

E.I.C.

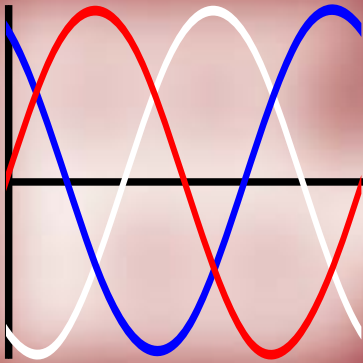
**Electrical
Importing
Company**

FOR REFERENCE ONLY

Items may have been replaced or obsolete

**MMXI
(2011)**

CATALOGUE



Industrial Switchgear

Electrical Components For Industry













**METAL ENCLOSURES
FLEXIBLE BUSBAR
SWITCHES & ISOLATORS
MOTOR O/L RELAYS
P/F CAPACITORS
CONTACTORS
SOLID STATE RELAYS
PUSHBUTTONS
LIMIT SWITCHES
CONTROL RELAYS
SENSORS
MOTOR STARTERS
SHRINK SLEEVING
SAFETY SWITCHES
PENDANTS
PLUGS & SOCKETS
CIRCUIT BREAKERS
ALUMINIUM BOXES**



NEW ZEALAND
OWNED
and
OPERATED

**PH: (09) 634 2978
FAX: (09) 634 6819**

NEW PRODUCT - PICTORIAL INDEX

Control Desks	Push Buttons	LED Indicating Lights	DC Coil Contactors	Manual Motor Starters	Solid State Relays
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Wall Mounting Powder Coated Metal Enclosures and Accessories

CR and CRD enclosures come complete with mounting (gear) plate, gland plates (except for smallest enclosure), standard door locks and wall mounting brackets.



CR complete enclosures with standard door

Standard Vertical Type

COMPLETE ENCLOSURES				ACCESSORIES (add to Enclosure)			
WITH STANDARD DOOR	TRADE PRICE	WITH TRANSPARENT DOOR	TRADE PRICE	INNER DOOR	TRADE PRICE	DISTRIBUTION FRAME	TRADE PRICE
CR252010							
CR252015							
CR302515							
CR303015		CR303015PD					
CR303020		CR303020PD					
CR403015		CR403015PD					
CR403020		CR403020PD		ID4030/20			
CR404020		CR404020PD		ID4040/20			
CR504020		CR504020PD		ID5040/20		DB504020F	
CR504025		CR504025PD		ID5040/25		DB504025F	
CR504035*		CR504035PD		ID5040/35			
CR505020		CR505020PD		ID5050/20		DB505020F	
CR505025		CR505025PD		ID5050/25		DB505025F	
CR604020		CR604020PD		ID6040/20		DB604020F	
CR605020		CR605020PD		ID6050/20		DB605020F	
CR605025		CR605025PD		ID6050/25		DB605025F	
CR605035*		CR605035PD		ID6050/35			
CR606020		CR606020PD		ID6060/20		DB606020F	
CR705025		CR705025PD		ID7050/25		DB705025F	
CR806020		CR806020PD		ID8060/20		DB806020F	
CR806025		CR806025PD		ID8060/25		DB806025F	
CR806035*		CR806035PD		ID8060/35			
CR808025		CR808025PD		ID8080/25		DB808025F	
CR1006030		CR1006030PD		ID10060/30		DB1006030F	
CR1008030		CR1008030PD		ID10080/30		DB1008030F	
CR1208030		CR1208030PD		ID12080/30			
CR1208040*		CR1208040PD		ID12080/40			

Horizontal Type

CR403015H		CR403015HPD					
CR403020H		CR403020HPD					
CR504020H		CR504020HPD				DB504020HF	
CR604020H		CR604020HPD				DB604020HF	
CR605025H		CR605025HPD				DB605025HF	

Two-Door Type

CRD8010030							
CRD10010030							
CRD12010030							

* Extra deep enclosure to suit VSDs and soft starters

Gland Plate for CR Enclosures

GLAND PLATES	OVERALL SIZE	GLAND OPENING	REPLACEMENT PLATE PART NUMBER
A	208 x 94	174 x 60	CRGPLATE-SML
B	294 x 123	259 x 88	CRGPLATE-MED
C	344 x 149	310 x 115	CRGPLATE-LGE

Refer CVS mini catalogue for further information



ACCESSORIES (add to Enclosures)				ENCLOSURE SIZE HxWxD mm	GLAND PLATES	DOOR LOCKS
CANOPY	TRADE PRICE	PLINTH	TRADE PRICE			
				250 x 200 x 100	0	1
				250 x 200 x 150	0	1
CP2515				300 x 250 x 150	A x 1	1
CP3015				300 x 300 x 150	A x 1	1
CP3020				300 x 300 x 200	A x 1	1
CP3015				400 x 300 x 150	A x 1	1
CP3020				400 x 300 x 200	A x 1	1
CP4020				400 x 400 x 200	B x 1	1
CP4020				500 x 400 x 200	B x 1	1
CP4025				500 x 400 x 250	B x 1	1
				500 x 400 x 350	B x 1	1
CP5020				500 x 500 x 200	B x 1	1
CP5025				500 x 500 x 250	C x 1	1
CP4020				600 x 400 x 200	B x 2	2
CP5020				600 x 500 x 200	B x 2	2
CP5025				600 x 500 x 250	C x 2	2
				600 x 500 x 350	C x 2	2
CP6020				600 x 600 x 200	C x 2	2
CP5025				700 x 500 x 250	C x 2	2
CP6020				800 x 600 x 200	C x 2	2
CP6025				800 x 600 x 250	C x 2	2
				800 x 600 x 350	C x 2	2
CP8025				800 x 800 x 250	C x 4	2
CP6030		PLN63/100		1000 x 600 x 300	C x 2	2
CP8030		PLN83/100		1000 x 800 x 300	C x 4	2
CP8030		PLN83/100		1200 x 800 x 300	C x 4	2
CP8040		PLN84/100		1200 x 800 x 400		2



Complete enclosure with transparent door, plus accessories inner door and fan/filter ventilation



Canopy



Rain Hood



Distribution Frame

	CP4015			300 x 400 x 150	A x 1	1
	CP4020			300 x 400 x 200	B x 1	1
	CP5020			400 x 500 x 200	B x 1	1
	CP6020			400 x 600 x 200	B x 2	1
	CP6025			500 x 600 x 250	C x 2	2

Alternative Door Locks

These locks will directly replace the standard lock



CVS-W200 Wing Handle



CVS-K200 Wing Handle 144 Key Lock

	CPM10030	PLN103/100		800 x 1000 x 300	C x 2	1
	CPM10030	PLN103/100		1000 x 1000 x 300	C x 2	1
	CPM10030	PLN103/100		1200 x 1000 x 300	C x 2	1

For Lock pricing refer next page

Wall Mounting Stainless Steel Metal Enclosures and Accessories

CRX and CRXX enclosures come complete with mounting (gear) plate, gland plates (except smallest enclosure) and standard door locks. Wall mounting brackets are purchased separately.



CRX complete enclosures with standard door

304 GRADE - Vertical Type

COMPLETE ENCLOSURES				ACCESSORIES (add to Enclosure)			
WITH STANDARD DOOR	TRADE PRICE	WITH TRANSPARENT DOOR	TRADE PRICE	INNER DOOR	TRADE PRICE	DISTRIBUTION FRAME	TRADE PRICE
CRX252015							
CRX302515							
CRX303015		CRX303015PD					
CRX403015		CRX403015PD					
CRX403020		CRX403020PD		ID4030/20			
CRX404020		CRX404020PD		ID4040/20			
CRX504020		CRX504020PD		ID5040/20		DB504020F	
CRX504025*		CRX504025PD		ID5040/25		DB504025F	
CRX505025*		CRX505025PD		ID5050/25		DB505025F	
CRX604020		CRX604020PD		ID6040/20		DB604020F	
CRX605020*		CRX605020PD		ID6050/20		DB605020F	
CRX605025*		CRX605025PD		ID6050/25		DB605025F	
CRX606025		CRX606025DP		ID6060/25		DB606025F	
CRX705025		CRX705025PD		ID7050/25		DB705025F	
CRX806025		CRX806025PD		ID8060/25		DB806025F	
CRX808030		CRX808030PD		ID8080/30		DB808030F	
CRX1006030*		CRX1006030PD		ID10060/30		DB1006030F	
CRX1008030		CRX1008030PD		ID10080/30		DB1008030F	
CRX1208030		CRX1208030PD					

* New sizes to the range

304 GRADE - Horizontal Type

CRX305025H							
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316 GRADE - Vertical Type

CRXX252015-316							
CRXX302515-316							
CRXX303015-316		CRXX303015PD					
CRXX403015-316		CRXX403015PD					
CRXX403020-316		CRXX403020PD		ID4030/20			
CRXX404020-316		CRXX404020PD		ID4040/20			
CRXX504020-316		CRXX504020PD		ID5040/20		DB504020F	
CRXX604020-316		CRXX604020PD		ID6040/20		DB604020F	
CRXX606025-316		CRXX606025PD		ID6060/25		DB606025F	
CRXX705025-316		CRXX705025PD		ID7050/25		DB705025F	
CRXX806025-316		CRXX806025PD		ID8060/25		DB806025F	
CRXX808030-316		CRXX808030PD		ID8080/30		DB808030F	
CRXX1008030-316		CRXX1008030PD		ID10080/30		DB1008030F	
CRXX1208030-316		CRXX1208030PD					

Gland Plate for CRX & CRXX Enclosures

GLAND PLATES	OVERALL SIZE	GLAND OPENING	REPLACEMENT PLATE PART NUMBER
A	208 x 94	174 x 60	_①_ GPLATE-SML
B	294 x 123	259 x 88	_①_ GPLATE-MED
C	344 x 149	310 x 115	_①_ GPLATE-LGE

① Add CRX for 304 Grade, or add CRXX for 316 Grade stainless steel

Refer CVS mini catalogue for further information



ACCESSORIES		ENCLOSURE SIZE HxWxD mm	GLAND PLATES	DOOR LOCKS
CANOPY	TRADE PRICE			
CPX2015		250 x 200 x 150	0	1
CPX2515		300 x 250 x 150	A x 1	1
CPX3015		300 x 300 x 150	A x 1	1
CPX3015		400 x 300 x 150	A x 1	1
CPX3020		400 x 300 x 200	A x 1	1
CPX4020		400 x 400 x 200	B x 1	1
CPX4020		500 x 400 x 200	B x 1	2
CPX4025		500 x 400 x 250	B x 1	2
CPX5025		500 x 500 x 250	C x 1	2
CPX4020		600 x 400 x 200	B x 1	2
CPX5020		600 x 500 x 200	B x 1	2
CPX5025		600 x 500 x 250	C x 1	2
CPX6025		600 x 600 x 250	C x 1	2
CPX5025		700 x 500 x 250	C x 1	2
CPX6025		800 x 600 x 250	C x 1	2
CPX8030		800 x 800 x 300	C x 2	2
CPX6030		1000 x 600 x 300	C x 1	2
CPX8030		1000 x 800 x 300	C x 2	2
CPX8030		1200 x 800 x 300	C x 2	2

CPX5025		300 x 500 x 250	C x 1	1
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CPXX2015		250 x 200 x 150	0	1
CPXX2515		300 x 250 x 150	A x 1	1
CPXX3015		300 x 300 x 150	A x 1	1
CPXX3015		400 x 300 x 150	A x 1	1
CPXX3020		400 x 300 x 200	A x 1	1
CPXX4020		400 x 400 x 200	B x 1	1
CPXX4020		500 x 400 x 200	B x 1	2
CPXX4020		600 x 400 x 200	B x 1	2
CPXX6025		600 x 600 x 250	C x 1	2
CPXX5025		700 x 500 x 250	C x 1	2
CPXX6025		800 x 600 x 250	C x 1	2
CPXX8030		800 x 800 x 300	C x 2	2
CPXX8030		1000 x 800 x 300	C x 2	2
CPXX8030		1200 x 800 x 300	C x 2	2



Canopy and Rain Hood (SS304)



Inner Door (painted steel)



Distribution Frame Kit



Transparent Door (SS304)

Accessories

DESCRIPTION	PART NUMBER	TRADE PRICE
SUIT CRX & CRXX STAINLESS STEEL ENCLOSURES		
<p>Stainless Steel Mounting Brackets (set of 4)</p>	<p>Wing Handled 144 Key Lock</p>	<p>Quarter Turn Lock Padlockable (SS316)</p>
Mounting Brackets - SS304	CVS-SS-BRACKETS	
Mounting Brackets - SS316	CVS-SS-BRACKETS-316	
Wing Handle 144 Key Lock	CVS-K200	
¼ Turn Lock P/Lckbl - SS316	CVS-P200-316	
SUIT CR & CRD POWDER COATED ENCLOSURES		
<p>Wing Handled Lock (Black)</p>	<p>Wing Handled 144 Key Lock</p>	<p>Quarter Turn Lock Padlockable (Black)</p>
Wing Handled Key Lock	CVS-W200	
Wing Handle 144 Key Lock	CVS-K200	
¼ Turn Lock P/Lckbl - Std	CVS-P200	

For Fans and Filter Vents - refer page 12

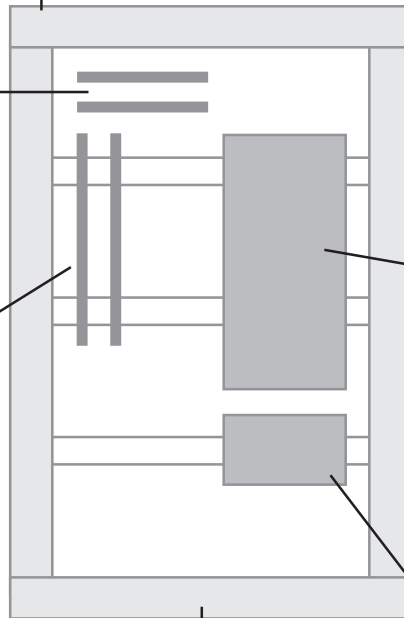
SELECTION CHART FOR PAN ASSEMBLY TYPE DISTRIBUTION BOARDS

ENCLOSURES

A	CR504020 / CRX504020 / CRXX504020-316
B	CR604020 / CRX604020 / CRXX604020-316
C	CR605020 - -
D	CR605025 - -
E	CR606025 / CRX606025 / CRXX606025-316
F	CR705025 / CRX705025 / CRXX705025-316
G	CR806025 / CRX806025 / CRXX806025-316
H	CR808025 - -
J	CR1006030 - -
K	CR1008030 / CRX1008030 -

NEUTRAL EARTH BARS

12-Way EN3S12W100A	A
24-Way EN3S24W100A	B
24-Way EN3S24W200A	C
24-Way EN3S24W200A	D
24-Way EN3S24W200A	E
36-Way EN3S36W200A	F
48-Way EN3S48W200A	G
24-Way EN3S24W200A	
48-Way EN3S48W200A	H
24-Way EN3S24W200A	
60-Way EN3S60W200A	J
36-Way EN3S36W200A	
60-Way EN3S60W200A	K
36-Way EN3S36W200A	



STANDARD PAN ASSEMBLY ❶

A	12-Way (125A) PANGW12P ❷
B	18-Way (125A) PANGW18P
C	24-Way (160A) PANGW24P
D	24-Way (160A) PANGW24P
E	24-Way (160A) PANGW24P
F	36-Way (160A) PANGW36P
G	48-Way (160A) PANGW48P 24-Way (250A) PANGW24P ❸
H	48-Way (160A) PANGW48P 24-Way (250A) PANGW24P ❸
J	60-Way (160A) PANGW60P 36-Way (250A) PANGW36P ❸
K	60-Way (160A) PANGW60P 36-Way (250A) PANGW36P ❸

FRAME KIT

A	DB504020F
B	DB604020F
C	DB605020F
D	DB605025F
E	DB606025F
F	DB705025F
G	DB806025F
H	DB808025F
J	DB1006025F
K	DB1008030F

MAIN ISOLATOR

125A	CVS97723
160A	CVS97727
250A	CVS97729

INFORMATION FOR ORDERING

Enclosure: CR _ _ _ _ _

Pan Assembly: PAN _ _ _ _ _

Frame Kit: DB _ _ _ _ _

Main Isolator: CVS _ _ _ _ _

Neutral Earth: EN3S _ _ _ _ _


For assembly allow 10% of the value of the componentry (excluding circuit breakers)

Notes:


- ❶ Typical layout displayed - for other options consult EIC.
- ❷ Pan assembly to suit Gewiss circuit breakers - assemblies available for other brands.
- ❸ Fitted with 200A earth neutral bars.

Frame Kits

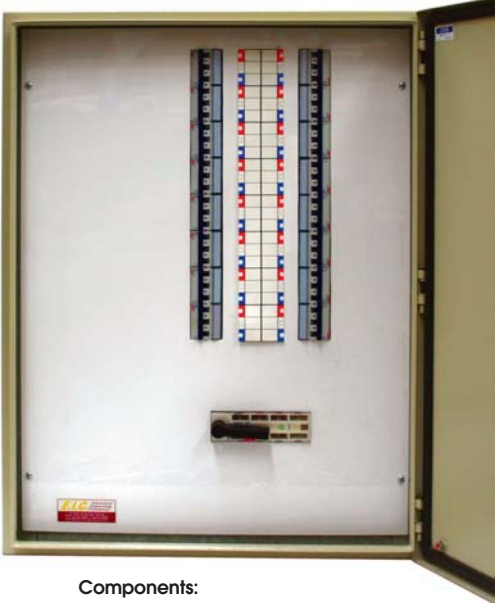
FRAME KIT - FRONT VIEW



FRAME KIT - SIDE VIEW



PAN ASSEMBLY TYPE DISTRIBUTION BOARD



35mm DIN Rail for mounting:

- Circuit Breakers
- RCDs
- Manual Motor Starters
- Contactors
- Relays
- Isolators
- Level Controls
- PLCs
- Timers
- Voltage Relays
- Phase Sequence Relays
- Current Sensing Relays
- Power Supplies
- Battery Chargers
- Solid State Relays
- Terminals

DIN Rail adjustable:

- Up / Down
- Front / Back

Components:

- Enclosure:..... CR806025
- Pan Assembly:..... PANGW48P
- Frame Kit:..... DB806025F
- Main Isolator:..... CVS 97727
- Neutral Earth:..... EN3S48W200A

Frame Kits:

The Frame Kit was developed to mount into a standard CVS Wall Mounted Powder Coated or Stainless Steel Enclosure. You now have the choice of a robust IP rated enclosure.

The Frame Kit includes a number of adjustable horizontal DIN rails ideal for the variety of 35mm DIN rail mounting devices available for Distribution Boards and Control Panels to take advantage of the market.

Combination Distribution Boards:

The DIN rails can be arranged to mount Circuit Breakers and RCDs horizontally using a busbar connecting comb. The same rails can be used to mount a Pan Assembly or a combination of Distribution and Motors Starters suitable for use as Generator Panels, Pump Controls or PLC Control Systems.

Additional DIN rails with support brackets can be ordered separately if required. ②

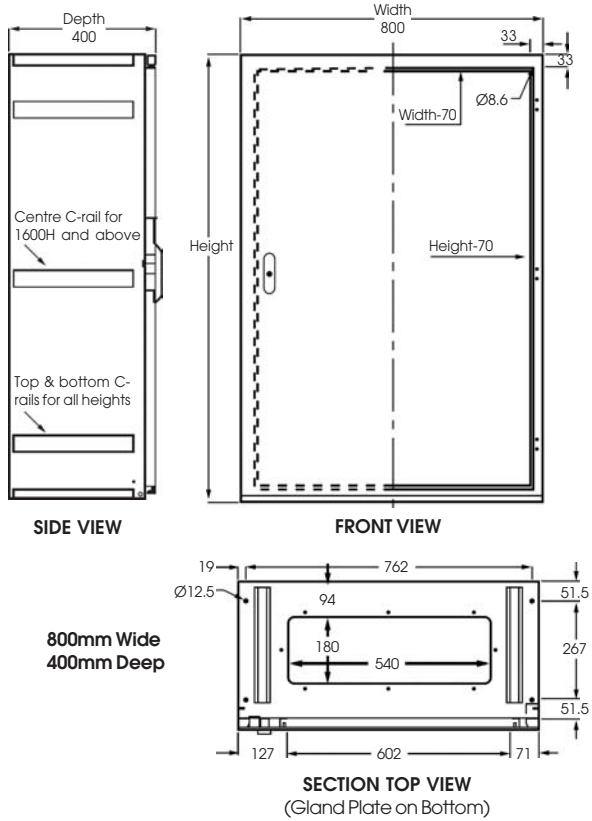
TO SUIT ENCLOSURE (CR, CRX or CRXX)	ASSEMBLED FRAME KITS ①				ADDITIONAL DIN RAILS ②	
	HORIZONTAL DIN RAILS	INSULATED MASKING PANEL	FRAME KIT PART NUMBER	TRADE PRICE	DIN RAIL KIT PART NUMBER	TRADE PRICE
___ 504020	2	455 x 360 mm	DB504020F		DIN5420	
___ 604020	3	555 x 360 mm	DB604020F		DIN6420	
___ 605020	3	555 x 460 mm	DB605020F		DIN6520	
___ 605025	3	555 x 460 mm	DB605025F		DIN6525	
___ 606025	3	555 x 560 mm	DB606025F		DIN6625	
___ 705025	3	655 x 460 mm	DB705025F		DIN7525	
___ 806025	3	755 x 560 mm	DB806025F		DIN8625	
___ 808025	3	755 x 760 mm	DB808025F		DIN8825	
___ 1006025	3	955 x 560 mm	DB1006025F		DIN10625	
___ 1008030	3	955 x 760 mm	DB1008030F		DIN10830	

NOTES: ① Assembled Frame Kits include horizontal DIN rails and white insulated masking panel (blank).
 ② DIN Rail Kits include DIN rail and support brackets.

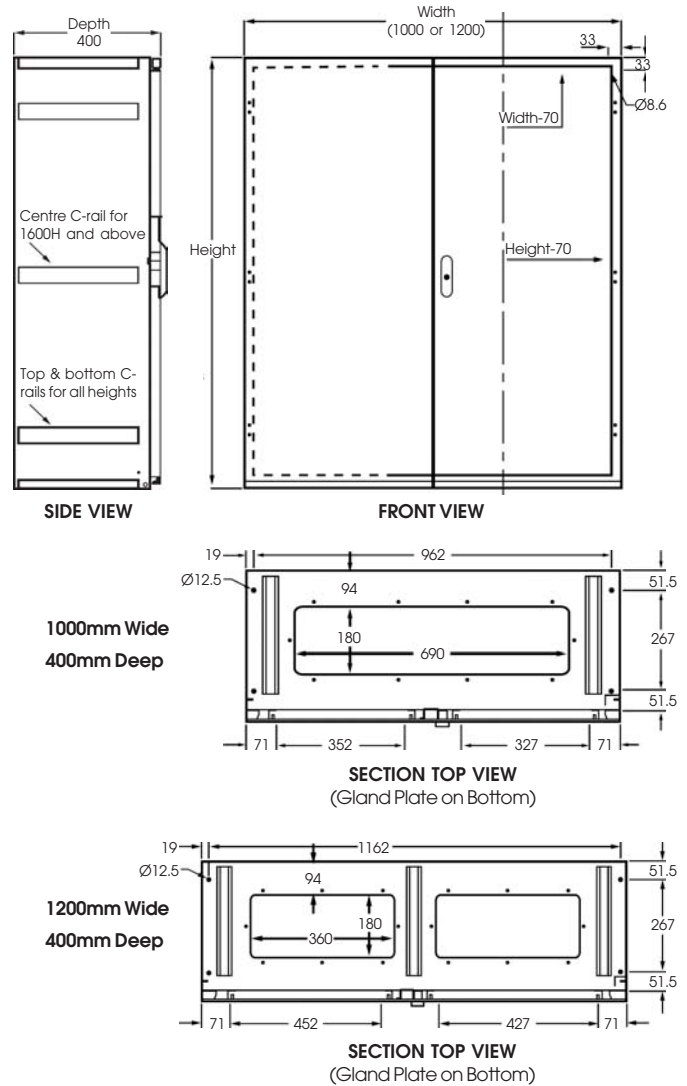
CM Enclosures

Floor Standing Metal Enclosures and Accessories

Single Door Enclosure Dimensions:



Two Door Enclosure Dimensions:



SINGLE DOOR ENCLOSURE - 800mm Wide

ENCLOSURES		ACCESSORIES (add to Enclosure)					
PART NUMBER	TRADE PRICE	PLINTH	TRADE PRICE	CANOPY	TRADE PRICE	LIGHT MTG BRACKET Ⓞ	TRADE PRICE
CM148/40		PLN84/100		CPM8040		LGT800	
CM168/40		PLN84/100		CPM8040		LGT800	
CM188/40		PLN84/100		CPM8040		LGT800	
CM208/40		PLN84/100		CPM8040		LGT800	

TWO DOOR ENCLOSURE - 1000mm Wide

CM1410/40		PLN104/100		CPM10040		LGT1000	
CM1610/40		PLN104/100		CPM10040		LGT1000	
CM1810/40		PLN104/100		CPM10040		LGT1000	
CM2010/40		PLN104/100		CPM10040		LGT1000	

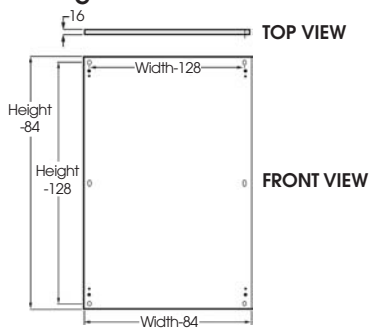
TWO DOOR ENCLOSURE - 1200mm Wide

CM1612/40		PLN124/100		CPM12040		LGT1200	
CM1812/40		PLN124/100		CPM12040		LGT1200	
CM2012/40		PLN124/100		CPM12040		LGT1200	

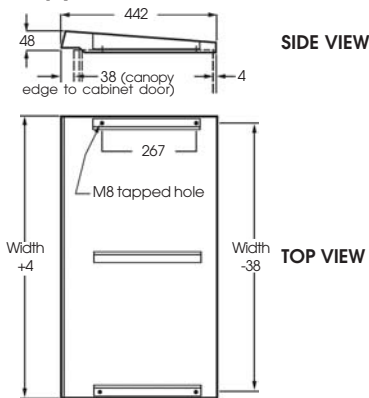
Notes: Ⓞ Cabinet Light Mounting Brackets come with a mounting panel and door switch. Light fitting is not included.

**CM Enclosures
IP55**

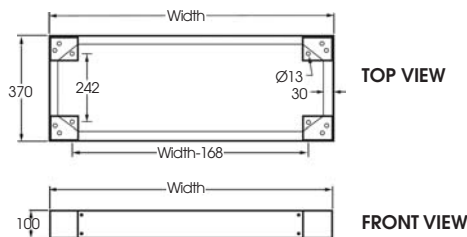
Mounting Plate Dimensions:



Canopy Dimensions:



Plinth Dimensions:



Specifications

Part Name	Material	Finish
Body/Door	2.0 mm MS	RAL 7032 Polyester Powder Coated
Gland Plate	2.0mm MS	RAL 7032 Polyester Powder Coated
Mounting Plate	3.0mm MS	Galvanised Mild Steel
Canopy	1.5mm MS	RAL 7032 Polyester Powder Coated
Plinth	2/3.0mm MS	Black Polyester Powder Coated
Light Bracket	1.5mm MS	Zinc Plated

ACCESSORIES (add to Enclosure)				ENCLOSURE DIMENSIONS (mm)		
INNER DOOR	TRADE PRICE	TRANSPARENT DOOR	TRADE PRICE	Height	Width	Depth
ID148	POA	TD148	POA	1400	800	400
ID168	POA	TD168	POA	1600	800	400
ID188	POA	TD188	POA	1800	800	400
ID208	POA	TD208	POA	2000	800	400

ID1410	POA	TD1410	POA	1400	1000	400
ID1610	POA	TD1610	POA	1600	1000	400
ID1810	POA	TD1810	POA	1800	1000	400
ID2010	POA	TD2010	POA	2000	1000	400

ID1612	POA	TD1612	POA	1600	1200	400
ID1812	POA	TD1812	POA	1800	1200	400
ID2012	POA	TD2012	POA	2000	1200	400

Options & Accessories



Model ES - Robust Double Sided Stand Alone Unit



Standard Powder Coated Units

Outdoor Enclosures

The CVS range of "ES" Enclosures are now being manufactured using electro-galvanised sheet steel. Combined with a specially designed canopy and improved corrosion resistance, the "ES" cabinets are better suited to outdoor use.

By keeping the welding processes and material finishing to a minimum, CVS engineers have ensured that the galvanised coating is maintained at the highest level possible.

These enclosures offer great value in a weather proof cabinet before moving up to stainless steel or a much heavier galvanised plate construction.

**NEW FOR 2010
OUTDOOR ENCLOSURES**



Outdoor Cabinet
(Rainhood shown is
supplied as accessory)

Specification

- The ES Model is a stand alone unit (not for joining purposes).
- Side plates form the main structure (not removable) which makes the enclosure more solid and maximises rigidity.
- Front door, rear panel, top panel and bottom gland plate are removable. Rear panel can change to rear door with additional components and door.
- The internal construction and specification are similar to the MS model.
- Material (Standard Units 2010):
 - Body, door, side plates and main structure – 2.0mm electro-galvanised steel
 - Top, rear panel and bottom gland plate – 1.5mm electro-galvanised steel
 - Mounting plate – 3.0mm galvanised steel
 - Plinth – 2.0 to 3.0mm electro-galvanised steel powder coated black polyester

Ordering Information

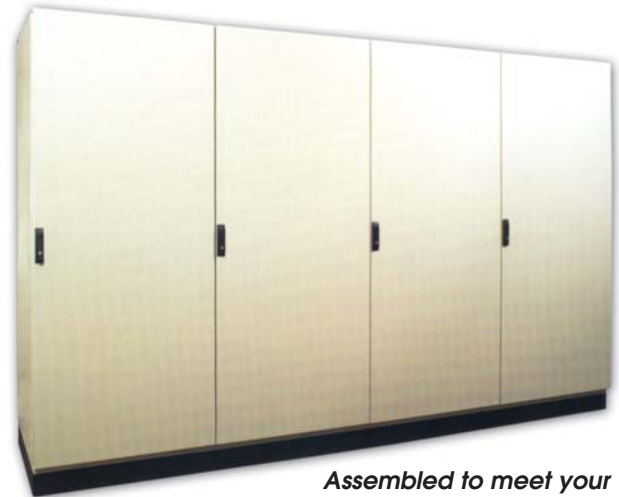
DIMENSIONS (mm) Height x Width x Depth	No of Doors	ENCLOSURES				ACCESSORIES	
		STANDARD TYPE (POWDER COATED)	TRADE PRICE	OUTDOOR TYPE (WITH CANOPY)	TRADE PRICE	PLINTH 100mmH	TRADE PRICE
2000 x 600 x 400	1	ES206/40*		ES206/40C*		PLM64/100	
2000 x 600 x 500	1	ES206/50		ES206/50C		PLM65/100	
2000 x 600 x 600	1	ES206/60		ES206/60C		PLM66/100	
2000 x 600 x 800	1	ES206/80		ES206/80C		PLM68/100	
2000 x 800 x 400	1	ES208/40*		ES208/40C*		PLM84/100	
2000 x 800 x 500	1	ES208/50		ES208/50C		PLM85/100	
2000 x 800 x 600	1	ES208/60		ES208/60C		PLM86/100	
2000 x 800 x 800	1	ES208/80		ES208/80C		PLM88/100	
2000 x 1000 x 400	2	ES2010/40*		ES2010/40C*		PLM104/100	
2000 x 1000 x 500	2	ES2010/50		ES2010/50C		PLM105/100	
2000 x 1000 x 600	2	ES2010/60		ES2010/60C		PLM106/100	
2000 x 1000 x 800	2	ES2010/80		ES2010/80C		PLM108/100	
2000 x 1200 x 400	2	ES2012/40*		ES2012/40C*		PLM124/100	
2000 x 1200 x 500	2	ES2012/50		ES2012/50C		PLM125/100	
2000 x 1200 x 600	2	ES2012/60		ES2012/60C		PLM126/100	
2000 x 1200 x 800	2	ES2012/80		ES2012/80C		PLM128/100	

Note: * The 400mm deep models are only available on indent at this stage. 1800mm high models are also available on indent.
Discuss options and accessories with EIC.

Model MS - CVS Modular Systems

Specification

- CVS Modular System (MS) is a flexible system where two or more enclosures can be joined together to achieve the required width (length).
- Front door, rear panel (or rear door), bottom gland plate, top and side panels are removable for flexibility.
- A continuous polyurethane gasket seal on door, top, rear and side panels provide maximum IP protection.
- Reinforcement frame on door to increase rigidity and mounting accessories.
- Concealed hinges provide 120° door opening.
- Complete with side mounting bar (x4).
- 1800mm high models are available on indent.
- Material:
 - Frame structure and door – 2.0mm mild steel.
 - Top, rear side panel and bottom gland plate – 1.5mm mild steel.
 - Mounting plate (MP, rear MP, inner MP) – 3.0mm galvanised steel.
 - Plinth – 2.0 to 3.0mm mild steel (polyester powder coating black colour).
- Locking system: 4-point for single door, 3-point for double door.
- Finish: Polyester powder coating CVS standard beige colour (RAL 7032).



Assembled to meet your requirements

Internal Construction



Mounting Plate Dimensions (mm)

Cabinet Width	Panel Width	Cabinet Height	Panel Height
600	499	2000	1884
800	699	2000	1884
1000	899	2000	1884
1200	1099	2000	1884



**IP55 (IEC 529)
CERT NO. 403479**

Ordering Information

DIMENSIONS (mm) Height x Width x Depth	No of Doors	MODULAR SECTION	TRADE PRICE	SIDE PANELS	TRADE PRICE	PLINTH Ø 100mmH	TRADE PRICE
2000 x 600 x 400	1	MS206/40*		MSSP204		PLM64/100	
2000 x 600 x 500	1	MS206/50		MSSP205		PLM65/100	
2000 x 600 x 600	1	MS206/60		MSSP206		PLM66/100	
2000 x 600 x 800	1	MS206/80		MSSP208		PLM68/100	
2000 x 800 x 400	1	MS208/40*		MSSP204		PLM84/100	
2000 x 800 x 500	1	MS208/50		MSSP205		PLM85/100	
2000 x 800 x 600	1	MS208/60		MSSP206		PLM86/100	
2000 x 800 x 800	1	MS208/80		MSSP208		PLM88/100	
2000 x 1000 x 400	2	MS2010/40*		MSSP204		PLM104/100	
2000 x 1000 x 500	2	MS2010/50		MSSP205		PLM105/100	
2000 x 1000 x 600	2	MS2010/60		MSSP206		PLM106/100	
2000 x 1000 x 800	2	MS2010/80		MSSP208		PLM108/100	
2000 x 1200 x 400	2	MS2012/40*		MSSP204		PLM124/100	
2000 x 1200 x 500	2	MS2012/50		MSSP205		PLM125/100	
2000 x 1200 x 600	2	MS2012/60		MSSP206		PLM126/100	
2000 x 1200 x 800	2	MS2012/80		MSSP208		PLM128/100	
ENCLOSURE JOINING KIT (1 kit for each additional enclosure)						MSJT	

Notes: * 1800mm high models are available on indent.
Discuss options and accessories with EIC.

● Plinth suitable for single section. Refer EIC for multi-section plinths.

Vent/Filter Units



Specifications

Filter Element:	
Material.....	Synthetic fibres
Average resistance (EN779).....	86%
Air velocity.....	1.5 m/s
Rated air flow (m ³ /h/m ²).....	5400
Final pressure drop.....	250 Pa
Initial efficiency (dust spot).....	< 20%
Dust holding at tested final.....	620 g/m ²
Class (EN779).....	G3
Temperature resistant.....	Up to 100°C
Relative humidity.....	Up to 100°C
Washable.....	Yes

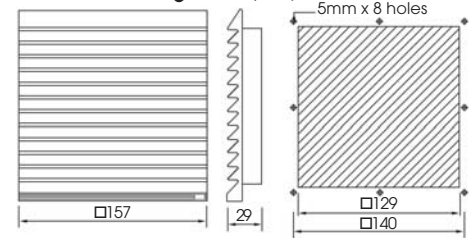
Ordering Information

PART NUMBER	SIZE (mm)	TRADE PRICE
FILTER04	157 x 157 x 29	
FILTER06	208 x 208 x 29	

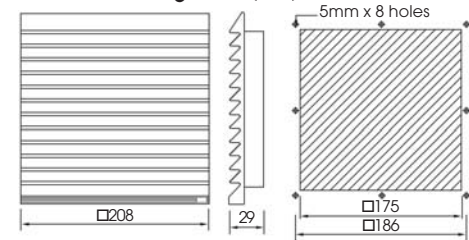
Specifications

Plastic Casing:	
Material.....	ABS
Flame retardant.....	Yes
UV-resistant.....	Yes

FILTER04 - Mounting cutout (mm)



FILTER06 - Mounting cutout (mm)



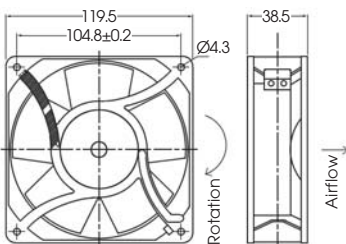
Cooling Fans - AC Axial Fan



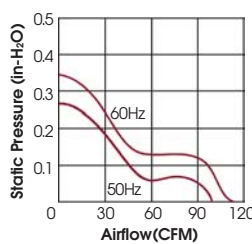
Specifications

MODEL	FAN04	FAN06
Dimensions	120 x 120 x 38 mm	172 x 150 x 51 mm
Frame	Die cast aluminium	
Impeller	Thermoplastic PBT, V-0	
Ambient temperature range	-10°C ~ +70°C	
Operating voltage range	Rated voltage ± 10%	
Bearing	Ball Bearing	
Termination	Lead wire 310 ± 5% mm	
Motor Type	AC shaded-pole motor	AC external rotor capacitor motor
Advantages	- Impedance protected - Flowing shape	- Thermal protected - External rotor motor - Low power consumption

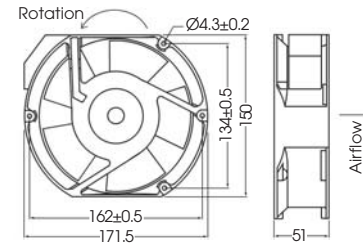
FAN04 - Dimensions (mm)



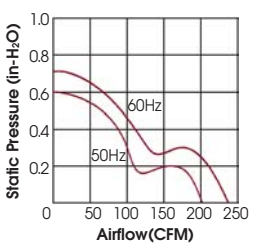
Characteristic Curves



FAN06 - Dimensions (mm)



Characteristic Curves



Ordering Information

Safety Standard	Voltage (V)	Freq (Hz)	Current (A)	Power (W)	Speed (RPM)	Air Flow (CFM)	Pressure (in-H2O)	Noise (dB)	PART NUMBER	TRADE PRICE
UL, TUV, CE	230	50/60	0.12/0.1	20/17	2700/3150	97/115	0.27/0.34	47/49	FAN04	
			0.12/0.12	25/25	2650/3100	202/240	0.6/0.68	51/58	FAN06	

Control Desks - 4 Sizes

Features:

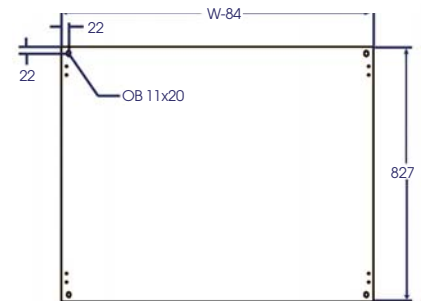
- Polyurethane one piece gasket on door provides a continuous seal.
- Galvanised adjustable depth mounting plate.
- Concealed hinges provide 130 degree door opening.
- Earthing facilities on door, body and mounting plate.
- Surface finished with polyester powder coating RAL 7035 texture.
- Plinth finished with polyester powder coating RAL 5004 texture.



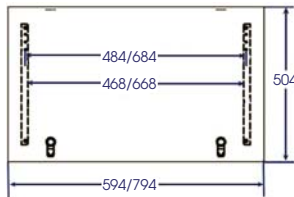
IP55 (IEC 529)

Specification:

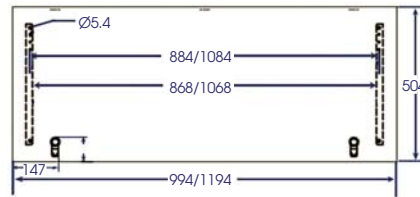
PART NAME	MATERIAL	FINISH
Body	1.4mm MS	} RAL 7035 (Polyester Powder Coated)
Door	2.0mm MS	
Gland Plate	2.0mm MS	
Mounting Plate	2.0mm MS	Rainbow Plated
Plinth	2.0/3.0mm MS	RAL 5004 (Black)



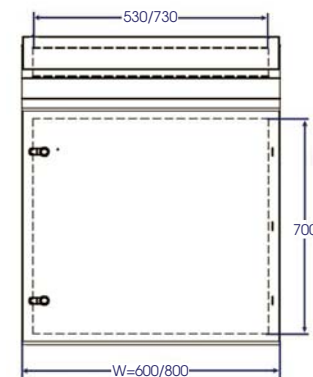
MOUNTING PLATE



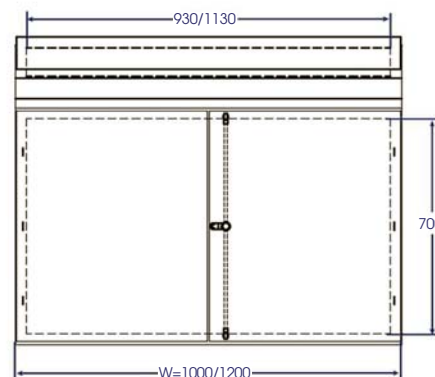
TOP PANEL



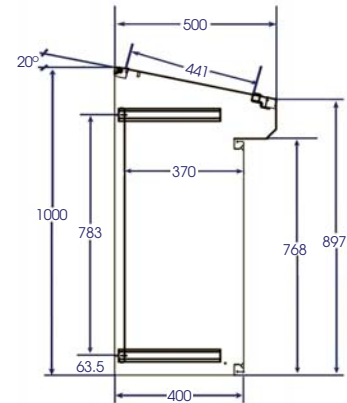
TOP PANEL



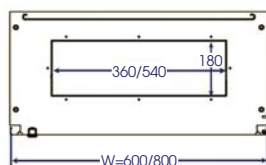
FRONT VIEW



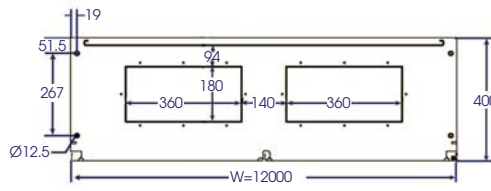
FRONT VIEW



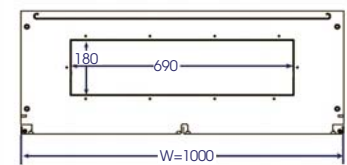
SIDE VIEW



BOTTOM VIEW



BOTTOM VIEW




BOTTOM VIEW


DESK DIMENSIONS (mm) Height x Width x Depth	No of Doors	Weight (kg)	CONTROL DESK PART NUMBER	TRADE PRICE	PLINTH (100mm) PART NUMBER	TRADE PRICE
1000 x 600 x 500	1	40	CS600		PL64/100 ①	
1000 x 800 x 500	1	62	CS800		PL84/100 ①	
1000 x 1000 x 500	2	84	CS1000		PL104/100 ①	
1000 x 1200 x 500	2	107	CS1200		PL124/100 ①	

Note: ① 200mm Plinths available on request.

Robust Metal Utility/Terminal Boxes

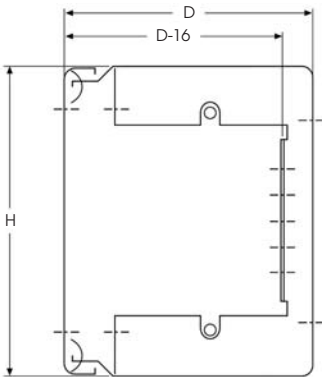


Powder Coated Steel

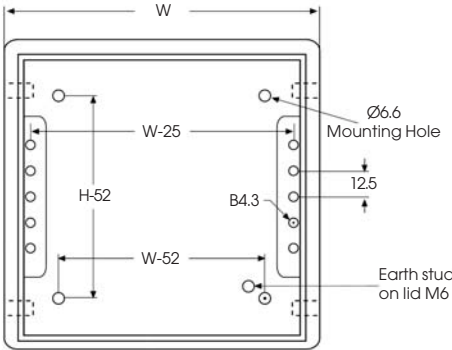


Stainless Steel

Box Dimensions




Side View




Front View


Accessories



Insulated Mounting Panel



35mm Din Rail



Mounting Feet

Specifications

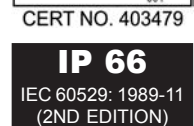
- Material & Finish:
 - 1.5mm SS304, hairline finished
 - 1.5mm sheet steel, polyester powder coating RAL 7032 (CVS beige colour)
- Internal Bracket: Made of mild steel and powder coated
- Double fold on base opening for strength and to channel water away from seal
- Polyurethane gasket on lid forms a continuous seal
- Earthing studs in base and lid
- Pre-punched holes on internal bracket for fixing din rail and mounting plate
- 4 fixing holes for direct mounting to wall
- Accessories: DIN rail, mounting plate and wall mounting brackets (feet)

Utility/Junction Boxes Ordering Information

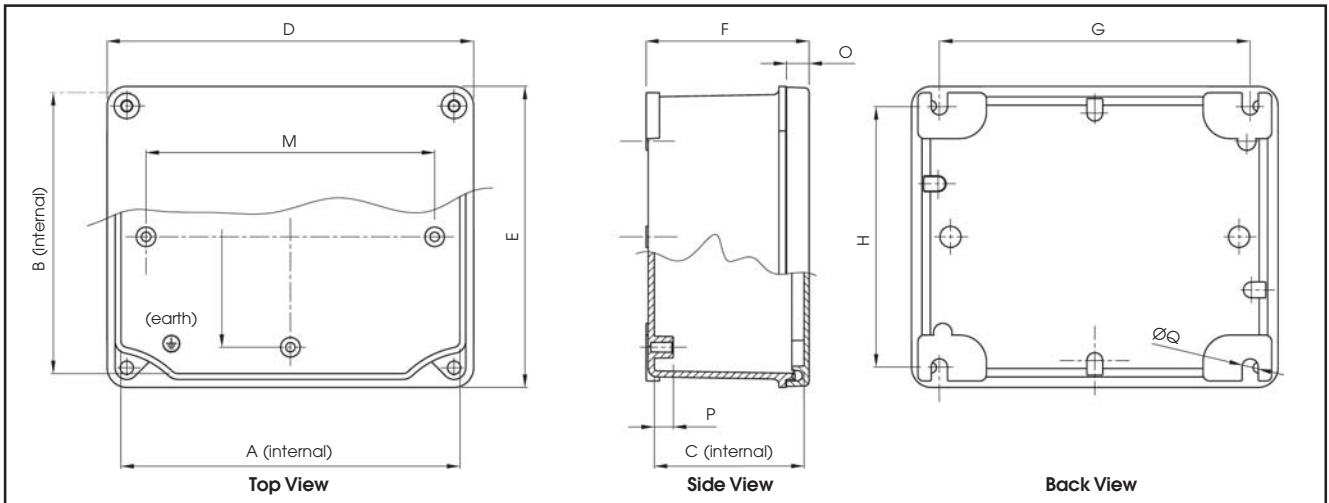
POWDER COATED STEEL			STAINLESS STEEL 304		
PART NUMBER	DIMENSIONS (mm)	TRADE PRICE	PART NUMBER	DIMENSIONS (mm)	TRADE PRICE
CT151512	150H x 150W x 120D		CTX151512	150H x 150W x 120D	
CT202012	200H x 200W x 120D		CTX202012	200H x 200W x 120D	

Accessories

PART NUMBER	DESCRIPTION	TRADE PRICE
CT15DIN	35mm DIN Rail for 150mm Terminal Box	
CT20DIN	35mm DIN Rail for 200mm Terminal Box	
CT15MP	Insulated Mounting Plate 80H x 140W mm for 150mm Box	
CT20MP	Insulated Mounting Plate 130H x 190W mm for 200mm Box	
CVS-FEET	Mounting Brackets (zinc)	
CVS-SS-FEET	Mounting Brackets (stainless steel)	



Die Cast Aluminium Alloy Junction Boxes - IP66^o



Internal Dimensions			External Dimensions			Other Dimensions							PART NUMBER	TRADE PRICE
L	H	D	L	H	D	Wall Mounting			Plate Mounting		Lid			
A	B	C	D	E	F	G	H	Q	M	N	P	O		
91	91	54	101	101	58	86	80	6.1	-	-	7.5	8.3	CTA919154	
128	103	57	138.5	113.5	61.5	117.5	101	6.1	109	-	7.3	8.5	CTA121057	
155	130	58	165.5	140.5	63.5	144	125	6.1	135	110	7.2	8.6	CTA151358	
178	156	75	189	167	80	168	153	6.1	140	120	7.1	8.7	CTA171575	
239	202	85	252	215	91	221	194	8.7	208	168	8.7	9	CTA232085	
294	244	114	307	257	120.5	275	236	8.7	256	210	8.5	9.2	CTA292411	
392	298	144	406.5	312.5	151	367	283	8.7	320	230	8.5	9.6	CTA392914	①

Notes: ① CAT 39 29 14 rating is IP55, all other sizes IP66

Galvanised-Steel Mounting Plates

Plate Size			PART NUMBER	TRADE PRICE
L	H	D		
A	B	C		
118.5	78.5	1.5	CTAP1210	
144	119	1.5	CTAP1513	
149	130	1.5	CTAP1715	
219	179	1.5	CTAP2320	
267	221	1.5	CTAP2924	
331	241	2	CTAP3929	

ORDER BACK-MOUNTING PLATE SEPARATELY

Special Features

- Surface finished with epoxy polyester coating
- Earthing facilities on base and lid
- Lid fitted with stainless steel doublenotched head screws
- Expanded EPDM gasket on lid forms a continuous seal

Weather Proof Junction & Utility Boxes



ATEX versions also available
Zones 2 and 22 - Refer to EIC

22.5mm Pilot Devices (IP40)

SELECTOR SWITCHES - c/w Contact Block				IP40
PT NUMBER	DESCRIPTION		CONTACT	TRADE PRICE
D22S2T11	2 POS		1 NO + 1 NC	
D22S2R11	2 POS		1 NO + 1 NC	
D22S3T20	3 POS		2 NO	
D22S3R11	3 POS		1 NO + 1 NC	
D22S3B20	3 POS		2 NO	

D22S3T20



ILLUMINATED SELECTOR SWITCHES - c/w Contact Block				IP40
D22ISR2T11 ^①	2 POS Red		1 NO + 1 NC	
D22ISG2T11 ^①	2 POS Green		1 NO + 1 NC	
D22ISY2T11 ^①	2 POS Yellow		1 NO + 1 NC	
D22ISR3T20 ^①	3 POS Red		2 NO	
D22ISG3T20 ^①	3 POS Green		2 NO	
D22ISY3T20 ^①	3 POS Yellow		2 NO	

Notes: - Refer CAM Chart below for switching operation
 ① Refer page 17 for LED voltage suffix

D22ISG2T1124



STANDARD CAMS FOR SELECTOR & KEY SWITCHES				
				KNOB OR KEY POSITION
2 POS	3 POS	CONTACT BLOCK ARRANGEMENT		
		NO	C11	(1 NO + 1 NC)
		NC		
		NC	C11	(1 NO + 1 NC)
		NO		
		NO	C20	(2 NO)
		NO		
		NC	C02	(2 NC)
		NC		
		NO	C20 + C02	(2 NO + 2NC) Series NC Contacts for Circuit in Center Pole
		NO		
		NC		
		NC		

D22KS113T



KEY SWITCHES (MAINTAINED POSITIONS) - c/w Contact Block					IP40	
PT NUMBER	SWITCH POSITION	KEY REMOVABLE			CONTACT	TRADE PRICE
		LEFT	CENTRE	RIGHT		
D22KS112T	2	*		*	1 NO + 1 NC	
D22KS112TL	2	*			1 NO + 1 NC	
D22KS112TR	2	*			1 NO + 1 NC	
D22KS203T	3	*	*	*	2 NO	
D22KS203TL	3	*			2 NO	
D22KS203TC	3	*			2 NO	
D22KS203TR	3	*			2 NO	

- Each operator is provided with 2 keys
 - Spare keys D22K039
 - Refer CAM Chart for switch operation (above)

ALL OPERATORS ARE C/W A CONTACT BLOCK

22.5mm Pilot Devices (IP40)

D22BG11



D22MBR1140



D22IBTY1124



D22MBT1160



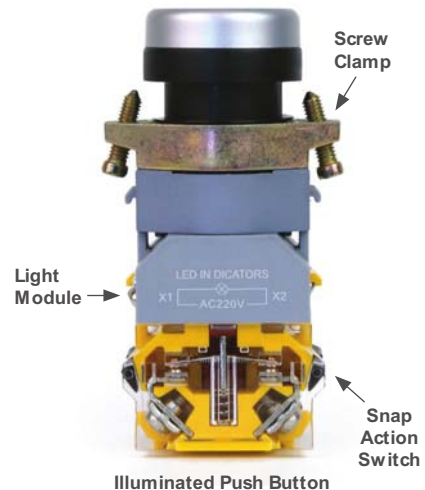
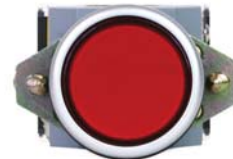
PART NUMBER	DESCRIPTION	CONTACT	TRADE PRICE
STANDARD PUSHBUTTON - Momentary Push w/Contact Block			
D22BK11	Black Button	1NO + 1NC	
D22BR11	Red Button	1NO + 1NC	
D22BG11	Green Button	1NO + 1NC	
D22BY11	Yellow Button	1NO + 1NC	
D22BB11	Blue Button	1NO + 1NC	
D22BW11	White Button	1NO + 1NC	
MUSHROOM PUSHBUTTON - Momentary Push w/Contact Block			
D22MBR1140	40mm Red Button	1NO + 1NC	
D22MBK1140	40mm Black Button	1NO + 1NC	
MUSHROOM PUSHBUTTON - Maintained, Push-On/Twist-To-Release w/CB			
D22MBT1140	40mm Red Button	1NO + 1NC	
D22MBT0240	40mm Red Button	2NC	
D22MBT1160	60mm Red Button	1NO + 1NC	
STANDARD PUSHBUTTON - Maintained, Push-On/Push-Off w/Contact Blk			
D22BTK11	Black Button	1NO + 1NC	
D22BTR11	Red Button	1NO + 1NC	
D22BTG11	Green Button	1NO + 1NC	
D22BTY11	Yellow Button	1NO + 1NC	
D22BTB11	Blue Button	1NO + 1NC	
D22BTW11	White Button	1NO + 1NC	

PART NUMBER	DESCRIPTION	CONTACT	TRADE PRICE
ILLUM PUSHBUTTON - Momentary Push w/Contact Block			
D22IBR11 ①	Red lens/button	1NO + 1NC	
D22IBG11 ①	Green lens/button	1NO + 1NC	
D22IBY11 ①	Yellow lens/button	1NO + 1NC	
D22IBB11 ①	Blue lens/button	1NO + 1NC	
D22IBW11 ①	White lens/button	1NO + 1NC	
ILLUM MUSHROOM BUTTON - Momentary Push w/Contact Block			
D22IMBR11 ①	40mm red button	1NO + 1NC	
ILLUM MUSHROOM BUTTON - Maintained, Push-On/Push-Off w/Contact			
D22ITBR11 ①	40mm red button	1NO + 1NC	
ILLUM PUSHBUTTON - Maintained, Push-On/Push-Off w/Contact Blk			
D22IBTR11 ①	Red lens/button	1NO + 1NC	
D22IBTG11 ①	Green lens/button	1NO + 1NC	
D22IBTY11 ①	Yellow lens/button	1NO + 1NC	
D22IBTB11 ①	Blue lens/button	1NO + 1NC	
D22IBTW11 ①	White lens/button	1NO + 1NC	
Notes: ① Codes for standard voltages: 24=24V AC/DC 23=230 AC Codes for other voltages: 12=12V AC/DC 48=48V AC/DC 11=110 AC/DC 40=400V AC			

D22IMBR11



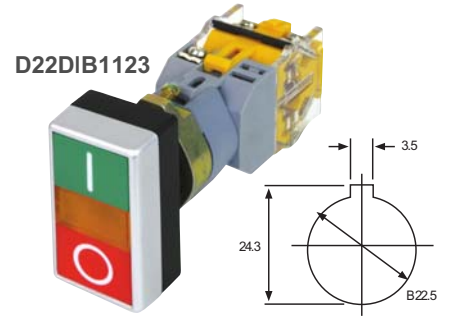
D22IBR11



22.5mm Pilot Devices (IP40)

**DOUBLE PUSH BUTTON I-O (GREEN-RED)
- Momentary Push c/w Contact Block**

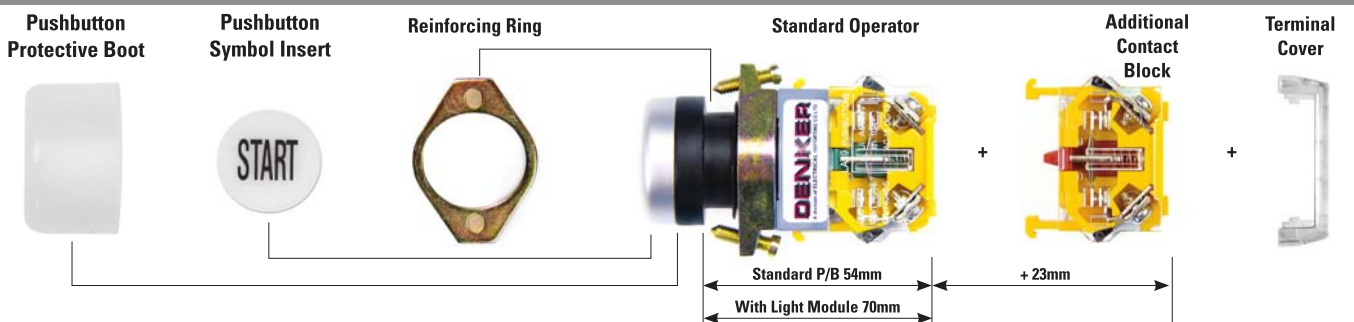
PT NUMBER	DESCRIPTION	CONTACT	TRADE PRICE
D22DB11	Standard - non illuminated	1 NO + 1 NC	
D22DIB1124	Illuminated 24 VAC/DC (Amber)	1 NO + 1 NC	
D22DIB1123	Illuminated 230 VAC (Amber)	1 NO + 1 NC	
D22DIB1140	Illuminated 400 VAC (Amber)	1 NO + 1 NC	



ACCESSORIES

DESCRIPTION	PT NUMBER	TRADE PRICE	DESCRIPTION	PT NUMBER	TRADE PRICE
	Protective Silicon Clear Rubber Boot for IP66 Rating D22SLC			Contact Block 1NC D22C01	
	Stainless Steel Pushbutton Protection Cover D22SPC			Contact Block 1NO D22C10	
	Transparent Pushbutton Flap Cover D22PC			Contact Block 2NC D22C02	
	Contact Block Terminal Cover D22TC			Contact Block 2NO D22C20	
	Metal Reinforcing Plate for Strengthening Plastic Panels D22PR1			Contact Block 1NO + 1NC D22C11	
	Metal Adaptor for 25mm Hole D22PR2				
	Plastic Adaptor for 30mm Hole D22PR3			60Bmm Warning Ring for Emergency Pushbutton D22WR60	
	Aluminium Adaptor for 30mm Hole D22PR4			90Bmm Warning Ring for Emergency Pushbutton D22WR90	
				Yellow Protection Cover D22WRY60	
				22mm Hole Plug D22HP	

ALL CONTACTS ARE SNAP ACTION WITH WIPING CONTACTS



PUSHBUTTON SURFACE-MOUNTING ENCLOSURES FOR 22mm OPERATORS - ABS

DESCRIPTION	DIMENSIONS	PT NUMBER	TRADE PRICE
STANDARD OPERATORS NON ILLUMINATED			
1 Hole	110 x 80 x 65mm deep	D221H65	
2 Hole	40 x 80 x 65mm deep	D222H65	
3 Hole	170 x 80 x 65mm deep	D223H65	
4 Hole	230 x 80 x 65mm deep	D224H65	
ILLUMINATED OPERATORS OR OPERATORS WITH ADDITIONAL CONTACT BLOCKS			
1 Hole	110 x 80 x 85mm deep	D221H85	
2 Hole	140 x 80 x 85mm deep	D222H85	
3 Hole	170 x 80 x 85mm deep	D223H85	
4 Hole	230 x 80 x 85mm deep	D224H85	

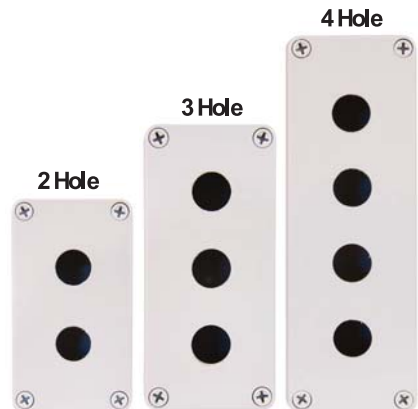
ASSEMBLED ENCLOSURES:

DESCRIPTION	PT No.	TRADE PRICE
Standard E/Stop Station 110 x 80 x 65mm deep	D22ES65	
Other combinations available on request		
Stop/Start Station Non-illuminated 110 x 80 x 65mm deep	D22DB65	
Stop/Start Station Illuminated 110 x 80 x 85mm deep	D22DBI85 ^①	

Note: ^① Code for LED Voltage refer previous page.

NOTE: Enclosures are ABS. POLYCARBONATE Enclosures are Available on Request

1 Hole



HEAVY DUTY PUSHBUTTON STATIONS

STAINLESS STEEL		POWER COATED
PT NUMBER	ENCLOSURE SIZE	PT NUMBER
CTX15ES60	150x150x120mm	CT15ES60
CTX20ES60	200x200x120mm	CT20ES60

TECHNICAL DATA FOR DENKER 'D' RANGE 22mm - Pushbuttons & Indicating Pilot Lights

IEC STANDARDS AND APPROVALS:

IEC/EN 60946-1
IEC/EN 60947-5-1
IEC 947
CE Low Voltage Directive

ELECTRICAL RATING:

AC: 220V/6A, 380V/4A, 660V/2A
DC: 24V/6A, 48V/6A, 110V/1A, 220V/0.5A, 440V/0.25A
Thermal Rating $i_{th} = 10A$
Contact Resistance: ≥ 50 milli-ohm
Insulation Rating: AC 2,500V 50HZ 1Minute
Rated Working Insulation Voltage: 660V AC
Electrical life: $\geq 6 \times 10^5$

MECHANICAL LIFE:

Push-buttons: 3×10^5 ; Selector Switch: 3×10^5 ;
Key Switch: 5×10^5 ; Emergency Switch: 5×10^4

TERMINATIONS:

Connections are screw-clamp terminals with Pozidrive or "Phillips type + Slot" Screw Head.
Terminal capacity: $1 \times 0.5mm^2$ or $2 \times 0.5mm^2$ stranded or solid wire.

ENVIRONMENTAL:

Ambient operating temperature:
-25°C to +60°C
Ambient storage temperature: -40°C to +65°C
Degree of Protection: IP40 (from front panel only).
Pushbuttons fitted with boots IP65
Allowable ambient humidity: $\geq 98\%$
Ambient Vibration: 2-80 Hz $\geq 0.7g$

MATERIALS:

Bezel: Brushed Aluminium
Mounting Base: Zinc Alloy Die Cast
Body: Polyamide
Lens: Polycarbonate
Contact Point: Silver-Nickel Alloy (AgNi)

MOUNTING:

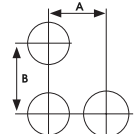
Screw Fixing Metal Mounting Block
Mounting Hole: 22.5mm $\pm 0.4mm$
Mounting Centre: 30x50mm
Panel Thickness: 1.2mm to 8mm max

LIGHT SOURCE FOR ILLUMINATED OPERATORS:

- Snap on Integrated LED light-block with independent screw terminals (X1, X2).
- InGAN LED chips for Green, Blue and White (Pure Green, Blue and White).
- Normal LED chips for Red, Amber and Yellow.
- Rated Current and Power: $\geq 20mA$ for 6V-48V AC/DC and 1.5W max for 110V to 380V AC.
- Life expectancy: 30K to 50K hrs.
- Brightness: $\geq 60cd/m^2$.
- Polarization: Non-polarized for both AC and DC operation.

Mounting Matrix

Description	Dimensions (mm)	
	A	B
All operators except those listed below.	30	50
40mm operators	45	50
Pushbutton fitted with Boots.	35	50



22.5mm Pilot Devices

22mm LEGEND PLATES SUITABLE FOR ALUMINIUM FOIL LABELS			
	PART NUMBER	DESCRIPTION	TRADE PRICE
	GH22-183	Black Plastic Label Support Suitable for 13x27 foil labels	
	GHSLABEL	Aluminium Foil Label Suitable for GH22-183	
	GH22-404	Black Plastic Label Support Suitable for 18x27 foil labels	
	GHMLABEL	Aluminium Foil Label Suitable for GH22-404	

SAFETY EMERGENCY STOP BUTTONS 22mm mount hole			
	PART NUMBER	DESCRIPTION	TRADE PRICE
<p>Latch Down - Twist to Release ⊕ Positive break according to IEC 947-5-1 Chap 3. Suitable for category 3-4 Safety Circuit S</p>	GH22M40S	Red 40i Latch Down Mushroom Pushbutton c/w 1xNC Contact Block	
	REPLACEMENT / ADDITIONAL		
	GH22E01	NC Safety Contact Block	

JOYSTICKS 22mm mount hole (Spring return)			
<p>GH22J4</p>	<p>GH22J2</p>	<p>Panel Hole Dimensions (mm):</p>	

PART NUMBER	DESCRIPTION	TRADE PRICE	PART NUMBER	DESCRIPTION	TRADE PRICE
GH22J4	4 Position Joystick c/w 1xNO contact in each position (2xNO + 2xNC)		GH22J2	2 Position Joystick c/w 1xNO contact in each position (Gold Contacts - Option)	
REPLACEMENT CONTACT BLOCKS					
GH22E10	NO Contact E10		GH22E10	NO Contact E10	
GH22E01	NC Contact E01		GH22E10AU	NO Gold Contact E10AU	



16mm IP40

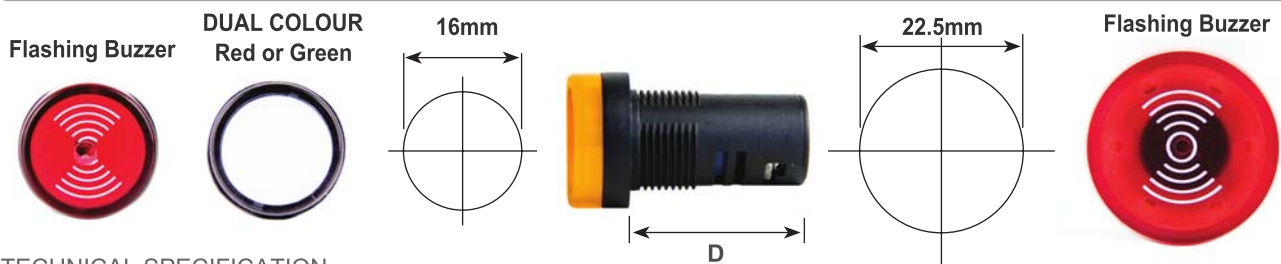


22mm IP65

LED INDICATING LIGHTS

PT NO	DESCRIPTION	D	PRICE	PT NO	DESCRIPTION	D	PRICE
RED16-2B_①_	Red 16 mm LED	45		RED22-03_①_	Red 22 mm LED	38	
GRN16-2B_①_	Green 16 mm LED	45		GRN22-03_①_	Green 22 mm LED	38	
ORG16-2B_①_	Orange 16 mm LED	45		ORG22-03_①_	Orange 22 mm LED	38	
BLU16-2B_①_	Blue 16 mm LED	45		BLU22-03_①_	Blue 22 mm LED	38	
WHT16-2B_①_	White 16 mm LED	45		WHT22-03_①_	White 22 mm LED	38	
RED16-0524 FB	Red Flashing Buzzer 24V AC/DC	45		RED22-0323-FZ	Red Flashing Buzzer 230V AC	50	
RED/GRN-0424	Dual Colour 24V AC/DC	48		RED22-0324-FZ	Red Flashing Buzzer 24V AC/DC	50	
RED/GRN-0421	Dual Colour 220V AC	48		RED22-03 23-FL	Red Self Flashing 230V AC	50	
				LED22-TOOL	Nut Tightening Tool		

NOTES: - Terminals: Solder terminals - other variations available on indent
 ① Codes for standard voltages: 24 = 24V AC/DC 23 = 230V AC
 Codes for other voltages: 12 = 12V AC/DC 48 = 48V AC/DC 11 = 110V AC/DC



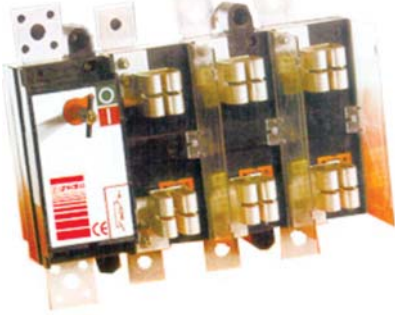
TECHNICAL SPECIFICATION

Environmental Temperature	-25°C to +55°C	Electrical Life Expectancy	5x10 ⁴ hrs	Operating Current	≤20mA (all voltages)
Relative Humidity	≤98%	Insulation Resistance	≤2MV	Voltage Tolerance	+/- 15% AC
Vibration	≤0.9g 2-80Hz	Ins. Withstand Voltage	2.5kV AC 50Hz 1min	Frequency Tolerance	50 Hz - 60 Hz
Protection Level (Light front only)	B 16 IP40 B 22 IP65	Surface Illumination	≤100cd/m ²	Installation	CLASS 3

PART NUMBER						
VOLTAGE	RED	GREEN	AMBER / YELLOW	WHITE	BLUE	
6V AC/DC	EICR06BA9	EICG06BA9	EICA06BA9	EICW06BA9	EICB06BA9	
12V AC/DC	EICR12BA9	EICG12BA9	EICA12BA9	EICW12BA9	EICB12BA9	
24V AC/DC	EICR24BA9	EICG24BA9	EICA24BA9	EICW24BA9	EICB24BA9	
130V AC only	EICR130BA9	EICG130BA9	EICA130BA9	EICW130BA9	EICB130BA9	
230V AC only	EICR230BA9	EICG230BA9	EICA230BA9	EICW230BA9	EICB230BA9	
PRICE						
Current -	6V AC/DC	≤10mA	24V AC/DC	≤10mA	230V AC only	≤3mA
	12V AC/DC	≤10mA	130V AC only	≤5mA		

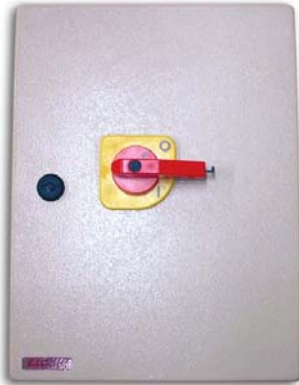


6V AC/DC, 12V AC/DC, 24V AC/DC types are fitted with bridge rectifier and are non-polarized. (i.e. on DC operation + (Positive) terminal can be connected to either the centre or to the side contacts.)

Fuse & Load Break Switches
SZF Fuse Switches - DIN Type (fuse links not supplied)


POLES	RATING	FUSE	SIZE	PART NUMBER	TRADE PRICE
3	125A	NH 00	SZ2	SZ2F3-125	
3	160A	NH 00	SZ2	SZ2F3-160**	
3	250A	NH 1	SZ3	SZ3F3-250	
3	315A	NH 2	SZ4	SZ4F3-315	
3	400A	NH 2	SZ4	SZ4F3-400**	
3	630A	NH 3	SZ5	SZ5F3-630	
4	160A	NH 00	SZ2	SZ2F4-160	
4	250A	NH 1	SZ3	SZ3F4-250	
4	400A	NH 2	SZ4	SZ4F4-400	
4	630A	NH 3	SZ5	SZ5F4-630	

Notes: - Order handles, extension shafts and covers separately (see SZF & SZD accessories list).
 - Other current ratings from 63A to 800A available on request.
 ** Switches for BS style fuses also available.


Metal Enclosed Fuse Switches (fuse links not supplied)

POLES	RATING	FUSE	ENCLOSURE	PART NUMBER	TRADE PRICE
3	160A	NH 00	H400xW300xD200	SZ2F3-160M	
3	250A	NH 1	H500xW400xD200	SZ3F3-250M	
3	400A	NH 2	H700xW500xD250	SZ4F3-400M	

Notes: - Metal enclosed fuse switches come complete with enclosure and door interlock handle.
 - Enclosures are from our CR painted steel range.

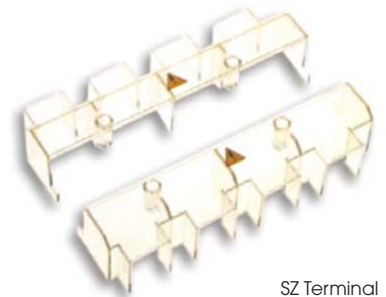
SZF & SZD Accessories

DESCRIPTION		TO SUIT SIZE	PART NUMBER	TRADE PRICE	
Door Interlock Handles					
Black 70mm		SZ1 - SZ2	88001		
Black 120mm		SZ3 - SZ4	88003		
Black 160mm #		SZ5	88005		
Red / Yellow 70mm		SZ1 - SZ2	88002		
Red / Yellow 120mm		SZ3 - SZ4	88004		
Red / Yellow 160mm #		SZ5	88006		
TO SUIT SIZE	PART No.	TRADE PRICE	SUIT SIZE	PART No.	TRADE PRICE
Terminal Covers			Main Contact Covers		
SZ1 Upper	88050		Fuse Switches only:		
SZ1 Lower	88051		SZ1F	88180	
SZ2 Upper	88052		SZ2F	88181	
SZ2 Lower	88053		SZ3F	88380	
SZ3 Upper	88350		SZ4F	88183	
SZ3 Lower	88351		SZ5F	88184	
SZ4 Upper	88054		Load Break Switches only:		
SZ4 Lower	88055		SZ1D	88060	
SZ5 Upper#	88056		SZ2D	88061	
SZ5 Lower#	88057		SZ3D	88360	
SZ5 Upper+	88058		SZ4D	88062	
SZ5 Lower+	88059		SZ5D	88063	
Standard Shafts (SUPPLIED WITH SWITCHES)					
SIZE	DEPTH		SIZE	DEPTH	
	MIN	MAX		MIN	MAX
SZ1D	116	247	SZ1F	157	260
SZ2D	124	255	SZ2F	165	268
SZ3D	148	261	SZ3F	189	280
SZ4D	174	276	SZ4F	215	296
SZ5D	213	306	SZ5F	257	320

Notes: - Auxiliary switches, change-over interlocks and other accessories available.
 # For SZ5F and up to 1250A.
 + For SZ5D 1600A and 2000A



SZ Handles

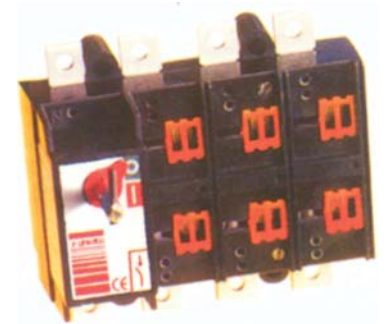


SZ Terminal Covers

Extension Shafts are available but not recommended.
 Alternative is to space the mounting feet off the mounting plate

SZD Load Break/Fault Make Switches

POLES	RATING	SIZE	PART NUMBER	TRADE PRICE
3	100A	SZ1	SZ1D3-100	
3	125A	SZ1	SZ1D3-125	
3	160A	SZ2	SZ2D3-160	
3	200A	SZ2	SZ2D3-200	
3	250A	SZ2	SZ2D3-250	
3	315A	SZ3	SZ3D3-315	
3	400A	SZ3	SZ3D3-400	
3	630A	SZ4	SZ4D3-630	
3	800A	SZ5	SZ5D3-800	
3	1000A	SZ5	SZ5D3-1000	
3	1250A	SZ5	SZ5D3-1250	
3	1600A	SZ5	SZ5D3-1600	
3	2000A	SZ5	SZ5D3-2000	
4	125A	SZ1	SZ1D4-125	
4	250A	SZ2	SZ2D4-250	
4	400A	SZ3	SZ3D4-400	
4	630A	SZ4	SZ4D4-630	
4	1000A	SZ5	SZ5D4-1000	
4	2000A	SZ5	SZ5D4-2000	



Notes: - Order handles, extension shafts and covers separately (see SZF & SZD accessories table on page 22).
 - Other current ratings from 100A to 3150A available on request.

Metal Enclosed Load Break/Fault Make Switches

POLES	RATING	ENCLOSURE	PART NUMBER	TRADE PRICE
3	125A	H300 x W300 x D150	SZ1D3-125M	
3	160A	H400 x W300 x D150	SZ2D3-160M	
3	250A	H400 x W300 x D150	SZ2D3-250M	
3	400A	H500 x W400 x D200	SZ3D3-400M	
3	630A	H600 x W400 x D200	SZ4D3-630M	



Notes: - Metal enclosed load break switches come complete with enclosure and door interlock handle.
 - Enclosures are from our CR painted steel range.



SM Switches shown with handles & shafts

SM Load Break Switches

POLES	RATING	PART NUMBER	TRADE PRICE
3	40A	SM3-40	
3	80A	SM3-80	
3	125A	SM3-125	

Notes: - Order handles and extension shafts separately (see SM accessories table).
 - Other current ratings from 16A to 160A and 4-pole versions available on request.



SM handles & shafts

SM Accessories

DESCRIPTION	PART NUMBER	TRADE PRICE
Door Interlock Handle: Black IP65	89500	
Door Interlock Handle: Red / Yellow IP65	89501	
Extension Shaft: 100 long x 8 x 8 mm	89535-100	
Extension Shaft: 200 long x 8 x 8 mm	89535-200	
Extension Shaft: 300 long x 8 x 8 mm	89535-300	

Notes: - Auxiliary switches and other accessories available on request



Direct-On-Line (DOL) Starters
- In Plastic Enclosure IP65

Design

- Shock-proof plastic, self extinguishing material
- Ingress Protection Rating: IP65
- Dimensions: H203 x W95 x D120mm
- Entry: 4x 20mm holes

Ordering Information

<p>GHDOL - B - 23 - 9 - 400</p> <p>DOL Starter</p> <p>Contactor Size B, C or D (Max Power)</p> <p>Overload Type RTD23E^① (or RTD32E^②)</p> <p>Overload Rating (Max Amps^③ -see rating table)</p> <p>Coil Voltage (24, 48, 110, 230, or 400 Vac)</p>		
MAX POWER	PART NUMBER ^③	TRADE PRICE ^③
<p>4 kW</p> <p>5.5 kW</p> <p>7.5 kW</p>	<p>GHDOL-B-23-__-__</p> <p>GHDOL-C-23-__-__</p> <p>GHDOL-D-23-__-__</p>	<p>RTD23E Overload available while stocks last</p>



Max Amps (Overload Rating)

CURRENT RANGE	MAX AMPS	TYPE RTD23E ^①	TYPE RTD32 ^②
0.4 ~ 0.6A	0.6	RTD23E-0.6	RTD32-0.6
0.6 ~ 0.9A	0.9	RTD23E-0.9	RTD32-0.9
0.8 ~ 1.2A	1.2	RTD23E-1.2	RTD32-1.2
1.2 ~ 1.8A	1.8	RTD23E-1.8	RTD32-1.8
1.8 ~ 2.7A	2.7	RTD23E-2.7	RTD32-2.7
2.7 ~ 4A	4	RTD23E-4	RTD32-4
4 ~ 6A	6	RTD23E-6	RTD32-6
6 ~ 9A	9	RTD23E-9	RTD32-9
8 ~ 11A	11	RTD23E-11	RTD32-11
10 ~ 14A	14	RTD23E-14	RTD32-14
13 ~ 18A	18	RTD23E-18	RTD32-18

Notes: ^① GHDOL-B-23-__-__ starters include the RTD23E overload relay fitted as standard.
^② Select "Max Amps" from Overload Rating Table.
^③ Trade Prices are for starters fitted with the standard RTD23E overload relay. Starters with the RTD32 overload relay are available on request - POA.

Enclosed Manual Motor Starters (Single or 3-Phase)

- The MMS incorporates manual push button operation. This combines the benefits of a circuit breaker with an adjustable thermal overload for motor protection.
- Shock-proof plastic enclosure IP55
- Short circuit protection
- Overload protection
- Phase failure protection
- Signalling - using auxiliary contact block

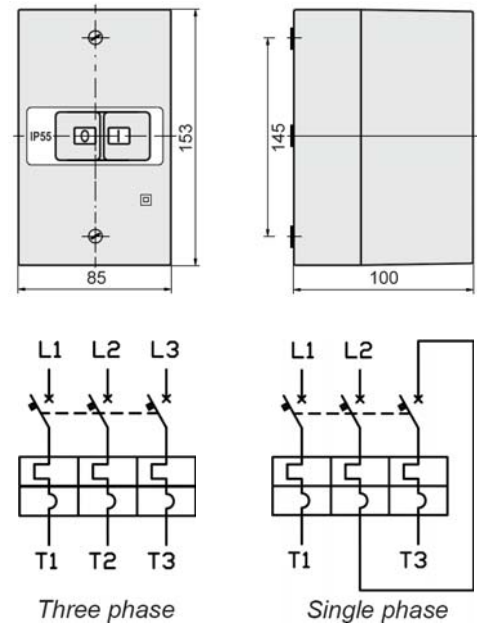


HO-55

GHA32-x

Component Selection

DESCRIPTION	PART NUMBER	TRADE PRICE
MMS: 0.1 ~ 0.16 Amp	GHA32-0.16A	
0.16 ~ 0.25 Amp	GHA32-0.25A	
0.25 ~ 0.4 Amp	GHA32-0.4A	
0.4 ~ 0.63 Amp	GHA32-0.63A	
0.63 ~ 1.0 Amp	GHA32-1.0A	
1.0 ~ 1.6 Amp	GHA32-1.6A	
1.6 ~ 2.5 Amp	GHA32-2.5A	
2.5 ~ 4.0 Amp	GHA32-4.0A	
4.0 ~ 6.3 Amp	GHA32-6.3A	
6.3 ~ 10 Amp	GHA32-10A	
Refer Page 36 for full specs		
Plastic Enclosure - IP55	HO-55	
Plastic Enclosure - IP55	FP-55	
Aux Contact - 1NO/1NC Side	HS11	
Aux Contact - 2NO Side	HS20	
Aux Contact - 1NO Top	HSV10	
Aux Contact - 1NC Top	HSV01	
Undervoltage Release - 400V	UR 380/50	
Undervoltage Release - 230V	UR 220/50	



Note: In situations where restart on a power failure is an issue, use an undervoltage release module for additional protection.

Star-Delta Starters

- In Metal Enclosure IP55
- (Option - Stainless Steel)

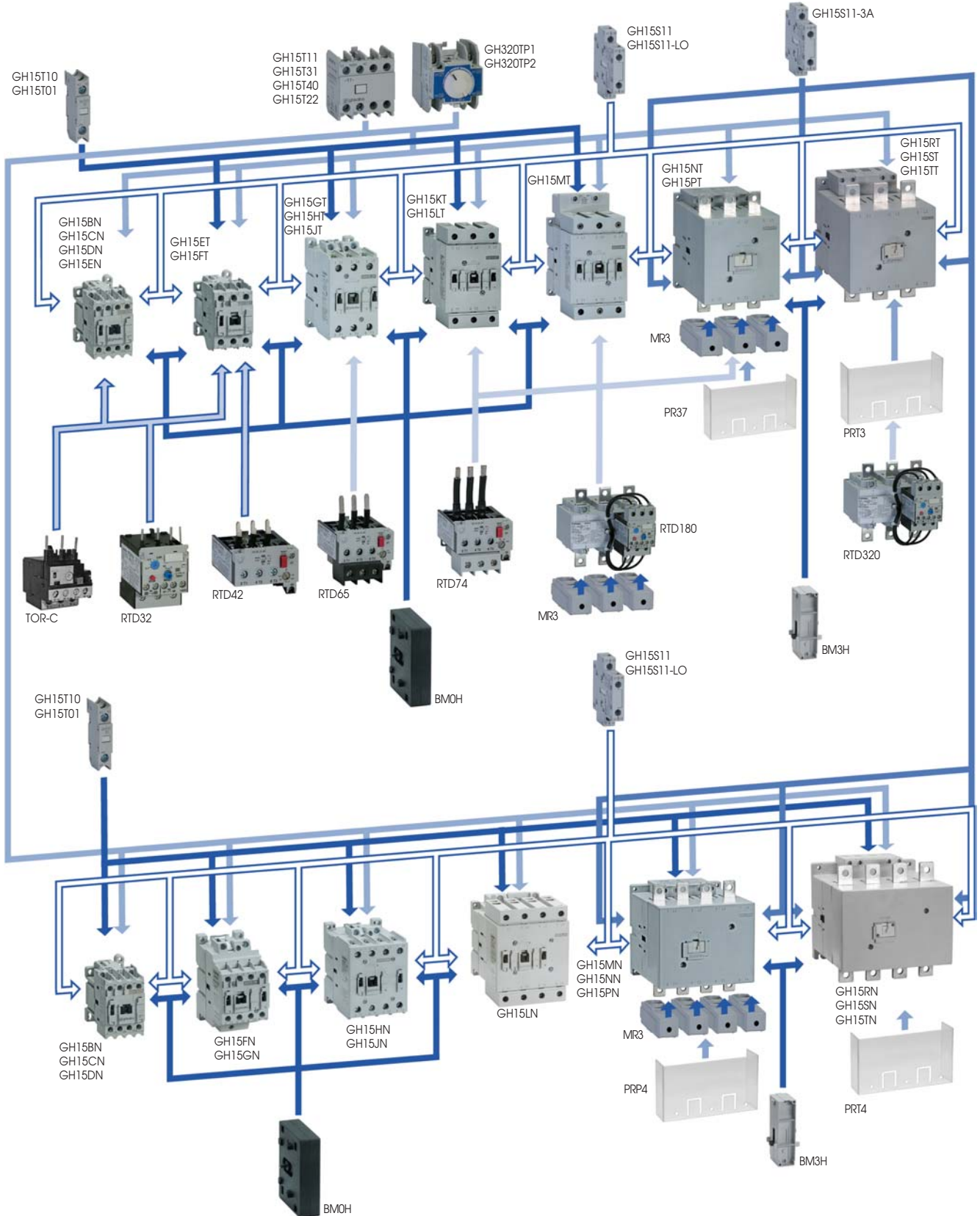


- Star-Delta Starters provide an economic method of reduced voltage starting. The method reduces the starting current and starting torque by approximately 33% of the DOL values for a given motor.
- In the below Star-Delta Starters, the overload relay is electrically in the phase windings of the motor and provide single phase protection. The overload operates on phase current - not line current.
- Set overload current to the phase current. Multiply FLC x 0.577.
- Larger sizes and custom built starters are also available on request.

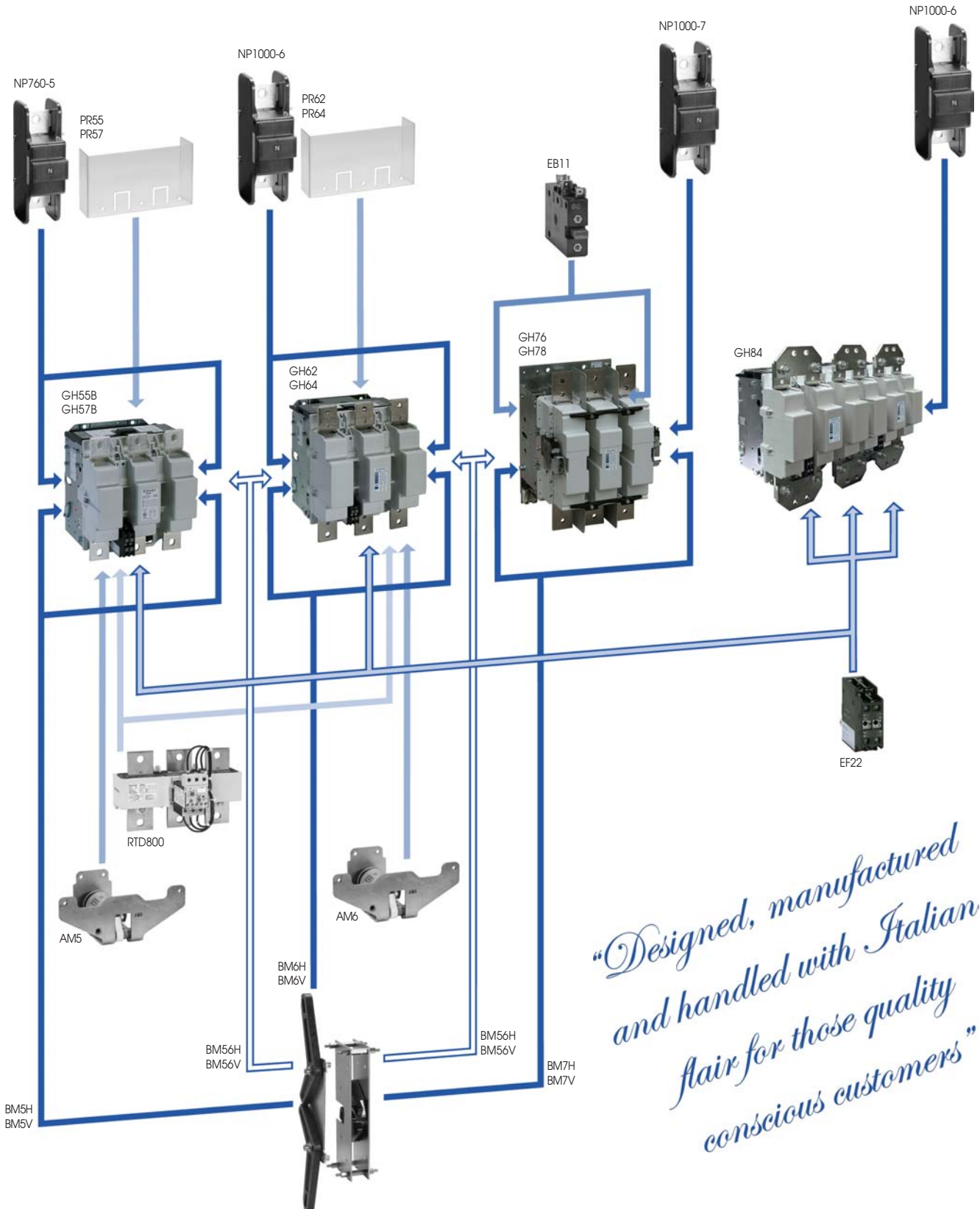
MAX POWER	DIMENSIONS H x W x D mm	PART NUMBER	TRADE PRICE
11kW (15hp)	300 x 300 x 200	SEOC-211 M	
11kW (15hp)	300 x 300 x 200	SEOC-211 MP	
18.5kW (25hp)	300 x 300 x 200	SEOC-218 M	
18.5kW (25hp)	300 x 300 x 200	SEOC-218 MP	
22kW (30hp)	400 x 300 x 200	SEOC-222 M	
22kW (30hp)	400 x 300 x 200	SEOC-222 MP	

Notes: ● P = Includes Start and Stop Pushbuttons

The PRODUCT



The CHOICE

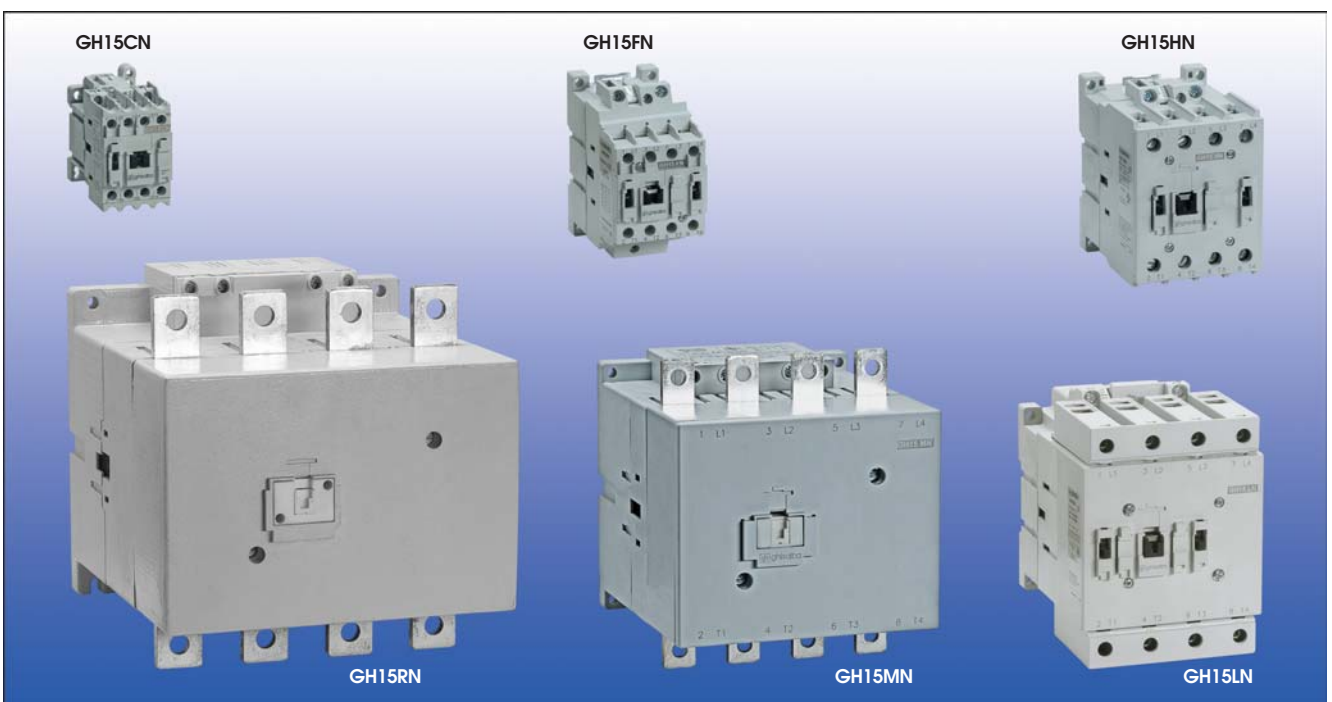


*“Designed, manufactured
and handled with Italian
flair for those quality
conscious customers”*

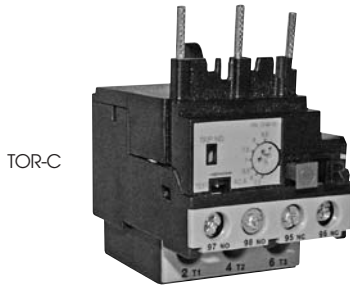
Standard 4 Pole AC Contactors (Power Poles)

AC3 ①		AC1 ②	POWER POLES		PART NUMBER	MAX AUX ③		DIMENSIONS			TRADE PRICE			
kW	Amp	Amp	N/O	N/C		N/O	N/C	High	Wide	Deep				
4 N/O Power Poles														
4	9	30	4	-	GH15BN-4-00- ④ AC	6	4	80	45	85				
7.5	16	40			GH15DN-4-00- ④ AC									
15	32	50			GH15FN-4-00- ④ AC									
20	40	63			GH15GN-4-00- ④ AC	7	5	114	60	105				
22	50	80			GH15HN-4-00- ④ AC									
30	63	100			GH15JN-4-00- ④ AC									
45	95	135			GH15LN-4-00- ④ AC									
55	115	200			GH15MN-4-00- ④ AC	6	4	170	147	162				
75	150	250			GH15NN-4-00- ④ AC									
90	175	300			GH15PN-4-00- ④ AC									
110	210	350			GH15RN-4-00- ④ AC									
132	260	450			GH15SN-4-00- ④ AC									
160	315	600			GH15TN-4-00- ④ AC									
4 N/C Power Poles														
4	9	30			-	4	GH15BN-04-00- ④ AC	6	4	80		45	85	
18.5	40	63					GH15GN-04-00- ④ AC							
45	95	135	GH15LN-04-00- ④ AC	7			5	114	79	109				
2NO / 2NC Power Poles														
4	9	30	2	2	GH15BN-22-00- ④ AC	6	4	80	45	85				
18.5	40	63			GH15GN-22-00- ④ AC									
45	95	135			GH15LN-22-00- ④ AC	7	5	114	79	109				

Notes: ① Complete the Part Number with Coil Voltage. Standard voltages are: -AC: 24,48,110,230,400V -DC: 24,48,110,220V (POA)
 ② Rated at 40°C.
 ③ Maximum number of NO or NC auxiliary contacts that can be fitted to contactor.
 - 4th add-on neutral switching poles are available for standard 3-pole contactors sizes GH55B to GH78, on request.



Thermal Overload Relays - For Standard Contactors



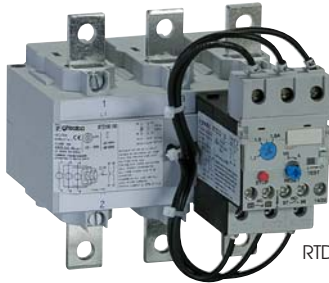
TOR-C



RTD32



RTD65



RTD180

New Type PART No.	CURRENT RANGE	TRADE PRICE	PART NUMBER	CURRENT RANGE	TRADE PRICE
New Type for GH15BN~DN			Suit GH15BN,CN,DN,ET&FT		
TOR-C 0.63	0.45 ~ 0.63A		RTD32-0.6	0.4 ~ 0.6A	
TOR-C 0.8	0.55 ~ 0.8A		RTD32-0.9	0.6 ~ 0.9A	
TOR-C 1	0.75 ~ 1A		RTD32-1.2	0.8 ~ 1.2A	
TOR-C 1.3	0.9 ~ 1.3A		RTD32-1.8	1.2 ~ 1.8A	
TOR-C 1.6	1.1 ~ 1.6A		RTD32-2.7	1.8 ~ 2.7A	
TOR-C 2	1.4 ~ 2A		RTD32-4	2.7 ~ 4.0A	
TOR-C 2.5	1.8 ~ 2.5A		RTD32-6	4.0 ~ 6.0A	
TOR-C 3.2	2.3 ~ 3.2A		RTD32-9	6.0 ~ 9.0A	
TOR-C 4	2.9 ~ 4A		RTD32-11	8.0 ~ 11A	
TOR-C 4.8	3.5 ~ 4.8A		RTD32-14	10 ~ 14A	
TOR-C 6.3	4.5 ~ 6.3A		RTD32-18	13 ~ 18A	
TOR-C 7.5	5.5 ~ 7.5A		RTD32-24	17 ~ 24A	
TOR-C 10	7.2 ~ 10A		RTD32-32	23 ~ 32A	
TOR-C 12.5	9 ~ 12.5A		U3-32SM	Mounting Base	
Suit GH15GN~JT			Suit GH15KT-MT		
RTD65-28	20 ~ 28A		RTD74-74	60 ~ 74A	
RTD65-42	28 ~ 42A		Suit GH15RT~TT		
RTD65-52	40 ~ 52A		RTD180-90	60 ~ 90A	
RTD65-65	52 ~ 65A		RTD180-120	80 ~ 120A	
U3-42G	Mounting Base		RTD180-180	120 ~ 180A	
LG58302	Base Leads				



GH320TP1



GH15T10



GH15T40



GH15S11

Accessories - For Standard Contactors

PART NUMBER	DESCRIPTION	TRADE PRICE	PART NUMBER	DESCRIPTION	TRADE PRICE
Auxiliary Contacts - Suit GH15BN~TT			Mechanical Interlocks - Horizontal Type		
GH15T01	Top Mount: 1NC		BM0H	For GH15BN~LT, LN, MT	
GH15T10	Top Mount: 1NO		BM3H	For GH15MN~TT, TN	
GH15T11	Top Mount: 1NO + 1NC		BM5H	For GH52B~57B	
GH15T22	Top Mount: 2NO + 2NC		BM6H	For GH62~64	
GH15T31	Top Mount: 3NO + 1NC		BM7H	For GH76~78	
GH15T40	Top Mount: 4NO		Connecting Links - Use With RTD32 Overload Relay		
GH15S11	Side Mount: 1NO + 1NC		WKP4	Parallel for GH15BN,CN&DN	
Pneumatic Timers - Top Mount			WKC4	Reversing for GH15BN,CN&DN	
GH320TP1	0.3 ~ 30 sec, 1NO+1NC	SUSPENDED - replacement plending	WKC4B	Reversing for GH15BN,CN&DN	
GH320TP2	10 ~ 180 sec, 1NO+1NC		WKP3	Parallel for GH15ET~FT	
Auxiliary Contacts - Suit GH44~78			WKC3	Reversing for GH15ET~FT	
EF22	GH44~64: 2NO + 2NC		Notes: ① Vertical versions available on request for GH44~78. Interlocks for mixed sizes also available on request.		
EB11	GH76~78: 1NO + 1NC				

Mini Contactors

AC3		AC1	PART NUMBER	AUXILIARY			MOUNTING	DIMENSIONS			TRADE PRICE
kW	Amp	Amp		Supplied	Maximum	Type		High	Wide	Deep	
3 Pole Contactors (plus auxiliaries)											
4	9	20	GHMC-3-10- ① AC	1NO	4 additional	Top Mounting GHTR02 (2NC) GHTR11 (1NO + 1NC) GHTR22 (2NO + 2NC) GHTR40 (4NO)	DIN Rail or Panel Mount	57.5	45	49	
			GHMC-3-01- ① AC	1NC							
			GHMC-3-10- ① DC	1NO							
			GHMC-3-01- ① DC	1NC							
5.5	12	20	GHMD-3-10- ① AC	1NO							
			GHMD-3-01- ① AC	1NC							
			GHMD-3-10- ① DC	1NO							
			GHMD-3-01- ① DC	1NC							
3 Pole Reversing Contactors (plus auxiliaries)											
4	9	20	GHMC-3-10/R- ② AC	1NO ea	4 additional per contactor	Top Mounting GHTR02 (2NC) GHTR11 (1NO + 1NC) GHTR22 (2NO + 2NC) GHTR40 (4NO)	DIN Rail or Panel Mount	57.5	94	49	
			GHMC-3-01/R- ② AC	1NC ea							
			GHMC-3-10/R- ② DC	1NO ea							
			GHMC-3-01/R- ② DC	1NC ea							
5.5	12	20	GHMD-3-10/R- ② AC	1NO ea							
			GHMD-3-01/R- ② AC	1NC ea							
			GHMD-3-10/R- ② DC	1NO ea							
			GHMD-3-01/R- ② DC	1NC ea							

Notes: ① Complete Part Number with Coil Voltage. Stocked coil voltages are: -AC: 24, 110, 230, 400V -DC: 24V. Other coil voltages on request.
 ② Complete Part Number with Coil Voltage. Stocked coil voltage is 230Vac.
 - 4 pole models also available on request.

Thermal Overload Relays - For Mini Contactors

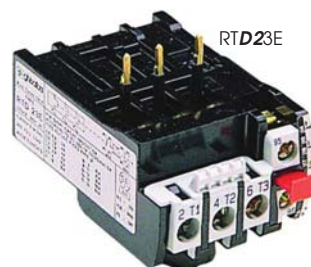
PART NUMBER	CURRENT RANGE	TRADE PRICE
RTD23E-0.9	0.6 ~ 0.9A	
RTD23E-1.2	0.8 ~ 1.2A	
RTD23E-1.8	1.2 ~ 1.8A	
RTD23E-2.7	1.8 ~ 2.7A	
RTD23E-4	2.7 ~ 4.0A	
RTD23E-6	4.0 ~ 6.0A	
RTD23E-9	6.0 ~ 9.0A	
RTD23E-11	8.0 ~ 11A	
RTD23E-14	10 ~ 14A	
RTD23E-18	13 ~ 18A	

RTD23E Overload available while stocks last



Accessories - For Mini Contactors

PART NUMBER	DESCRIPTION	TRADE PRICE
Auxiliary Contacts		
GHTR11	Top Mount: 1NO + 1NC	
GHTR02	Top Mount: 2NC	
GHTR22	Top Mount: 2NO + 2NC	
GHTR40	Top Mount: 4NO	



Standard AC Contactor Ratings

For the Switching of Capacitors, Transformers, Lighting Circuits


CONTACTOR TYPE	CAPACITOR SWITCHING (AC-6b)						TRANSFORMER SWITCHING (AC-6a)			LIGHT CIRCUIT SWITCHING (Ue ≤ 440)		
	I peak max (kA)	Ie Ue ≤ 500V t ≤ 55°C (A)	Max Rated Power (kVAR)				t ≤ 55°C Ie max (A) (max peak current = 30 Ie)			FLUORESCENT LAMPS AC-5a (t ≤ 55°C)		INCANDESCENT LAMPS AC-5b (t ≤ 55°C) Ie max (A)
			230V	400V	500V	690V	400V	500V	690V	Not Compensated Ie max (A)	Compensated Ie max (A)	
GH15BN	0.4	9	4	6	7.5	7.5	4	4	3	9	6	8
GH15CN	0.5	12	5	8	10	10	6	6	4.5	12	8	10
GH15DN	0.6	16	6	10	12.5	12.5	8	8	6	15	11	12
GH15ET	1.2	23	9	15	20	20	12	12	9	22	15	17
GH15FT	1.2	30	11	20	25	25	15	15	11	30	20	22
GH15GT	2.5	38	15	25	30	30	20	20	15	38	26	32
GH15HT	2.5	45	17	30	35	35	25	25	19	45	30	40
GH15JT	2.5	55	20	35	45	45	30	30	22	60	40	50
GH15KT	2.5	63	23	40	50	50	36	36	27	70	50	58
GH15LT	2.5	75	28	50	60	60	40	40	30	80	70	80
GH15MT	2.5	90	35	60	75	75	50	50	40	100	70	80
GH15NT	2.5	120	45	80	100	100	65	65	50	120	85	100
GH15PT	3	155	60	100	130	130	80	80	60	140	100	120
GH15RT	5	195	75	130	170	170	90	90	90	180	130	160
GH15ST	5	225	90	155	194	194	120	120	120	230	170	190
GH15TT	5	255	100	170	220	220	142	142	142	280	200	220
GH55B	8	300	115	200	260	260	203	203	180	360	300	260
GH57B	9	370	145	250	320	320	248	248	225	450	360	315
GH62	12	440	170	300	380	380	315	315	284	570	460	440
GH64	14	520	200	350	450	450	390	390	215	700	550	500
GH76	16	680	260	450	590	590	450	450	450	850	660	560
GH78	18	760	290	500	660	660	540	540	540	1000	800	630

Capacitor Switching Contactors

RATED POWER (kVAR)		MAX FUSE CURRENT	AUXILIARY SUPPLIED	PART NUMBER	TRADE PRICE
220/240V	380/415V				
7.5 kVAR	15 kVAR	32 A	1NO	GH15RFT1-3-10- ①	
10 kVAR	25 kVAR	50 A	-	GH15RFT2-3-00- ①	
15 kVAR	30 kVAR	80 A	-	GH15RFT3-3-00- ①	
25 kVAR	50 kVAR	125 A	-	GH15RFT5-3-00- ①	

Notes: ① Complete the Part Number with Coil Voltage. Standard voltages are: -AC: 24,48,110,230,400V

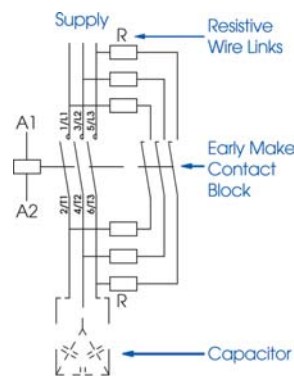
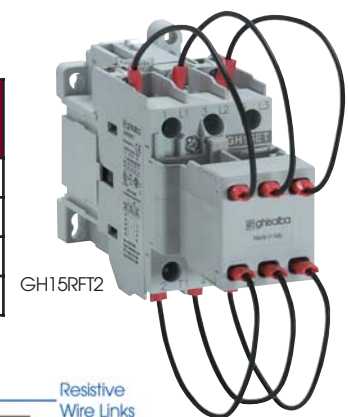
Associated Products



SAMWHA
Power Factor Capacitors
For full range refer to page 95



JANITZA
Power Factor Controllers
Consult EIC



At switch on, the resistors limit the inrush current to the capacitor

Contactors With Low Consumption DC Coil - 3 Watts

For Automation and Control Applications:

- Consumption on pick-up and seal <3 Watt - for direct connection to PLC.
- Suppressor included to avoid electromagnetic interference and overvoltage.
- High resistance against shocks by means of permanent magnetic cores.
- Compactness: Only 45 mm wide.
- Coil Voltage: Standard 24Vdc; Optional 48,60,110,220 Vdc ②
- Compatibility with RTD32 thermal overload relay - refer page 30.



GH24DN3-10

AC3		AC1	PART NUMBER	AUXILIARIES		MOUNTING	DIMENSIONS				TRADE PRICE
kW	Amp	Amp		Supplied	Additional Max		High	Wide	Deep	Depth With Aux	
3 N/O Power Poles 400Vac - With Aux Contact ①											
4	10	25	GH24BN3-10-24	1NO	4NO or 4NC or a combination	35mm DIN Rail or Panel Mount	94	45	89	111	
4	10	25	GH24BN3-01-24	1NC							
5.5	14	25	GH24CN3-10-24	1NO							
5.5	14	25	GH24CN3-01-24	1NC							
7.5	18	32	GH24DN3-10-24	1NO							
7.5	18	32	GH24DN3-01-24	1NC							
11	22	32	GH24EN3-10-24	1NO							
11	22	32	GH24EN3-01-24	1NC							

Notes: ① Four power pole versions on request.
② Optional voltage on indent only.

Accessories - For Low Consumption Contactors

PART NUMBER	DESCRIPTION	RATINGS			TRADE PRICE
		AC1	AC15	DC13	
GH24T10	Aux Contact 1NO	10A	3A 230V 2A 400V	2A 60V 0.4A 110V 0.1A 220V	
GH24T01	Aux Contact 1NC				
BH24H	Mechanical Interlock				



GH24T10

Regular Contactors With AC/DC Coils (As Standard)

CONTACTOR SIZE	24V 50/60Hz 24V DC	48V 50/60Hz 48V DC	110-120V 50/60Hz 110V DC	220-240V 50/60Hz 220V DC	380-415V 50/60Hz 345-380V DC
GH15MT&MN	✓	✓	✓	✓	✗
GH15NT&NN	✓	✓	✓	✓	✗
GH15PT&PN	✓	✓	✓	✓	✗
GH15RT&RN	✓	✓	✓	✓	✗
GH15ST&SN	✓	✓	✓	✓	✗
GH15TT&TN	✓	✓	✓	✓	✗
			110-120V 50/60Hz 100-110V DC	220-240V 50/60Hz 200-220V DC	
GH55B-3-22	✓	✓	✓	✓	✓
GH57B-3-22	✓	✓	✓	✓	✓
GH62-3-22	✓	✓	✓	✓	✓
GH64-3-22	✓	✓	✓	✓	✓

Notes: ● GH15BN...LT Contactors:

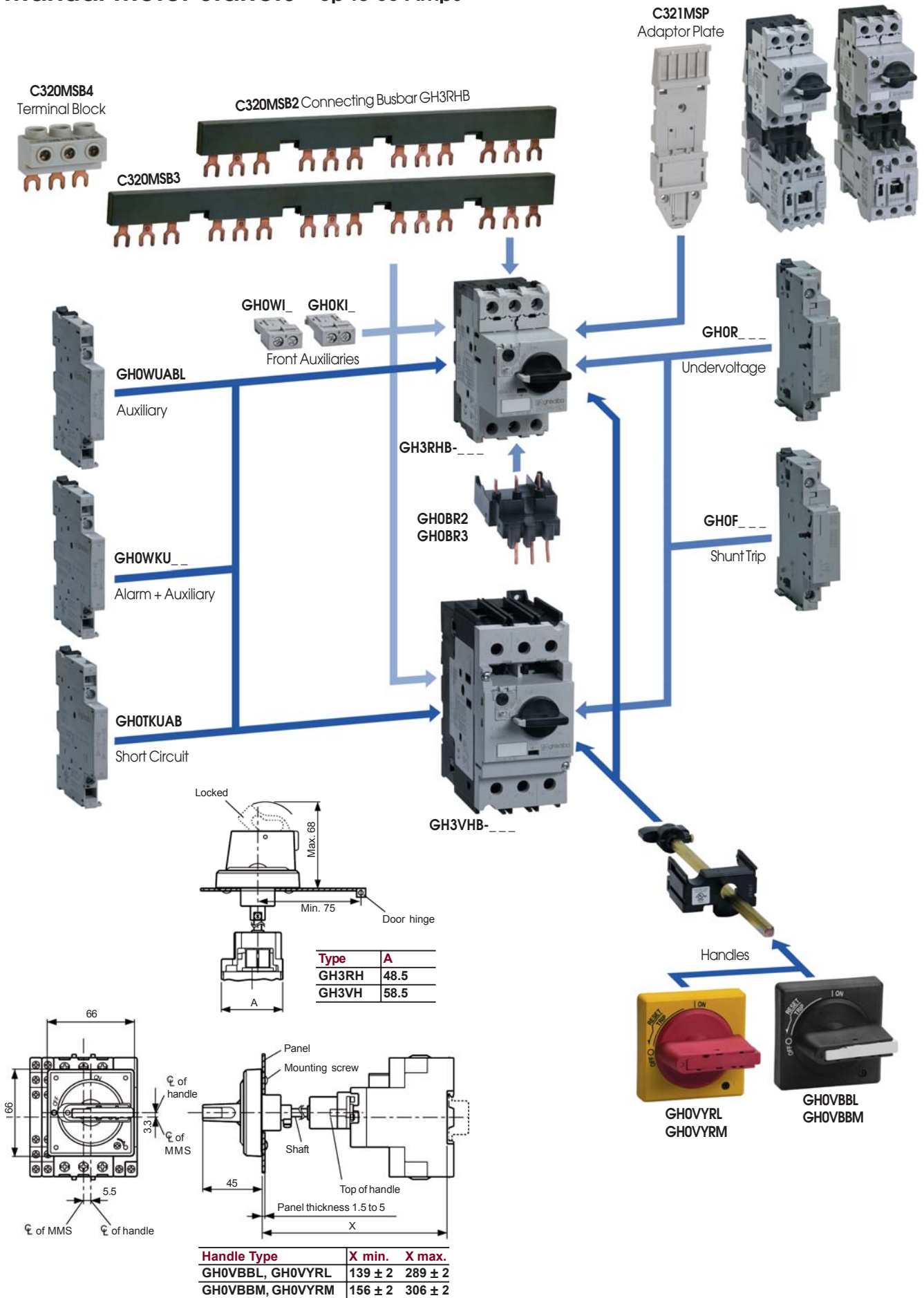
- Standard coil kits are available for these contactors. The kit consists of a dual wound coil with a NC-LO auxiliary contact block.
- For these contactors fitted with a DC coil, add the voltage and 'DC' to the part number (eg. GH15BN-3-10-24DC) - POA.



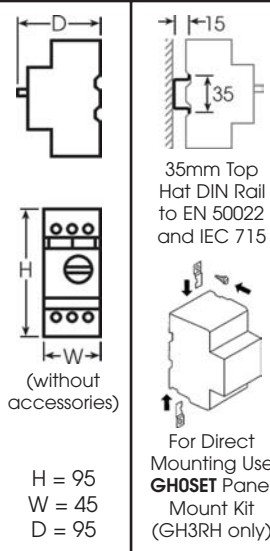
GH15CN

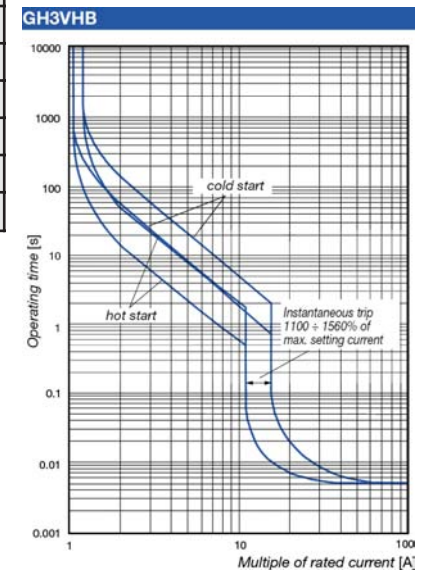
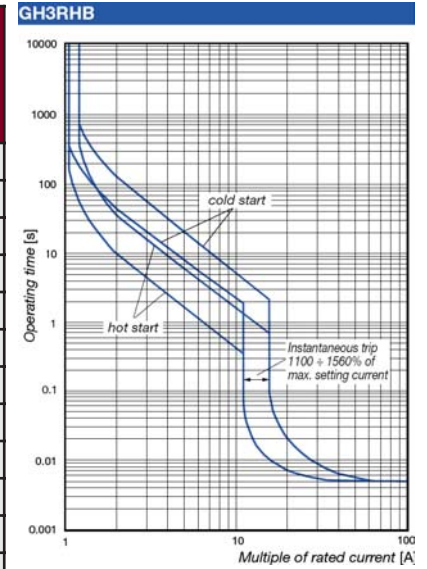
GH15MT

Manual Motor Starters - Up to 63 Amps



Manual Motor Starters - Rotary Switch Type GH3RH and GH3VH

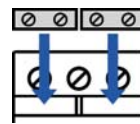
RATINGS (A)	PART NUMBER	RATED BREAKING CAPACITY (kA) IEC 60947-2				DIMENSIONS (mm)	MOUNTING	TRADE PRICE
		240VAC		415VAC				
		Icu	Ics	Icu	Ics			
0.1 ~ 0.16	GH3RHB-P16	100	100	100	100			
0.16 ~ 0.25	GH3RHB-P25	100	100	100	100			
0.25 ~ 0.4	GH3RHB-P40	100	100	100	100			
0.4 ~ 0.63	GH3RHB-P63	100	100	100	100			
0.63 ~ 1	GH3RHB-001	100	100	100	100			
1 ~ 1.6	GH3RHB-1P6	100	100	100	100			
1.6 ~ 2.5	GH3RHB-2P5	100	100	100	100			
2.5 ~ 4	GH3RHB-004	100	100	100	100			
4 ~ 6.3	GH3RHB-6P3	100	100	100	100			
6.3 ~ 10	GH3RHB-010	100	100	100	100			
9 ~ 13	GH3RHB-013	100	100	100	100			
11 ~ 16	GH3RHB-016	100	100	50	38			
14 ~ 20	GH3RHB-020	100	100	50	38			
19 ~ 25	GH3RHB-025	100	100	50	38			
24 ~ 32	GH3RHB-032	100	100	50	38			
28 ~ 40	GH3VHB-040	100	100	50	38			
35 ~ 50	GH3VHB-050	100	100	50	38			
45 ~ 63	GH3VHB-063	100	100	50	38			



Accessories

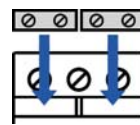
PART NUMBER	DESCRIPTION	TRADE PRICE
Side Auxiliary Contacts		
GH0WUABL	On/Off Indication - 1NO + 1NC	
GH0WKUAA	Alarm + Aux - 1NOALARM + 1NO	
GH0WKUBA	Alarm + Aux - 1NOALARM + 1NC	
GH0WKUAB	Alarm + Aux - 1NCALARM + 1NO	
GH0WKUBB	Alarm + Aux - 1NCALARM + 1NC	
GH0TKUAB	Short-Circuit Alarm - 1NO + 1NC	
Top or Front Auxiliary Contacts		
GH0WIA	Off/On Indication - 1NO	
GH0WIB	Off/On Indication - 1NC	
GH0KIA	Trip Indication - 1NO	
GH0KIB	Trip Indication - 1NC	
Connection Accessories		
C320MSB2	Busbar GH3RH - 4x MMS	
C320MSB3	Busbar GH3RH - 5x MMS	
C320MSB4	Terminal Block	
Link Modules		
GH0BR2	GH3RH to GH15BN~DN	
GH0BR3	GH3RH to GH15ET&FT	
Adaptor Plate		
C321MSP	GH3RH to GH15BN~FT	
Other Accessories		
GH0SET	Panel Mounting Feet - GH3RH	
GH0TCV	IP20 Terminal Covers - GH3VH	

Mounting Top or Front Auxiliary Contacts:



2x GH0W_ _

OR



1x GH0W_ _ & 1x GH0K_ _
(must be in positions shown)



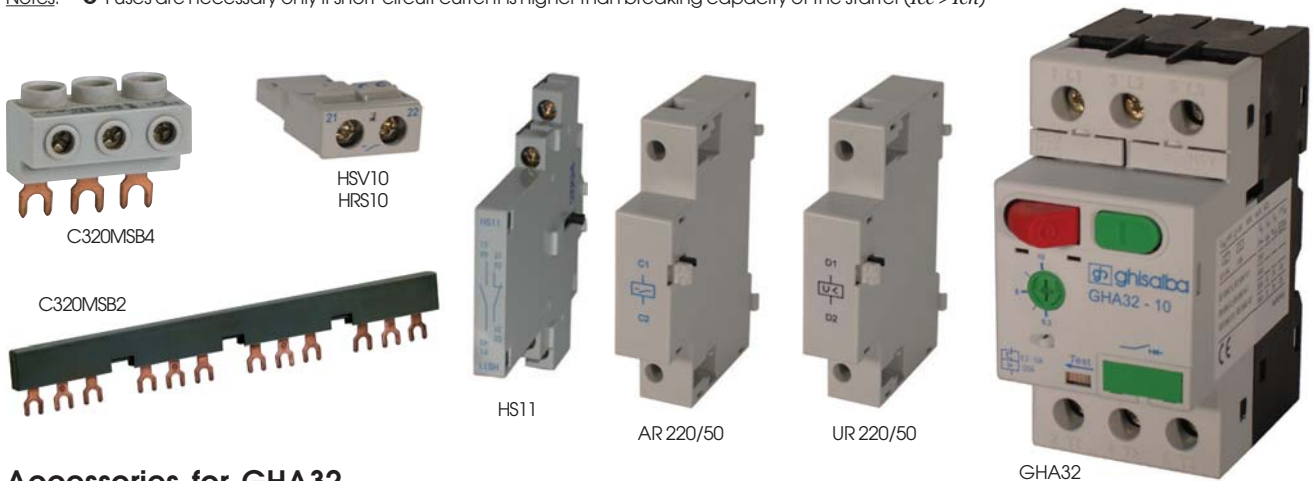
GH0KIA
Top Auxiliary

PART NUMBER	DESCRIPTION	TRADE PRICE
Under Voltage Release		
GH0RFZU	220-230V 50Hz / 240-260V 60Hz	
GH0RHZU	380-400V 50Hz / 400-460V 60Hz	
Shunt Trip Release Coil		
GH0FAZU	24V 50/60Hz	
GH0FFZU	220-230V 50Hz / 240-260V 60Hz	
GH0FHZU	380-400V 50Hz / 400-440V 60Hz	
GH0FKZUD	24-60V DC	
External Handles		
GH0VBBL	Black: Suit GH3RH	
GH0VYRL	Yellow-Red: Suit GH3RH	
GH0VBBM	Black: Suit GH3VH	
GH0VYRM	Yellow-Red: Suit GH3VH	

GHA32 Manual Motor Starters - Replaces GHA25

RATINGS (A)	PART NUMBER	SHORT CIRCUIT TRIP RESPONSE CURRENT	SHORT CIRCUIT BREAKING CAPACITY I_{cu} / I_{cs} (kA)		MAX BACK-UP FUSES aM (gG) ①		TRADE PRICE
			220/240V	380/415V	230V	400V	
0.1 ~ 0.16	GHA32-0.16	2.1 A	Switches are short-circuit proof for any value of prospective short-circuit current I_{cc}		No back-up fuse required		
0.16 ~ 0.25	GHA32-0.25	3.2 A					
0.25 ~ 0.4	GHA32-0.4	5.2 A					
0.4 ~ 0.63	GHA32-0.63	8.2 A					
0.63 ~ 1	GHA32-1	13 A					
1 ~ 1.6	GHA32-1.6	21 A					
1.6 ~ 2.5	GHA32-2.5	32 A					
2.5 ~ 4	GHA32-4	52 A					
4 ~ 6.3	GHA32-6.3	75 A					
6.3 ~ 10	GHA32-10	120 A					
9 ~ 14	GHA32-14	160 A	25 / 13	25 / 13	80 A	63 A	
13 ~ 18	GHA32-18	230 A	25 / 13	25 / 13	80 A	63 A	
17 ~ 23	GHA32-23	270 A	25 / 13	25 / 13	80 A	80 A	
20 ~ 27	GHA32-27	360 A	15 / 13	15 / 13	80 A	80 A	
25 ~ 32	GHA32-32	400 A	15 / 13	15 / 13	80 A	80 A	

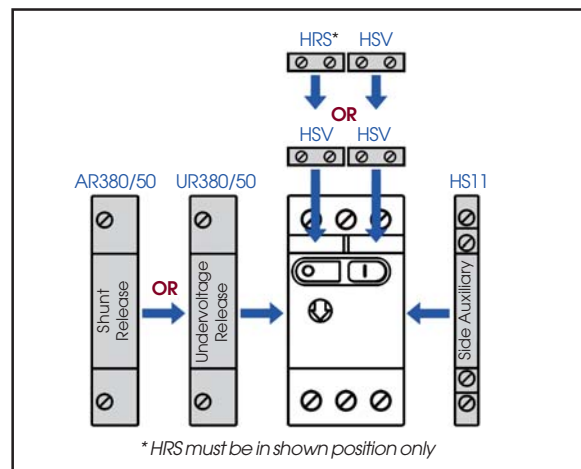
Notes: ① Fuses are necessary only if short-circuit current is higher than breaking capacity of the starter ($I_{cc} > I_{cn}$)



Accessories for GHA32

PART NUMBER	DESCRIPTION	TRADE PRICE
HS11	Aux Contact - Side 1NO + 1NC	
HS20	Aux Contact - Side 2NO	
HSV10	Aux Contact - Front 1NO	
HSV01	Aux Contact - Front 1NC	
HRS10	Aux Contact - Front-Trip 1NO	
HRS01	Aux Contact - Front-Trip 1NC	
UR 220/50	Undervoltage Release - 220~240V/50Hz	
UR 380/50	Undervoltage Release 380~415V/50Hz	
AR 220/50	Shunt Release - Coil 220~240V/50Hz	
AR 380/50	Shunt Release - Coil 380~415V/50Hz	
HO-55	Enclosure IP55 - Surface Mount	
FP-55	Enclosure IP55 - Flush Mount (in door)	
C320MSB2	3-Ph Connecting Busbar - 4x GHA32 ②	
C320MSB3	3-Ph Connecting Busbar - 5x GHA32 ②	
C320MSB4	Terminal Block	
C321MSP	Adaptor Plate	

Notes: ② Allows for 1x Side Auxiliary Contact

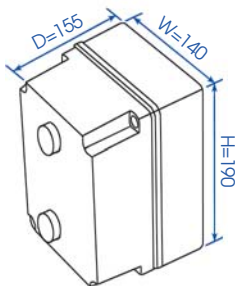


TECHNICAL SPECIFICATIONS:

Standards EN60947, IEC 947, VDE0660
 Approvals CULus
 Degree of Protection IP20

Roller Door Starters

Dimensions:



Key Switch OFF/ON (option)



RDS750

RDS750 – Basic Model

Specifications:

- Manual Operation
- Maximum Rating: 0.37kW
- Supply Voltage: 3 Phase + E
- Contact Rating: 9A (AC3)
- Plastic Enclosure
- Dimensions: 190H x 140W x 155D mm
- Options:
 - Security Key Switch (add K to part number)

QUALITY COMPONENTS FROM GHISALBA, GEWISS & DENKER

DESCRIPTION	PART NUMBER	TRADE PRICE
Basic Manual Starter	RDS750	
Manual Starter with Optional Key Switch	RDS750K	



RDS850K



FULL / MAN / HALF Switch (option)

Key Switch OFF/ON (option)

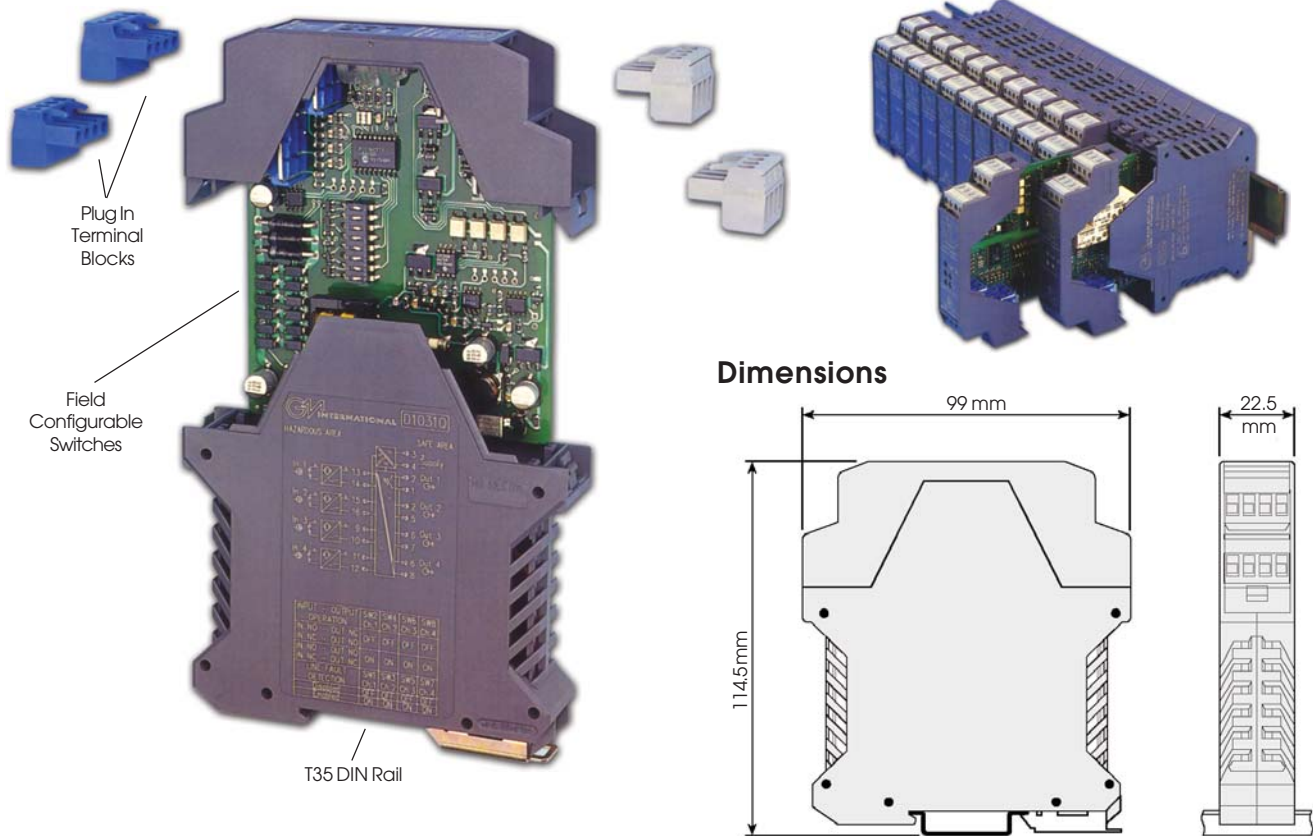
RDS800 – Starter with Selectable Functions

Specifications:

- Selectable Auto/Manual Operation
- Rating: 2.2kW (5A)
- Supply Voltage: 3 Phase + E
- Contact Rating: 9A (AC3)
- Electronic Overload Protection
- Plastic Enclosure
- Dimensions: 250H x 195W x 199D mm
- Options:
 - Adjustable Door Height: Auto Half Up and Auto Full Up (height is time based and is adjusted via an electronic timer)
 - Security Key Switch (add K to part number)

DESCRIPTION	PART NUMBER	TRADE PRICE
Semi-Automatic Starter	RDS800	
Semi-Auto Starter with Optional Key Switch	RDS800K	
Semi-Auto Starter with Adjustable Door Height	RDS850	
Semi-Auto Starter with Adjustable Door Height and Optional Key Switch	RDS850K	

Intrinsically Safe Barriers - D1000 Series



International Approvals

Intrinsically Safe Products



GM International's products have been granted IS certificates from the most credited notified bodies in the world. Certificates are available for ATEX (Europe), IECEx (International), Russian and Ukrainian standards, USA and Canada.

Certificates have been integrally scanned and are available for download from GM's website.



SIL Certifications according to IEC 61508 and IEC 61511



GM International offers a wide range of products that have been proved to comply with the most severe quality and safety requirements.

IEC 61508 and IEC 61511 standards represent a milestone in the progress of industry in the achievement of supreme levels of safety through the entire instrumented system lifecycle.



The majority of GM's products are SIL certified; reports and analyses from TUV and EXIDA are available for download from GM's website.

Marine Type Approval



GM International offers Type Approval Certificates for its line of Intrinsically Safe Isolators D1000 Series and Power Supplies for use in Marine and Offshore applications.

Certificates have been released both by Korean Register of Shipping and Det Norske Veritas.

Company Quality System

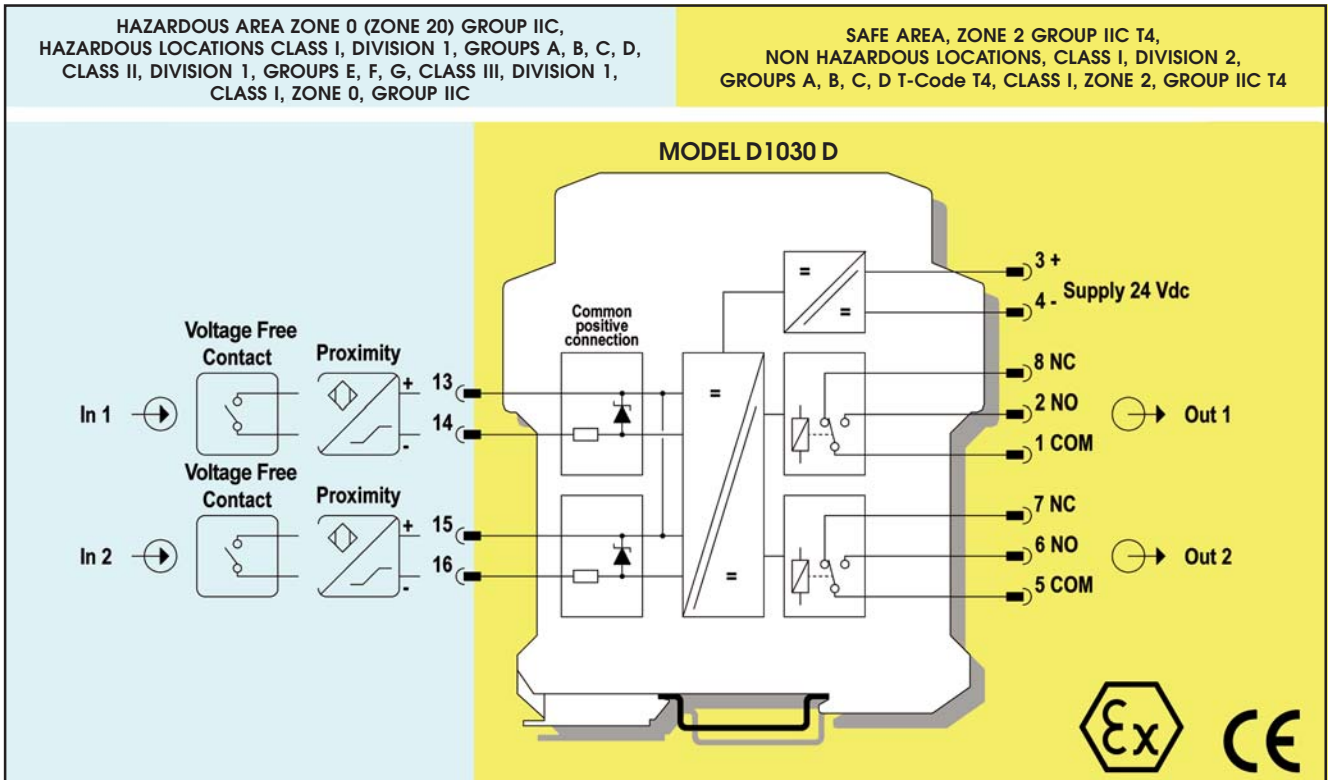


GM International's Production Quality System is certified by Det Norske Veritas (Norway) to be compliant with ATEX 94/9/EC Directive and ISO 9001/2000.

This means GM's production facilities are periodically re-assessed throughout the whole manufacturing process, to ensure that the highest quality standards are met.

All certificates are freely downloadable from www.gmintsr.com

Typical Function Diagram



Commonly Stocked Models















PART NUMBER	DESCRIPTION	TRADE PRICE
D1010D	2 Channel Analogue 4-20mA/0-20mA Input. 4-20mA/0-20mA (1-5V/0-5V) Safe Area Output. Hart compatible.	
D1030D	2 Digital Inputs (Dry Contact, Prox Sw). 2 Relay Output (2A 250V), 24VDC Supply.	
D1130D	2 Digital Inputs (Dry Contact, Prox Sw). 2 Relay Output (2A 250V), 85-264VAC Supply.	
D1043Q	4 Digital Outputs for Solenoid or Visual/Audiable Alarms.	

Notes: ① Single and multi-channel versions are available (1 to 4 channels)
 ② Power bus versions allow the modules to be plugged together with a common bus

Other modules may be held in stock or available on request. The range includes:

- **Digital Modules:-** 24VDC and 85-264VAC powered versions, relay and open collector output
- **Analogue Input and Output Modules:-** 4-20mA, 0-20mA (1-5V, 0-5V)
- **Signal Converters:-** 4-20mA, 0-20mA, 1-5V, 0-5V, 0-10V
- **Temperature / Potentiometer Transmitters:-** RTD, PT100, 100R – 10K
- **Strain Gauge Power Supplies**

**CONTACT EIC FOR FURTHER DETAILS ON THE RANGE OF
GM INTERNATIONAL MODULES**

Safety Switches: 2 Piece - Switch and Actuator	Safety Switches: For Hinged Guard Applications
 <p>Type SK/SKC → Zb</p> <ul style="list-style-type: none"> • Safety interlock position switches with selectable actuator entry • EN 60947-5-1 • IP65 <p style="text-align: right;"><i>Refer Page 41</i></p>	 <p>Type SHS3 (New Series) → Zb</p> <ul style="list-style-type: none"> • Safety Hinge Switch • For hinged guards with rotation angle and switch point to 270° • Suitable for systems in control category 4 to EN 954-1 with redundancy • IP67 <p style="text-align: right;"><i>Refer Page 41</i></p>
 <p>Type SKT → Zb</p> <ul style="list-style-type: none"> • Plastic housing • 4x90° head rotation • Short body • IP65 <p style="text-align: right;"><i>Refer EIC for details</i></p>	 <p>Type I88-VKS/VKW → Zb</p> <ul style="list-style-type: none"> • Plastic housing • Suitable for hinged covers and doors • IP65 <p style="text-align: right;"><i>Refer EIC for details</i></p>
 <p>Type SKI → Zb</p> <ul style="list-style-type: none"> • Plastic housing • 4x90° head rotation • Mounting to EN50047 • IP65 <p style="text-align: right;"><i>Refer EIC for details</i></p>	 <p>Type GC-VKS/VKW → Zb</p> <ul style="list-style-type: none"> • Metal housing • Suitable for hinged covers and doors • IP65 <p style="text-align: right;"><i>Refer Page 41</i></p>
 <p>Type SLK → Zb</p> <ul style="list-style-type: none"> • Slim-line plastic housing • Spring or solenoid locking • 2000N holding force • 4x90° head rotation • IP67 <p style="text-align: right;"><i>Refer EIC for details</i></p>	 <p>Type I88-AHDB → Zb</p> <ul style="list-style-type: none"> • Plastic housing • Mounting on hinge axis • IP65 <p style="text-align: right;"><i>Refer Page 41</i></p>
 <p>Type GC-VT Type ENM-VTW → Zb</p> <ul style="list-style-type: none"> • Metal housing • Mounting to EN50041 • IP67 <p style="text-align: right;"><i>Refer Page 41</i></p>	<p>Safety Pull Rope Switches</p>
 <p>Type SLM → Zb</p> <ul style="list-style-type: none"> • Robust metal housing • Spring or solenoid locking • Mounting to EN50041 • IP67 <p style="text-align: right;"><i>Refer EIC for details</i></p>	 <p>Type S/Si → Zb</p> <ul style="list-style-type: none"> • Plastic housing • Metal housing • IP65 <p style="text-align: right;"><i>Refer Page 42</i></p>
<p>Other Safety Switches</p>	 <p>Type SR → Zb</p> <ul style="list-style-type: none"> • Slim-line plastic housing • Emergency Stop function to EN 60947-5-5 • Integral Emergency Stop button • Quick rope installation • Easy installation and setup • IP67 <p style="text-align: right;"><i>Refer Page 42</i></p>
 <p>Type ENM-AHZ → Zb</p> <ul style="list-style-type: none"> • Metal housing • Forced disconnect contact in forward and reverse travel • IP65 <p style="text-align: right;"><i>608-7135-030 POA</i></p>	<p>Notes:</p> <p>→ Positive break according to IEC 947-5-1 Chap 3.</p> <p>Zb Change-over contact is galvanically isolated.</p> <p style="text-align: right;"><i>More options available - contact EIC for assistance</i></p>
 <p>Type SNA →</p> <ul style="list-style-type: none"> • Emergency Stop Button with twist and key release • For front-side mounting • Tamper-resistant according to EN418 protection • IP65 <p style="text-align: right;"><i>Refer Page 41</i></p>	

**Switches suitable for use with SCR SAFETY RELAYS
for up to CONTROL CATEGORY 4 (refer page 44)**



Type SHS3
601-9390-023

Type SHS3 - Safety Hinge Switches

DESCRIPTION	PART NUMBER	TRADE PRICE
Cable, Axial, Switch Mounted RHS	601-9390-022	
Cable, Axial, Switch Mounted LHS	601-9390-023	
Non-Switched Hinge	601-9390-038	
Change Kit. Re-adjustment Switch Point	399-1990-161	



Type I88-VKW
608-6100-094
(refer EIC - POA)

Type GC-VKS/VKW - Flaps & Door Switches

DESCRIPTION	PART NUMBER	TRADE PRICE
Metal Body, Linear Arm - 0° ~ 90°	612-1100-622	
Metal Body, Linear Arm - 0° ~ 180°	612-1100-623	

Type I88-AHDB - Door Axis Switches

DESCRIPTION	PART NUMBER	TRADE PRICE
Plastic Body 360° 1NO/1NC	618-6100-267	

Type SK/SKC - Interlock Position Switches

DESCRIPTION	PART NUMBER	TRADE PRICE
Plastic Body 10N 1NC/1NO	601-6119-016	
Plastic Body 10N 2NC	601-6169-053	
Plastic Body 10N 2NC/1NO	601-6169-026	



Type GC-VKW
612-1100-623

Type SKI - Interlock Position Switches

DESCRIPTION	PART NUMBER	TRADE PRICE
Plastic Body 1NC/1NO	601-6819-052	

Type I88/GC-VT - Pin Switches

DESCRIPTION	PART NUMBER	TRADE PRICE
Plastic Body 1NC/1NO	601-6819-018	
Metal Body 60N 1NC/1NO	612-1100-555	



Type I88-AHDB
618-6100-267

Type SNA - Emergency Stop Switches

DESCRIPTION	PART NUMBER	TRADE PRICE
Emergency Stop Button Twist to Release c/w NC Contact (forced disconnect)	601-9169-001	
Emergency Stop Button Key Release c/w NC Contact (forced disconnect)	601-9169-002	
Spare Contact Block 1NC	601-9169-005	
Spare Contact Block 1NO	601-9169-006	



Type SK
601-6119-016



Type SKI
601-6819-052



Type GC-VT
612-1100-555



Type SNA
601-9169-001

THIS IS A SMALL REPRESENTATION OF THE SWITCHES AVAILABLE
Contact EIC for more options

Pull Rope Switches

DESCRIPTION	PULL FORCE	MAX ROPE LENGTH	SPRING (Recommended ①)	PART NUMBER	TRADE PRICE
Single Direction - IP65					
Plastic Body - 1NC+1NO	20 N	2 m	365-2100-211	601-3832-076	
Plastic Body	70 N	6 m	365-2100-331	601-1831-134	
Metal Body	70 N	6 m	365-2100-331	601-2831-022	
Metal Body w/Reset Button	70 N	6 m	365-2100-331	601-2831-023	
Metal Body	120 N	8 m	365-2100-332	601-1431-857	
Metal Body w/Reset Button	120 N	8 m	365-2100-332	601-1431-869	
Metal Body	200 N	14 m	365-2100-332	601-2431-877	
Metal Body w/Reset Button	200 N	14 m	365-2100-332	601-2431-883	
Single Direction - IP67					
SR Type Plastic Body - 2NC+2NO, w/Reset Button & Eye for Rope	175 N	37.5 m	391-1042-153	601-1621-026	
	300 N	75 m	391-1042-154	601-1620-020	
SR Type Plastic Body - 2NC+2NO, w/Reset Button & Quick Fastening Head for Rope	100 N	25 m	391-1042-153	601-1629-032	
	175 N	37.5 m	391-1042-153	601-1629-024	
	300 N	75 m	391-1042-154	601-1629-028	
SR as above plus E/Stop Button	300 N	75 m	391-1042-154	601-1629-019	
SRM Type Metal Body - 2NC+2NO, w/Reset Button & Eye for Rope	175 N	37.5 m	391-1042-153	601-2921-089	
	300 N	75 m	391-1042-154	601-2921-091	
SRM Type Metal Body - 2NC+2NO, w/Reset Button & Q/Fast Head	175 N	37.5 m	391-1042-153	601-2929-085	
	300 N	75 m	391-1042-154	601-2929-087	
Two Direction					
Plastic Body w/Release Lever	35 N	150 m (2x 75 m)	365-2100-331/ 365-2100-332	601-5625-001	
Plastic Body w/Release Lever & Lamp	35 N	150 m (2x 75 m)	365-2100-331/ 365-2100-332	601-5625-002	
Metal Body w/Release Ring	110 N	100 m (2x 50 m)	365-2100-331/ 365-2100-332	601-4735-001	

Notes: ① A spring is recommended for the single direction switches. Check the pull direction before making your selection

Springs

PART NUMBER	TRADE PRICE
365-2100-211	
365-2100-331	
365-2100-332	
391-1042-153	
391-1042-154	



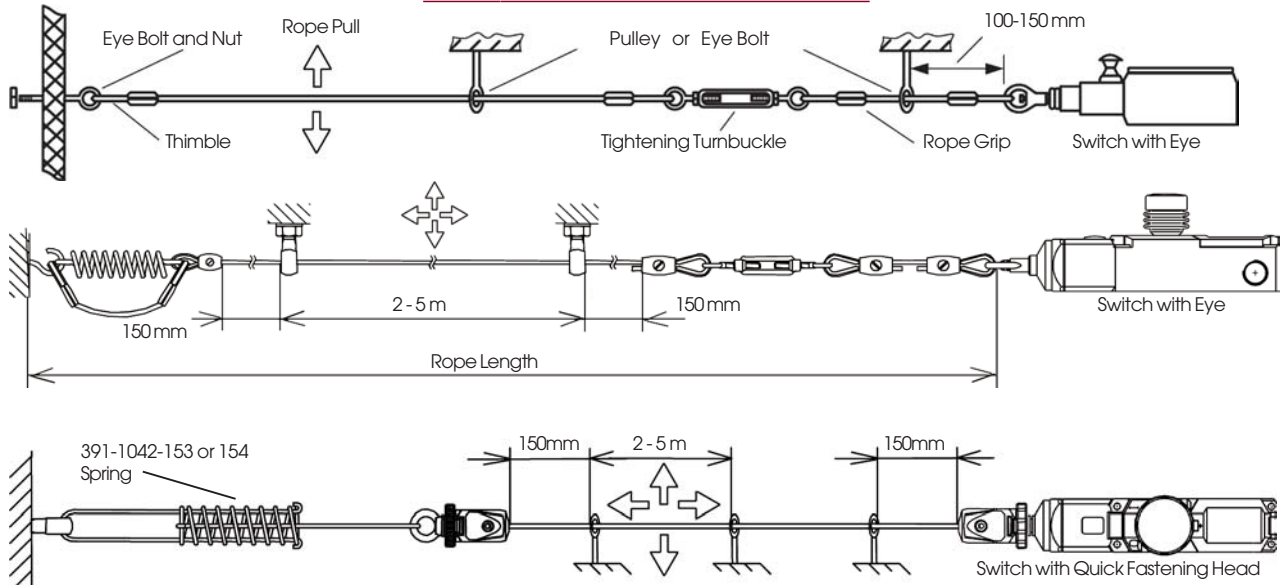
601-2831-023



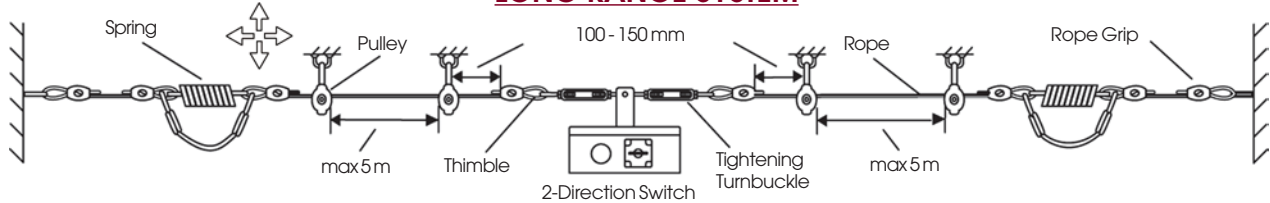
Conveyor Belt Monitor Switch

DESCRIPTION	PART NUMBER	TRADE PRICE
<p>Conveyed Material Conveyor Belt (1) Normal Position (2) Latch Position</p>	601-5736-003	

SHORT AND MID RANGE SYSTEM



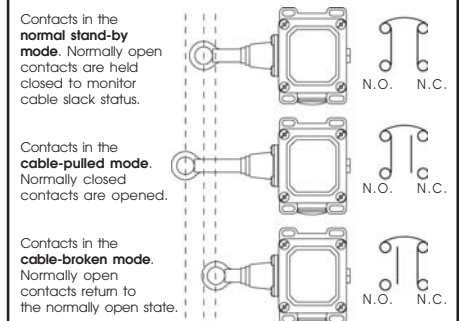
LONG RANGE SYSTEM



Pull Rope Switch Accessories

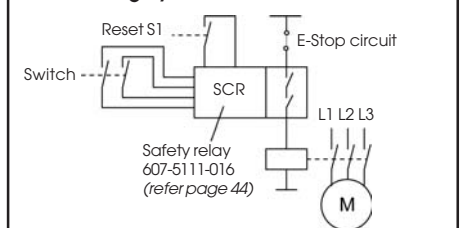
DESCRIPTION	PART NUMBER	TRADE PRICE
Pull Rope		
2.5-4mm Galvanised PVC Coated Clear 346kg	PW4GC	Subject to availability - confirm with EIC
2.5-4mm Galvanised PVC Coated Red 346kg	PW4GR	
2.5-4mm Galvanised PVC Coated Green 346kg	PW4GG	
2.5-4mm Galvanised PVC Coated Blue 346kg	PW4GB	
3-5mm S/Steel PVC Coated 1/19 754kg	PW5SS	
2.5-4mm Galvanised PVC Coated Red 346kg	PW4GR10	
2.5-4mm Galvanised PVC Coated Red 346kg	PW4GR20	
Accessories (other items available on request)		
4mm Stainless Steel Thimble	PW4TSS	Subject to availability - confirm with EIC
4mm Wire Rope Grip Galvanised	PW4RGG	
4mm Wire Rope Grip Stainless Steel	PW4RGS	
5mm Galvanised D Shackle	PW5DSG	
4mm Stainless Steel Bow Shackle	PW4BSSS	
4mm Stainless Steel D Shackle	PW4DSSS	
5mm Eye/Eye Turnbuckle Zinc Plated Light Duty	PW5EETZ	
5mm Eye/Eye Turnbuckle Stainless Steel	PW5EETSS	
5mm Hook/Eye Turnbuckle Zinc Plated	PW5HETZ	
6x55mm S/S Eye Bolt - 1x nut & 2x washers	PW655EBNSS	
8x80mm S/S Eye Bolt - 1x nut & 2x washers	PW880EBNSS	
38mm S/S Single Pulley - Plain + Saddle	PW38PSS-S	

CONTACT POSITION BASED ON CABLE STATUS

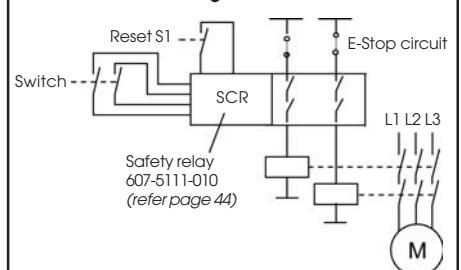


STRATEGIES FOR SAFETY CONTROL CATEGORIES

Control category 2/3 acc. EN 954



Control category 3/4 acc. EN 954 with a redundant circuit design even on drive control



SCR Safety Relays

<p>Features</p> <ul style="list-style-type: none"> • EMERGENCY STOP relay/ safety gate monitors. • Up to Control Category 2 or 3 (depending on application). • 2 NO safety outputs (enabling paths). • Start button monitoring. • LED display for output status and mains supply. • 24V AC/DC (electronic fuse). • Dimensions (W x H x D) 22.5 x 114.5 x 99 mm • CE (TUV, UL, C-UL pending) 	<p>Assembly and Function (function circuit diagram)</p> <p>13-14, 23-24 Safety Circuits (normally open)</p>	<p>NEW</p>	
<p>MATRIX CODE</p>	<p>DESCRIPTION</p>	<p>PART NUMBER</p>	<p>TRADE PRICE</p>
<p>SCR 2-W22-2.5-S</p>	<p>SCR Safety Relay - up to Control Category 2 or 3</p>	<p>607-5111-016</p>	

<p>Features</p> <ul style="list-style-type: none"> • EMERGENCY STOP relay/ safety gate monitors. • Up to Control Category 4. • 3 NO safety outputs (enabling paths). • 1 NC auxiliary output (signal output). • Start button monitoring. • Cross-wire monitoring. • LED display for output status and mains supply. • 24V AC/DC (electronic fuse). • Dimensions (W x H x D) 22.5 x 114.5 x 99 mm • CE, TUV, UL, C-UL. 	<p>Assembly and Function (function circuit diagram)</p> <p>13-14, 23-24, 33-34 Safety Circuits (normally open)</p> <p>41-42 Auxiliary Circuits (normally closed)</p>	<p>NEW</p>	
<p>MATRIX CODE</p>	<p>DESCRIPTION</p>	<p>PART NUMBER</p>	<p>TRADE PRICE</p>
<p>SCR 4-W22-3.5-SD</p>	<p>SCR Safety Relay - up to Control Category 4</p>	<p>607-5111-010</p>	

**BERNSTEIN OFFER A VARIETY OF RELAYS
FOR SPECIFIC APPLICATIONS AND CIRCUIT VARIATIONS**
Refer EIC for further details

Magnetic Sensors

Body Type / PART NUMBER	Reed Contacts	Max Voltage ; Power / Current	Body Style & Dimensions	Cable Length	Min Switching Distance	Referring Magnet	TRADE PRICE
Standard Magnetic Sensors							
Cylindrical 631-4226-423	1 x N/O	250V ; 100VA / 0.3A	Plastic Smooth ø12 x 92 mm	1 m	7 mm	T-62N/S	
Cylindrical 631-6326-426	1 x C/O	250V ; 60VA / 1A	Plastic Smooth ø12 x 92 mm	1 m	12 mm	T-62N/S	
Cylindrical 631-5326-425	1 x C/O	250V ; 30VA / 0.5A	Plastic Smooth ø12 x 92 mm	1 m	12 mm	T-62N/S	
Cylindrical 631-5306-045	1 x C/O	250V ; 30VA / 0.5A	AL Smooth ø12 x 86 mm	2 m	8 mm	T-62N/S	
Cylindrical 631-5306-314	1 x C/O	250V ; 30VA / 0.5A	AL Smooth ø12 x 86 mm	1 m	8 mm	T-62N/S	
Cylindrical 631-1208-596	1 x N/O	250V ; 10VA / 0.5A	S-Steel Threaded øM8 x 32 mm	1 m	18 mm	T-62N/S	
Rectangular 631-6302-389	1 x C/O	250V ; 60VA / 1A	Plastic ① 80 x 15 x 20 mm	1 m	30 mm	T-62N/S	
Rectangular 631-6302-285	1 x C/O	250V ; 60VA / 1A	Plastic 80 x 15 x 20 mm	4 m	18 mm	TK-21-02	
Rectangular 631-4202-204	1 x N/O	250V ; 100VA / 3A	Plastic 80 x 15 x 20 mm	1 m	21 mm	TK-21-02	
Rectangular 631-4202-382	1 x N/O	250V ; 100VA / 3A	Plastic 80 x 15 x 20 mm	2 m	21 mm	TK-21-02	
Rectangular 631-4212-217	1 x N/O	250V ; 100VA / 3A	Plastic 80 x 15 x 20 mm	1 m	21 mm	TK-21-12	
Rectangular 631-1211-541	1 x N/O	250V ; 10VA / 0.5A	Plastic 28.6 x 6.4 x 18 mm	1 m	10 mm	TK-11-11	
Rectangular PSA60010	1 x N/O	440V AC ; 500VA / 3A	Plastic 51 x 7 x 16 mm	300 mm	12 mm	P625	
Coded Magnetic Sensors ②							
Cylindrical 649-0653-310	NO + NC	30V DC ; 3VA / 0.1A	Plastic Threaded øM30 x 15 mm	3 m	3 mm	TK-43-CD	
Cylindrical 649-0653-311	NO + NC	30V DC ; 3VA / 0.1A	Plastic Threaded øM30 x 15 mm	6 m	3 mm	TK-43-CD	
Rectangular 649-0642-006	NO + NC	30V DC ; 3VA / 0.1A	Plastic 88 x 13 x 25 mm	5 m	5 mm	TK-42-CD	
Rectangular PXS79020	NO + NO	100V DC ; 3VA / 0.1A	Plastic 88 x 13 x 25 mm	2 m	6 mm	P200	
Rectangular PXS79150	NO + NO	100V DC ; 3VA / 0.1A	Plastic ③ 88 x 13 x 25 mm	5 m	6 mm	P200	

Notes: ① Extended operating temperature range of -40°C to +150°C.
② Has LED indication when last contact has closed.

③ Can be used in conjunction with control modules to achieve required safety categories - refer EIC for available controllers.

Magnets

Body Type	Magnet Code	Dimensions	PART NUMBER	TRADE PRICE
Standard Magnets				
Circular	T-61N/S	ø20 x 6.5 mm	630-1261-035	
	T-62N/S	ø23 x 10 mm	630-1262-039	
	T-67N/S	ø20 x 10 mm	630-1167-054	
	T-69N/S	ø31 x 15 mm	630-1269-031	
Rectangular	TK-11-11	28.6 x 6.4 x 18 mm	630-2111-047	
	TK-21-12	80 x 15 x 20 mm	630-2121-030	
	TK-21-02	80 x 15 x 20 mm	630-3121-002	
	P625	32 x 6.8 x 15 mm	P6250000	
Coded Magnets				
Circular	TK-43-CD	ø35 x 15 mm	640-2043-023	
Rectangular	TK-42-CD	88 x 15 x 25 mm	640-2042-022	
	P200	88 x 15 x 25 mm	P2000100	



Inductive Proximity Sensors Globaline Series - 2m Embedded Cable Type



Normally Open

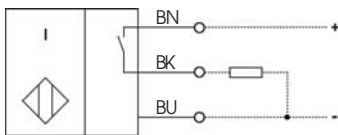
MATRIX CODE	Output Type		Flush/Extended	Sensing Distance	Operating Voltage	Termination	PART NUMBER	TRADE PRICE
Ø 8mm Metal Barrel - Threaded								
KIB-M08PS/1.5-KL2	PNP	N/O	Flush	1.5 mm	10-30Vdc	2m / DC3-wire	693-2901-001	
KIB-M08NS/1.5-KL2	NPN	N/O	Flush	1.5 mm	10-30Vdc	2m / DC3-wire	693-2301-001	
Ø12mm Metal Barrel - Threaded								
KIB-M12PS/002-KL2	PNP	N/O	Flush	2 mm	10-30Vdc	2m / DC3-wire	693-2903-001	
KIB-M12NS/002-KL2	NPN	N/O	Flush	2 mm	10-30Vdc	2m / DC3-wire	693-2303-001	
KIN-M12PS/004-KL2	PNP	N/O	Extended	4 mm	10-30Vdc	2m / DC3-wire	693-2904-001	
KIN-M12NS/004-KL2	NPN	N/O	Extended	4 mm	10-30Vdc	2m / DC3-wire	693-2304-001	
Ø18mm Metal Barrel - Threaded								
KIB-M18PS/005-KL2	PNP	N/O	Flush	5 mm	10-30Vdc	2m / DC3-wire	693-2905-001	
KIB-M18NS/005-KL2	NPN	N/O	Flush	5 mm	10-30Vdc	2m / DC3-wire	693-2305-001	
KIN-M18PS/008-KL2	PNP	N/O	Extended	8 mm	10-30Vdc	2m / DC3-wire	693-2906-001	
KIN-M18NS/008-KL2	NPN	N/O	Extended	8 mm	10-30Vdc	2m / DC3-wire	693-2306-001	
Ø30mm Metal Barrel - Threaded								
KIB-M30PS/010-KL2	PNP	N/O	Flush	10 mm	10-30Vdc	2m / DC3-wire	693-2907-001	
KIB-M30NS/010-KL2	NPN	N/O	Flush	10 mm	10-30Vdc	2m / DC3-wire	693-2307-001	
KIN-M30PS/015-KL2	PNP	N/O	Extended	15 mm	10-30Vdc	2m / DC3-wire	693-2908-001	

Normally Closed

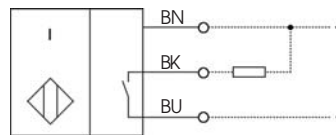
Ø12mm Metal Barrel - Threaded								
KIN-M12PO/004-KL2	PNP	N/C	Extended	4 mm	10-30Vdc	2m / DC3-wire	693-2704-001	
KIN-M12NO/004-KL2	NPN	N/C	Extended	4 mm	10-30Vdc	2m / DC3-wire	693-2104-001	
Ø18mm Metal Barrel - Threaded								
KIB-M18PO/005-KL2	PNP	N/C	Flush	5 mm	10-30Vdc	2m / DC3-wire	693-2705-001	
KIB-M18NO/005-KL2	NPN	N/C	Flush	5 mm	10-30Vdc	2m / DC3-wire	693-2105-001	
KIN-M18PO/008-KL2	PNP	N/C	Extended	8 mm	10-30Vdc	2m / DC3-wire	693-2706-001	
Ø30mm Metal Barrel - Threaded								
KIB-M30NO/010-KL2	NPN	N/C	Flush	10 mm	10-30Vdc	2m / DC3-wire	693-2107-001	

Wiring Diagrams (Normally Open)

PNP Proximity Sensor



NPN Proximity Sensor



CODE	COLOUR
BN	Brown
-	-
BU	Blue
BK	Black

Capacitive Proximity Sensors



Type KCN-R20



Type KCN-T30

Inductive Proximity Sensors Globaline Series - Quick Disconnect Cable Type



693-2907-002

Normally Open

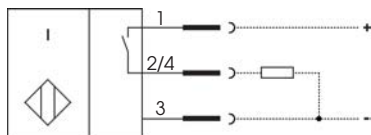
MATRIX CODE	Output Type		Flush/Extended	Sensing Distance	Operating Voltage	Suitable Cable	PART NUMBER	TRADE PRICE
Ø 8mm Metal Barrel - Threaded								
KIB-M08PS/1.5-KLSM8	PNP	N/O	Flush	1.5 mm	10-30Vdc	A or B	693-2942-001	
KIB-M08NS/1.5-KLSM8	NPN	N/O	Flush	1.5 mm	10-30Vdc		693-2342-001	
Ø12mm Metal Barrel - Threaded								
KIB-M12PS/002-KLS12	PNP	N/O	Flush	2 mm	10-30Vdc	C,D,E or F	693-2943-001	
KIB-M12NS/002-KLS12	NPN	N/O	Flush	2 mm	10-30Vdc		693-2343-001	
KIN-M12PS/004-KLS12	PNP	N/O	Extended	4 mm	10-30Vdc		693-2944-001	
KIN-M12NS/004-KLS12	NPN	N/O	Extended	4 mm	10-30Vdc		693-2344-001	
Ø18mm Metal Barrel - Threaded								
KIB-M18PS/005-KLS12	PNP	N/O	Flush	5 mm	10-30Vdc	C,D,E or F	693-2905-004	
KIB-M18NS/005-KLS12	NPN	N/O	Flush	5 mm	10-30Vdc		693-2305-004	
KIN-M18PS/008-KLS12	PNP	N/O	Extended	8 mm	10-30Vdc		693-2906-004	
KIN-M18NS/008-KLS12	NPN	N/O	Extended	8 mm	10-30Vdc		693-2306-004	
Ø30mm Metal Barrel - Threaded								
KIB-M30PS/010-KLS12	PNP	N/O	Flush	10 mm	10-30Vdc	C,D,E or F	693-2907-002	
KIN-M30PS/015-KLS12	PNP	N/O	Extended	15 mm	10-30Vdc		693-2908-002	

Quick Disconnect Cables

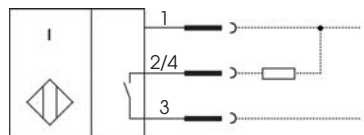
WITH STRAIGHT PLUG (Female)				WITH RIGHT ANGLED PLUG (Female)			
Termination		PART NUMBER	TRADE PRICE	Termination		PART NUMBER	TRADE PRICE
A	M8 3-wire 2.5m long	413-9100-795		B	M8 3-wire 2.5m long	413-9100-798	
C	M12 3-wire 2.5m long	413-9100-801		D	M12 3-wire 2.5m long	413-9100-804	
E	M12 3-wire 5m long	413-9100-802		F	M12 3-wire 5m long	413-9100-468	

Wiring Diagrams (Normally Open)

NPN Proximity Sensor

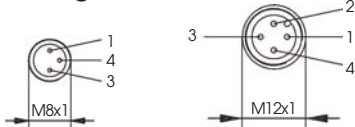


PNP Proximity Sensor



PIN NUMBER	COLOUR
1	Brown
2	-
3	Blue
4	Black

Male Plug (on Proximity Sensor)



Female Plug (on Quick Disconnect Cable)



Capacitive Proximity Sensors

MATRIX CODE	Output Type		Flush/Extended	Sensing Distance	Operating Voltage	Termination	PART NUMBER	TRADE PRICE
Ø20mm Plastic Barrel - Smooth								
KCN-R20PS/015-KLP2	PNP	N/O	Extended	15 mm	10-60Vdc	2m / DC3-wire	650-7910-001	
Ø30mm & Ø32mm Plastic Barrel - Threaded								
KCN-T30AO/020-LP2	AC	N/C	Extended	20 mm	48-250Vac	2m / AC2-wire	650-8423-001	
KCN-T30AS/020-LP2	AC	N/O	Extended	20 mm	48-250Vac	2m / AC2-wire	650-8523-001	
KCN-T32DP/030-KLP2	NPN/PNP	NO or NC	Extended	30 mm	10-60Vdc	2m / DC3-wire	650-7013-001	

Notes: The above sensors are the basic models normally stocked. Other output types available on request, including the following options:
 - Metal and plastic barrel sizes available in 12, 18, 30 & 32mm.
 - E68 and N44 rectangular housing available.
 - Flush (non-shielded) models available.

Inductive Proximity Sensors General Purpose

MATRIX CODE	Output Type		Flush/ Extended	Sensing Distance	Operating Voltage	Termination	PART NUMBER	TRADE PRICE
Ø4mm Metal Barrel - Smooth								
KIB-D04PS/0.8-KL2PU	PNP	N/O	Flush	0.8mm	10-30Vdc	2m / DC3-wire	650-2999-004	
KIB-D04PS/0.8-KLSM8	PNP	N/O	Flush	0.8mm	10-30Vdc	quick disconnect	650-2999-017	
Ø8mm Metal Barrel - Threaded								
KIB-M08PS/1.5-KLSM8	PNP	N/O	Flush	1.5mm	10-30Vdc	quick disconnect	650-2942-005 ①	
KIN-M08PS/002-KLSM8	PNP	N/O	Extended	2mm	10-30Vdc	quick disconnect	650-2942-006	
Ø12mm Metal Barrel - Threaded								
KIB-M12PS/002-KL2	PNP	N/O	Flush	2mm	10-30Vdc	2m / DC3-wire	650-2903-003 ①	
KIB-M12NS/002-KL2V	NPN	N/O	Flush	2mm	10-30Vdc	2m / DC3-wire	650-2303-007 ②	
KIB-M12ZS/002-L2	NPN/PNP	N/O	Flush	2mm	10-55Vdc	2m / DC2-wire	650-1303-001	
KIN-M12PS/004-KL2	PNP	N/O	Extended	4mm	10-30Vdc	2m / DC3-wire	650-2904-002 ①	
KIN-M12NS/004-KL2	NPN	N/O	Extended	4mm	10-30Vdc	2m / DC3-wire	650-2304-001 ①	
KIN-M12ZS/004-L2	NPN/PNP	N/O	Extended	4mm	10-55Vdc	2m / DC2-wire	650-1304-001	
KIN-M12PU/004-KL2	PNP	C/O	Extended	4mm	10-60Vdc	2m / DC4-wire	650-2804-001	
KIN-M12NU/004-KL2	NPN	C/O	Extended	4mm	10-60Vdc	2m / DC4-wire	650-2204-001	
KIN-M12AS/004-L2	AC	N/O	Extended	4mm	90-250Vac	2m / AC2-wire	650-3504-001	
KIN-M12PS/006-KL2E	PNP	N/O	Extended	6mm	10-60Vdc	2m / DC3-wire	650-2904-009 ③	
KIN-M12NS/006-KL2E	NPN	N/O	Extended	6mm	10-60Vdc	2m / DC3-wire	650-2304-012 ③	
KIN-M12PO/006-KL2E	PNP	N/C	Extended	6mm	10-60Vdc	2m / DC3-wire	650-2704-005 ③	
Ø18mm Metal Barrel - Threaded								
KIB-M18PS/005-KL2	PNP	N/O	Flush	5mm	10-60Vdc	2m / DC3-wire	650-2905-850 ①	
KIB-M18NS/005-KL2	NPN	N/O	Flush	5mm	10-60Vdc	2m / DC3-wire	650-2305-134 ①	
KIB-M18AS/005-L2	AC	N/O	Flush	5mm	20-250Vac	2m / AC2-wire	650-3505-004	
KIN-M18PS/008-KL2	PNP	N/O	Extended	8mm	10-60Vdc	2m / DC3-wire	650-2906-200 ①	
KIN-M18NS/008-KL2	NPN	N/O	Extended	8mm	10-60Vdc	2m / DC3-wire	650-2306-194 ①	
KIN-M18AS/008-L2	AC	N/O	Extended	8mm	20-250Vac	2m / AC2-wire	650-3506-002	
Ø18mm Plastic Barrel - Threaded								
KIN-T18PS/008-KL2	PNP	N/O	Extended	8mm	10-60Vdc	2m / DC3-wire	650-2921-975	
KIN-T18NS/008-KL2	NPN	N/O	Extended	8mm	10-60Vdc	2m / DC3-wire	650-2321-699	
KIN-T18AS/008-L2	AC	N/O	Extended	8mm	48-250Vac	2m / AC2-wire	650-3521-705	
Ø30mm Metal Barrel - Threaded								
KIB-M30PS/010-KL2	PNP	N/O	Flush	10mm	10-60Vdc	2m / DC3-wire	650-2907-068 ①	
KIB-M30NS/010-KL2	NPN	N/O	Flush	10mm	10-60Vdc	2m / DC3-wire	650-2307-135	
KIB-M30AS/010-L2	AC	N/O	Flush	10mm	20-250Vac	2m / AC2-wire	650-3507-378	
KIB-M30AO/010-L2	AC	N/C	Flush	10mm	20-250Vac	2m / AC2-wire	650-3407-240	
Rectangular Body								
KIB-Q08PS/1.5-K2	PNP	N/O	Flush	1.5mm	10-30Vdc	2m / DC3-wire	650-2980-004	
KIB-E28PS/002-KL2	PNP	N/O	Flush	2mm	10-30Vdc	2m / DC3-wire	650-2973-001	
KIB-E40PS/002-KL2	PNP	N/O	Flush	2mm	10-30Vdc	2m / DC3-wire	650-2984-002	

Notes: The above sensors are the basic models normally stocked. See the "Sensor Matrix" for all model types and options available, on request.

- ① Equivalent also available in the Globaline (economical) Series - see page 46 and 47.
- ② Short bodied sensor. The standard length bodied sensor is available in the Globaline (economical) Series - see page 46.
- ③ Extended sensing distance models.



Type
KIB-D04



Type
KIB-M18



Type
KIB-T18



Type
KIB-Q08



Type
KIB-E40

Inductive & Capacitive Proximity Sensor Matrix

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
K I N			-	M 1 2			P S		-	0 0 4			-	K L 2		
PRODUCT GROUP				TYPE / SIZE OF HOUSING			TYPE OF OUTPUT			SENSING DISTANCE				OPTIONS		

- | | | |
|---|---|---|
| <p>1 - K = Non contact proximity sensor</p> <p>2 - I = Inductive
C = Capacitive</p> <p>3 - B = Flush / shielded
- N = Non flush / non shielded
- A = Adjustable flush / non flush via sensitivity control
- V = Sensor amplifier</p> <p>4 - Dash</p> <p>5 - M = Metric threaded metal barrel
- T = Metric threaded plastic barrel
- D = Cylindrical metal smooth barrel
- R = Cylindrical plastic smooth barrel
- Q = Rectangular metal housing
- P = PG threaded metal barrel
- E = Rectangular plastic housing
- S = Slot type sensor
- N = DIN standard housing
- B = Bar sensor</p> <p>6 - If the housing is cylindrical or barrel, the two digit code refers to the diameter in millimeters.

(see "7" for examples)</p> | <p>7 - Example:
03 = 3 mm dia
40 = 40 mm dia
format for other shapes: digits 5, 6 and 7</p> <p>- S 03 = 3.5 mm slot sensor
- Q 05 = 5 x 5 x 25 mm
- Q 08 = 8 x 8 x 40 mm side sensing
Q 80 = 8 x 8 x 40 mm middle sensing
- Q 12 = 12 x 12 x 55 mm
- B 40 = Bar sensor
- E 50 = 50 x 25 x 55 mm
- E 28 = 28 x 16 x 11 mm
- E 40 = 40 x 26 x 12 mm
- N 40 = 40 x 40 x 40 mm
- N 04 = 40 x 40 x 72.5 mm
- N 44 = 40 x 40 x 112 mm
- E 68 = 68 x 30 x 15 mm
- E 80 = 80 x 30 x 20 mm</p> <p>8 - P = PNP
- N = NPN
- A = AC2-wire
- E = Namur
- Z = DC2-wire
- M = AC/DC-multivoltage
- R = Relay
- Q = Triac
- T = Thyristor AC3-wire
- G = Push/Pull
- D = NPN/PNP</p> <p>9 - S = Normally open
- O = Normally closed
- P = Programmable switch selectable NO/NC
- A = Analog
- U = Complementary 4-wire NO/NC</p> | <p>10 - Dash</p> <p>11 } Sensing distance
12 } Example:
13 } 1,5 = 1.5 mm
002 = 2.0 mm
040 = 40.0 mm</p> <p>14 - Dash</p> <p>15 - K = Short circuit protection</p> <p>16 - L = LED</p> <p>17 - Cable length in meters
Example: 2 = 2 meters
6 = 6 meters</p> <p>- S = Socket
- E = Sensor with extended sensing range
- V = Short body housing
- P = Potentiometer
- PU = Polyurethane cable
- SD = Plug with terminals according to DIN standard usually sensor comes with plug fitted</p> <p>- SM = Mini socket snap fit (quick disconnect)
- S8 = M8 quick disconnect screw type
- S12 = M12 quick disconnect screw type
- SM8 = M8 quick disconnect universal snap and screw
- N = Stainless steel
- F = High switching frequency
- C = High chemical resistance surface
- T = High temperature</p> |
|---|---|---|

Wire Colour Translation	
br (braun)	: Brown
sw (schwarz)	: Black
bl (blau)	: Blue
ws (weiss)	: White

Specialised Proximity Sensors

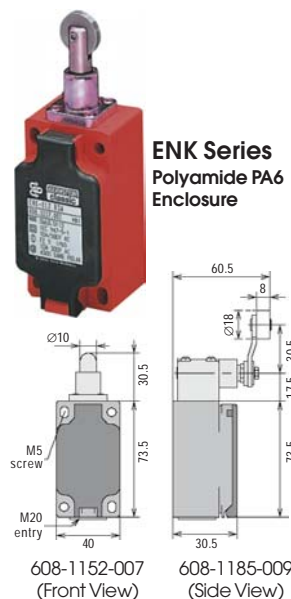
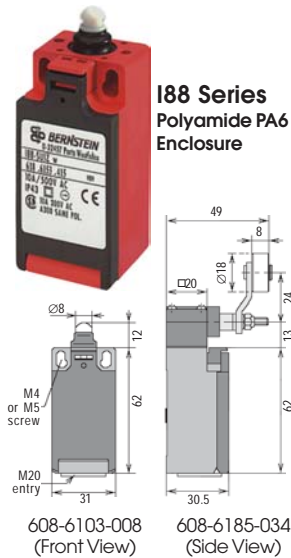
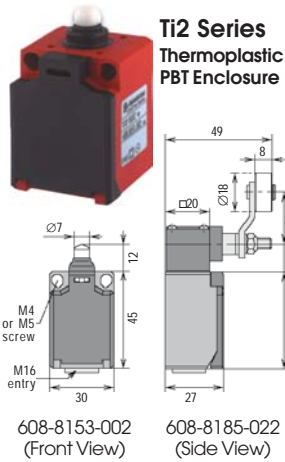
- Photoelectric Sensors with Analogue Output
- Intrinsically Safe Inductive NAMUR Sensors
- Inductive Sensors suitable for high temperature and frequency
- Switching Amplifiers and Setpoint Controllers
- Programmable Sensors
- Special Purpose Design Sensors

Contact EIC for more information.



Plastic Bodied Limit Switches

Complete Switch Supplied as One Piece



Actuator Head	DESCRIPTION	Contact Block	Sealing Sleeve	PART NUMBER	Replaces	TRADE PRICE
Ti2 Series - 250V 10A (max)						
Mounting Measurements to DIN EN 50047 - IP65						
	TOP PUSH - STND PLUNGER TYPE Nylon Plunger Ø7mm	SU1 Z	Outer	608-8153-002	608-4153-502	
	TOP PUSH - ROLLER PLUNGER TYPE Nylon Roller Ø10x3.3mm	U1 Z	Inner	608-8117-007	608-4117-503	
		SU1 Z	Inner	608-8167-008	608-4167-504	
	TOP PUSH - ROLLER LEVER TYPE Nylon Roller Ø13.5x4.7mm	SU1 Z	Outer	608-8171-016	608-4171-506	
	SIDE ROTARY - TURRET HEAD with Fixed Arm 24mm, Roller Ø18x8mm	SU1 Z	Inner	608-8185-022	608-4185-518	
	SIDE ROTARY - TURRET HEAD with Adj Rod Ø3x150mm Long	SU1	Inner	608-8187-028	-	
I88 Series - 500V 10A (max)						
Euronorm Standard Switch to DIN EN 50047 - IP65						
	TOP PUSH - STND PLUNGER TYPE Nylon Plunger Ø8mm	U1 Z	Outer	608-6103-008	-	
	TOP PUSH - TURRET HEAD with Small Roller Plunger Ø10x3mm	SU1 Z	Inner	608-6167-018	-	
	TOP PUSH - TURRET HEAD with Large Roller Plunger Ø14x3mm	SU1 Z	Inner	608-6167-051	-	
	TOP PUSH - ROLLER LEVER TYPE Nylon Roller Ø11x5.5mm	SU1 Z	Outer	608-6171-022	-	
	SIDE ROTARY - TURRET HEAD with Fixed Arm 24mm, Roller Ø18x8mm	SU1 Z	Inner	608-6185-034	-	
	SIDE ROTARY - TURRET HEAD with Adj Arm 19.5~55mm, Roller Ø25x8mm	U1	Inner	608-6136-037	-	
ENK Series - 500V 10A (max)						
Euronorm Standard Switch to DIN EN 50041 - IP65						
	TOP PUSH - STND PLUNGER TYPE Metal Plunger Ø10mm	SU1 Z	Inner	608-1152-007	-	
	TOP PUSH - ROLLER PLUNGER TYPE Metal Roller Ø18x4mm	SU1 Z	Inner	608-1167-008	-	
	TOP PUSH - ROLLER LEVER TYPE Nylon Roller Ø20x11mm	SU1 Z	Outer	608-1171-096	-	
	SIDE ROTARY - TURRET HEAD with Fixed Arm 30.5mm, Roller Ø18x8mm	SU1 Z	Inner	608-1185-009	-	
	SIDE ROTARY - TURRET HEAD with Adj Arm 27~81mm, Roller Ø25x8mm	SU1	Inner	608-1186-018	-	
	SIDE ROTARY - TURRET HEAD with Adj Rod Ø6x200mm Long	SU1 Z	Inner	608-1187-017	-	
	TOP ACTUATE - WOBBLE STICK Spring Rod & Nylon Tip, 133mm Long	SU1	Outer	608-1190-045	-	

Notes: - Contacts: SU1: 1NC/1NO - Snap action changeover
 U1: 1NC/1NO - Slow action changeover (break before make)
 Z: Positive Disconnect of NC contact
 - Other actuators, contact blocks and EEx versions available in the ENK Series on request.
 - Other series switches available on request are the C2 and Biggy:

C2 Series
For confined spaces
34H x 26W x 21D mm



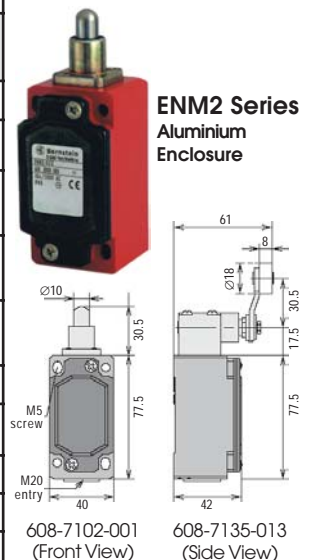
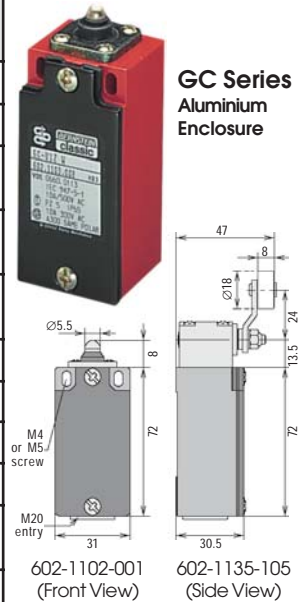
Biggy Series
2 lateral cable entries
50H x 59W x 32D mm



Metal Bodied Limit Switches

Complete Switch Supplied as One Piece

Actuator Head	DESCRIPTION	Contact Block	Sealing Sleeve	PART NUMBER	Replaces	TRADE PRICE
GC Series - 500V 10A (max)						
Terminals Numbered in Accordance with DIN EN 50013 - IP65						
	TOP PUSH - STND PLUNGER TYPE Metal Plunger Ø5.5mm	U1 Z	Inner	602-1102-001	-	
		U1 Z	Outer	602-1103-008	-	
	TOP PUSH - ADJ PLUNGER TYPE Metal Plunger Ø5mm	U1 Z	Inner	602-1105-015	-	
	TOP PUSH - BALL-PLUNGER TYPE Metal Ball Ø12mm	SU1 Z	Inner	602-1160-052	-	
	TOP PUSH - ROLLER PLUNGER TYPE Metal Roller Ø14x3.3mm	U1 Z	Inner	602-1117-029	-	
	TOP PUSH - ROLLER LEVER TYPE Nylon Roller Ø13x7.3mm	U1 Z	Outer	602-1121-067	-	
		SU1 Z	Inner	602-1370-629	-	
	TOP PUSH - ROLLER LEVER TYPE Long Lever, Roller Ø13x7.3mm	U1 Z	Inner	602-1123-085	-	
		SU1 Z	Outer	602-1374-632	602-1174-094	
	TOP PUSH - ROLLER LEVER TYPE Angled Lever, Roller Ø13x7.3mm	SU1	Inner	602-1176-073	-	
	SIDE ROTARY - TURRET HEAD with Fixed Arm 24mm, Roller Ø18x8mm	U1 Z	Inner	602-1135-102	-	
	SIDE ROTARY - TURRET HEAD with Adj Arm 27-81.5mm, Roller Ø25x8mm	U1	Inner	602-1136-104	-	
	SIDE ROTARY - TURRET HEAD with Adj Rod Ø6x200mm Long	U1	Inner	602-1137-103	-	
	SIDE ROTARY - TURRET HEAD with Wobble Stick 144mm Long	U1	Inner	602-1139-106	-	
	TOP ACTUATE - WOBBLE STICK Spring Rod & Nylon Tip, 133mm Long	U1	Outer	602-1140-476	-	
ENM2 Series - 400V 10A (max)						
Standard Switch According to DIN EN 50041 - IP65						
	TOP PUSH - STND PLUNGER TYPE Metal Plunger Ø10mm	U1 Z	Inner	608-7102-001	608-2102-001	
		SU1 Z	Inner	608-7352-002	608-2152-003 608-2352-004	
	TOP PUSH - ROLLER PLUNGER TYPE Metal Roller Ø18x4mm	SU1 Z	Inner	608-7367-005	608-2167-007 608-2367-008	
	TOP PUSH - ROLLER LEVER TYPE Adj Lever Left, Roller Ø20x8mm	SU1 Z	Outer	608-7371-008	608-2151-212	
	TOP PUSH - ROLLER LEVER TYPE Adj Lever Right, Roller Ø20x8mm	SU1 Z	Outer	608-7377-011	608-2177-214	
	SIDE ROTARY - TURRET HEAD with Fixed Arm 30.5mm, Roller Ø18x8mm	U1 Z	Inner	608-7135-013	608-2135-009	
		SU1 Z	Inner	608-7385-014	608-2185-011 608-2385-012	
	SIDE ROTARY - TURRET HEAD with Adj Arm 27-81.5mm, Roller Ø25x8mm	U1	Inner	608-7136-016	608-2136-025	
		SU1	Inner	608-7386-017	608-2186-027	
	SIDE ROTARY - TURRET HEAD with Adj Rod Ø6x200mm Long	U1	Inner	608-7137-018	608-2137-021	
		SU1 Z	Inner	608-7387-019	608-2187-023	

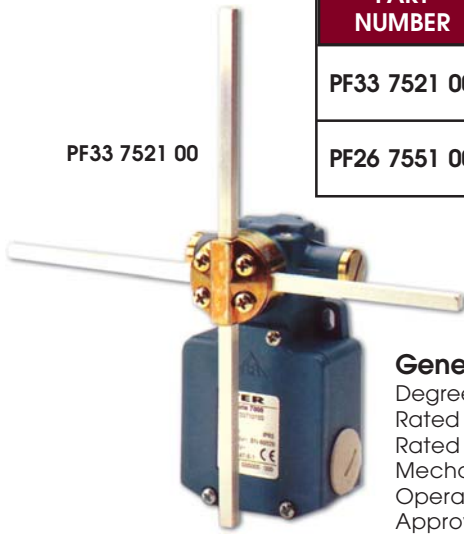


Notes: - Contacts: SU1: 1NC/1NO - Snap action changeover
 U1: 1NC/1NO - Slow action changeover (break before make)
 Z: Positive Disconnect of NC contact
 - Other actuators, contact blocks and EEx versions available on request.
 - Other series switches available on request are the D and SN2:



Position Limit Switches - X-Rod Type

PART NUMBER	POSITION	ROD	ACTUATING FORCE OR MOMENT	TRADE PRICE
PF33 7521 00	4 Fixed	X-Rod	13.2 daN-cm	
PF26 7551 00	4 Fixed	X-Rod	13.2 daN-cm	



PF33 7521 00

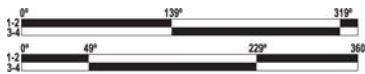


PF26 7551 00

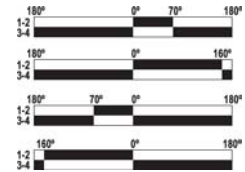
General Specification

Degree of protectionIP65 according to CEI EN 60529
 Rated thermal current10 A
 Rated insulation voltage500 VAC
 Mechanical durability 1 x 10⁶ operations
 Operation frequency3600 operations/hour max
 ApprovalsAwaiting UL - (c) UL
 Operational ratings 1.9A - 380VAC according to CEI EN 60947-5-1

Switching Position

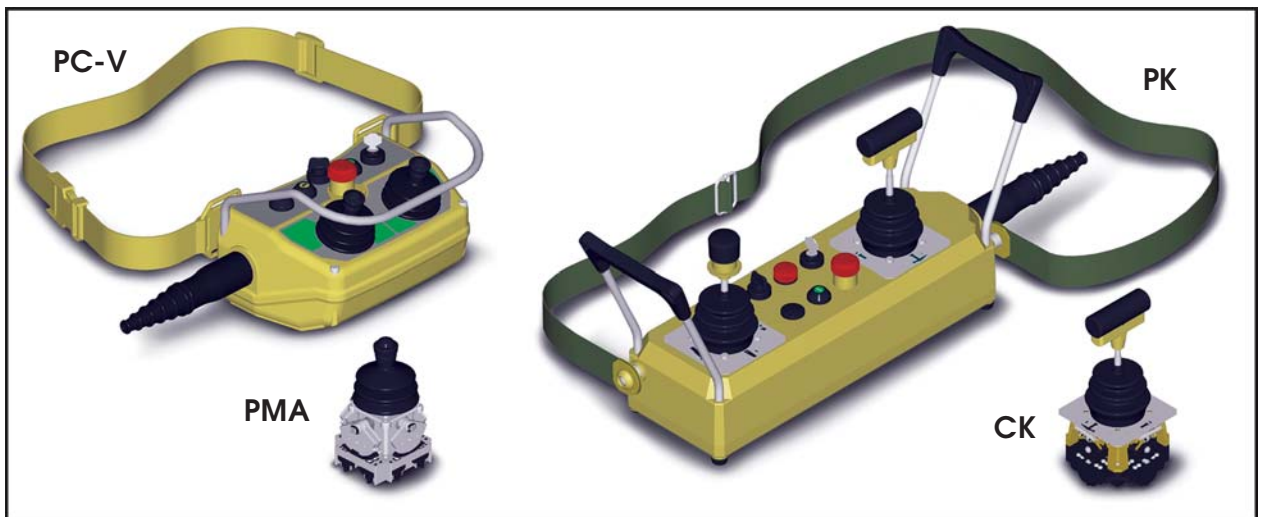


Switching Position



Joysticks & Joystick Stations - for Process Control

Two models available: 1- Heavy Duty CK (PK station) 2- Standard Duty PMA (PC-V station). Each model can have up to 5 positions in each direction, or a combination of potentiometer and switches.

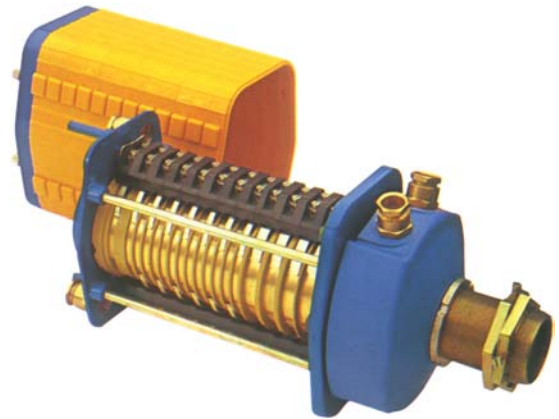
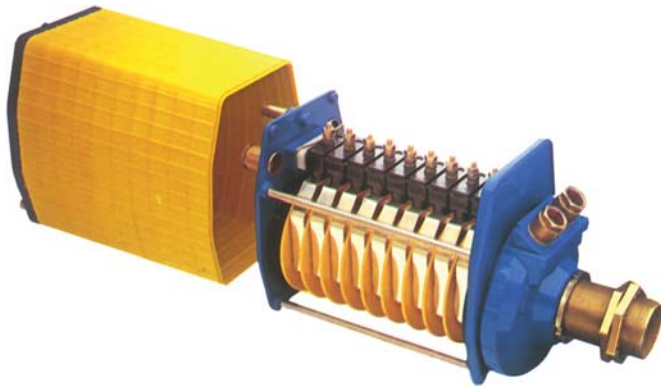


Technical Specification & Conformity Standards

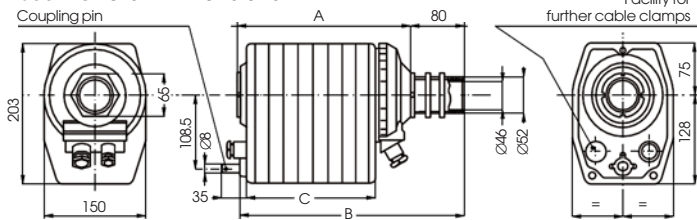
- **PC-V:** EN 60947-1 EN 60947-5-1 EN 60529 EN 60204-1 EN 418 - IP65 - Ui 500V~ - Ith 10A - AC15 - Ie 3A - Ue 250V
- **PMA:** EN 60947-1 EN 60947-5-1 EN 60529 EN 60204-1 - Ui 500V~ - Ith 10A - AC15 - Ie 3A - Ue 250V
- **PK:** EN 60947-1 EN 60947-5-1 EN 60529 EN 60204-1 EN 418 - IP54 - Ui 500V~ - Ith 10A - AC15 - Ie 3A - Ue 250V
- **CK:** EN 60947-1 EN 60947-5-1 EN 60529 EN 60204-1 - Ui 500V~ - Ith 10A - AC15 - Ie 3A - Ue 250 V

Contact EIC for more information and ordering details

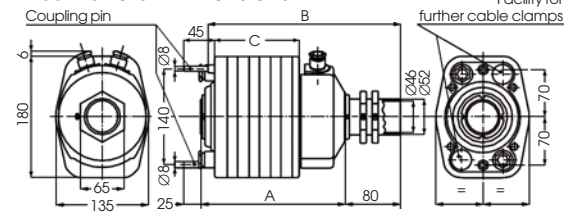
Rotating Collectors



2600P Overall Dimensions



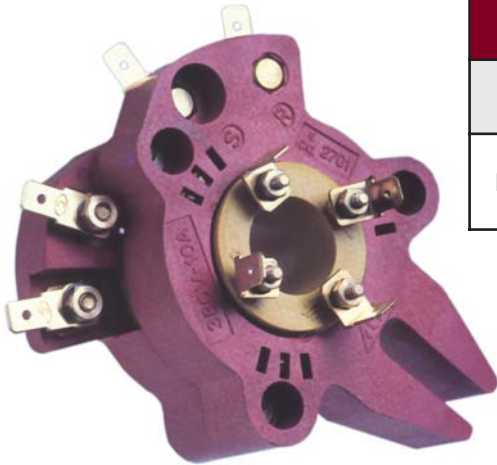
2400P Overall Dimensions



RINGS	TYPE	OVERALL DIMENSIONS			WEIGHT	PART NUMBER	REPLACES	TRADE PRICE
		A	B	C	kg			
2400/P SERIES - Mixed Version ①								
4 x 30A and Others 10A Rings with Enclosure								
5	5C/30-10	195	265	108	3.4	PF23 05 B001	2405/P	
6	6C/30-10	211	281	124	3.6	PF23 06 B003	2406/P	
7	7C/30-10	211	281	124	3.8	PF23 07 B002	2407/P	
8	8C/30-10	227	297	140	4	PF23 08 B001	2408/P	
9	9C/30-10	227	297	140	4.2	PF23 09 B001	2409/P	
10	10C/30-10	243	313	156	4.4	PF23 10 B001	2410/P	
11	11C/30-10	243	313	156	4.6	PF23 11 B001	2411/P	
12	12C/30-10	259	329	172	4.8	PF23 12 B001	2412/P	
2400/P SERIES - Single Version ②								
30A Rings with Enclosure								
3	3C/30	179	249	92	3	PF23 03 B001	2453/P	
4	4C/30	195	265	108	3	PF23 04 B001	2454/P	
5	5C/30	211	281	124	3	PF23 05 B002	2455/P	
6	6C/30	227	297	140	3	PF23 06 B002	2456/P	
7	7C/30	243	313	156	4	PF23 07 B001	2457/P	
8	8C/30	259	329	172	4	PF23 08 B003	2458/P	
9	9C/30	275	345	188	4	PF23 09 B002	2459/P	
10	10C/30	291	361	204	5	PF23 10 B003	2460/P	
2600/P SERIES - Single Version ③								
50A Rings with Enclosure								
3	3C/50	174	249	106	3.5	PF22 03 P001	2603/P	
4	4C/50	195	270	127	3.9	PF22 04 P001	2604/P	
5	5C/50	216	291	148	4.3	PF22 05 P001	2605/P	
6	6C/50	237	312	169	4.7	PF22 06 P001	2606/P	
7	7C/50	258	333	190	5.1	PF22 07 P001	2607/P	
8	8C/50	279	354	211	5.5	PF22 08 P001	2608/P	
9	9C/50	300	375	232	5.9	PF22 09 P003	2609/P	
10	10C/50	321	396	253	6.3	PF22 10 P001	2610/P	

Notes: ① 2400/P Series: Mixed version up to 40 rings available - refer EIC.
 ② 2400/P Series: Single version up to 20 rings available - refer EIC.
 ③ 2600/P Series: Single version up to 16 rings available - refer EIC. 2600 Series also available without enclosure.

Rotating Collectors

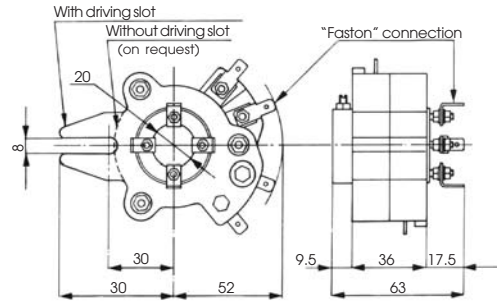


PART NUMBER	DESCRIPTION	REPLACES	TRADE PRICE
2700 SERIES - Fixed Version 4 x 10A Rings			
PF21 2701 01	Collector with Driving Slot and Adaptor Ø30mm	2701/30	

Technical Data

- 3 Phase + Earth
- Capacity 10A
- Voltage 380/400
- Insulation ... 50M Ohm
- Rigidity 2.5kV

2700 Overall Dimensions



Worm Gear Limit Switches



SF12C

**SERIES SF12C
Sequence Controller**

The Series SF12C can be utilised in many different applications by using its many characteristics:

- ⇒ From 1:1 to 1:8000 revs
- ⇒ Up to 12 microswitches can be fitted
- ⇒ Up to 2 potentiometers in addition to 4 microswitches

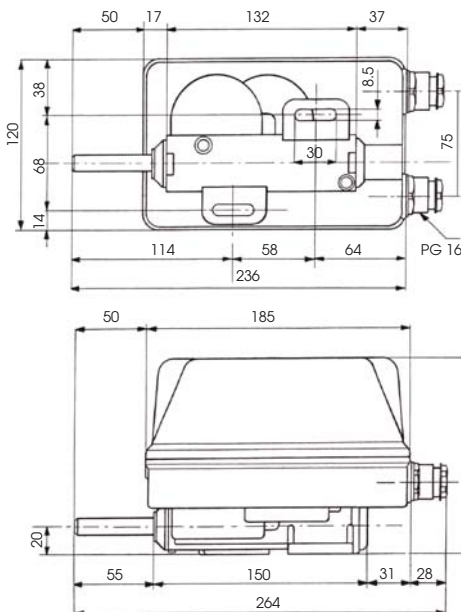
REV RATIO	No SWITCHES	MAX RPM	PART NUMBER	TRADE PRICE
1:1	12	1800	4201/12	
1:10	12	1800	4219/12	
1:50	12	1800	4300/12	
1:100	12	1800	4400/12	

Technical Data

- Base:die cast aluminium
- Cover:shock resistant plastic
- Protection rate:IP65 according to IEC 529, CENELC HD 365, CEI 40-1
- Insulation:Class 01 according to: CEE EL 24, CEI 23-11
- Operating position:whatever
- Micrometric adjustment
On control cams:continuously from 0° to 360°
- Cam/motorshaft
Rev.ratio:1:1 ~ 1:8000
- Environmental operating
Temperature:-20°C to +70°C
- Cable entry:1x PG16
- Number of switches: 2 - 12 either quick- or slow-break type
- Driving system:worm gear
- Nominal insulation500V according to IEC 337-1, Voltage:CEI 17-12
- Nominal thermal
Current lth:10A
- Nominal operating
Current and voltage:10 (4) A, 380V
- Mechanical life span: ... 10 million operations
- Contacts gap: 2 x 1.25mm
- Weight: 1.5 kg

Note: Other ratios and number of switches available

Dimensions



Setting



SF12C shown without cover

Worm Gear Limit Switches

SERIES MF2C 2x Switches						
REV RATIO	No SWITCHES	MAX RPM	PART NUMBER	TRADE PRICE	PART NUMBER Ⓣ	TRADE PRICE
1:15	2	600	3001/_ Ⓢ		3001/_ Ⓢ G	
1:25	2	600	3011/_ Ⓢ		3011/_ Ⓢ G	
1:50	2	600	3021/_ Ⓢ		3021/_ Ⓢ G	
1:75	2	600	3031/_ Ⓢ		3031/_ Ⓢ G	
1:100	2	600	3041/_ Ⓢ		3041/_ Ⓢ G	
1:150	2	600	3051/_ Ⓢ		3051/_ Ⓢ G	

Technical Data

- Degree of protection: IP65
- Shaft diameter: 8mm
- Weight: 0.26kg
- Current lth: 10A
- Current/Voltage max: 4A 220V
- Mechanical life: 10 million op
- Cable entry: 1x 16mm

Note: Ⓢ Complete the part number by selecting control cam below. eg. 3001/7141
 The standard cam is SL7141.
 Ⓣ For low voltage - low current circuits (PLC inputs) use units fitted with gold contacts

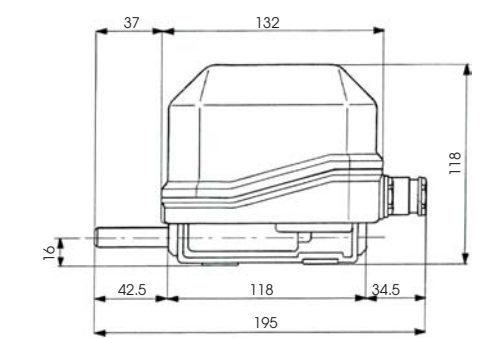
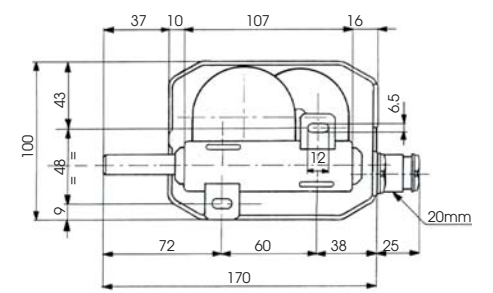
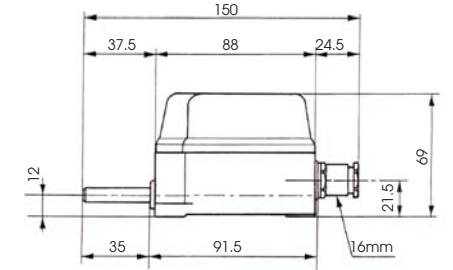
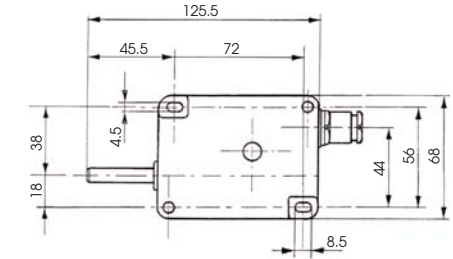
SERIES GF4C 4x Switches (1x POT can replace switches)				
REV RATIO	No SWITCHES	MAX RPM	PART NUMBER	TRADE PRICE
Shaft With Bevel Gear				
1:1	4	1200	3297/_ Ⓣ	
Shaft With Two-Start Screws				
1:10	4	300	3351/_ Ⓣ	
1:15	4	300	3375/_ Ⓣ	
1:20	4	300	3405/_ Ⓣ	
Shaft With One-Start Screw				
1:25	4	1800	3429/_ Ⓣ	
1:50	4	1800	3579/_ Ⓣ	
1:75	4	1800	3609/_ Ⓣ	
1:100	4	1800	3633/_ Ⓣ	
1:150	4	1800	3693/_ Ⓣ	
1:200	4	1800	3753/_ Ⓣ	
1:250	4	1800	3813/_ Ⓣ	
1:300	4	1800	3873/_ Ⓣ	
1:400	4	1800	4011/_ Ⓣ	
1:500	4	1800	4107/_ Ⓣ	
1:600	4	1800	4137/_ Ⓣ	
1:700	4	1800	4143/_ Ⓣ	
1:800	4	1800	4161/_ Ⓣ	

Technical Data

- Degree of protection: IP65
- Shaft diameter: 12mm
- Weight: 0.7kg
- Current lth: 10A
- Current/Voltage max: 4A 380V
- Mechanical life: 10 million op
- Cable entry: 1x 20mm

Note: Ⓣ Complete the part number by selecting control cam below. eg. 3297/7140

Switch-Operating Control Cams





Charlie Pendants - Economical (IP65)

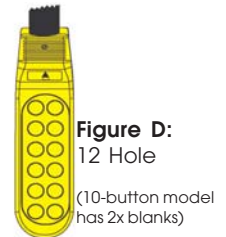
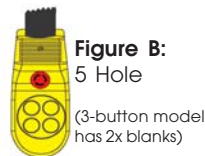
PART NUMBER	DESCRIPTION	TRADE PRICE
PF39 02 0014	2x 1-Speed Buttons (Stop-Start)	
PF39 02 0003	2x 1-Speed Buttons (Up & Down)	
PF39 02 0004	2x 2-Speed Buttons (Up & Down)	
PF39 03 0003	2x 1-Speed Buttons (Up & Down) +E/Stop	
PF39 03 0004	2x 2-Speed Buttons (Up & Down) +E/Stop	

Notes: - Operational ratings to AC-15: 250V 3A
- Pendants can be customised to suit individual applications - consult EIC.

Alpha Pendants - Style (IP65)

PART NUMBER	PENDANT SIZE	PENDANT ASSEMBLY				TRADE PRICE
		1-Speed	2-Speed	E/Stop	Blanks	
PF38 02 0001	2-Button (Fig. A)	2	-	-	2	
PF38 02 0002		-	2	-	2	
PF38 03 0001	3-Button (Fig. B)	2	-	1	2	
PF38 03 0002		-	2	-	2	
PF38 04 0004	4-Button (Fig. A)	4	-	-	-	
PF38 04 0005		-	4	-	-	
PF38 05 0003	5-Button (Fig. B)	4	-	-	-	
PF38 05 0004		-	-	1	-	
PF38 05 0005		-	-	-	-	
PF38 06 0013	6-Button (Fig. C)	-	-	-	2	
PF38 06 0014		-	6	-	2	
PF38 08 0074	8-Button (Fig. C)	6	-	1	1	
PF38 08 0021		-	6	1	1	

Notes: - Pendants can be customised to suit individual applications - consult EIC.
- Maximum number of holes/buttons is 12 - Fig D.
- Operational ratings to AC-15: 250V 3A



OBSOLETE

Replacement Parts - For Charlie & Alpha

PART NUMBER	DESCRIPTION	TRADE PRICE
PR SL1000 PI	Contact Block: 1NO	
PR SL1001 PI	Contact Block: 1NC	
PR SL1002 PI	Contact Block: NO+NO+COM (1-speed)	
PR SL1003 PI	Contact Block: NO+NO+COM (2-speed)	
PR SL1009 PI	E/Stop Mushroom Button, Latching	
PR SL1023 PI	Blanking Plug	



PCP Power Switching (3-Pole) - Direct Switching

PART NUMBER	DESCRIPTION	TRADE PRICE
PCP81	2x 1-Speed Buttons (Up & Down)	
PCP82	2x 1-Speed Buttons (Up & Down) + E/Stop	
PCP0471	Replacement 1-Sp 3-Pole Dual Contact	

Notes: - Operational ratings to AC3, AC4: 380V 10A
- 2-speed bipolar pendants also available

SPA Pendants - Heavy Duty (IP65)

Part No SPA					
No of Buttons	Pushbutton Contact Elements		Options		
4	A -		1 - E/Stop mushroom button		
6	B - 1NO + 1NC		2 - Key switch		
8	C - 2 speed on hoist		3 - Blanking plug		
10	D - 2 speed on hoist & cross travel		4 - Selector switch		
12	E - 2 speed on hoist, cross & long travel		5 - Ind light c/w cover		
14	F - Other combination - customised		6 - Symbols on buttons		
16			7 - Other buttons - specify		
18			8 - Specific engraving		
20					
<i>Pairs of buttons all mechanically interlocked (horizontally)</i>					
PART No	DESCRIPTION	PRICE	PART No	DESCRIPTION	PRICE
Standard SPA Pendants					
SPA4B6	4x 1NO/1NC Buttons		SPA14B6	14x 1NO/1NC Buttons	
SPA6B6	6x 1NO/1NC Buttons		SPA16B6	16x 1NO/1NC Buttons	
SPA8B6	8x 1NO/1NC Buttons		SPA18B6	18x 1NO/1NC Buttons	
SPA10B6	10x 1NO/1NC Buttons		SPA20B6	20x 1NO/1NC Buttons	
SPA12B6	12x 1NO/1NC Buttons				
SPA Replacement Parts			SPA Contact Blocks		
SPA3500	E/Stop M/Rm Button		SPA0073	1NO1NC + Lamp	
SPA3539	Key Switch 2 Position		SPA0074	1NO1NC + 1NO1NC	
SPA3540	Selector Sw 2 Position		SPA0075	2x 1NO1NC1NO	
SPA5557	Blanking Plug		SPA0077	2NO2NC + 2NO2NC	

Notes: - Operational ratings to AC-15: 380V 1.9A



Pendants can be customised to suit individual applications

CE, UL, cUL

NPA Pendants - Robust (IP65)

Pairs of buttons all mechanically interlocked (vertically)

Part No NPA			Part No DP		
No of Buttons	Pushbutton Contact Elements		Options		
2	A - 1NO		1 - E/Stop mushroom button		
3	B - 1NO + 1NC		2 - Key switch		
4	C - 2 speed on hoist		3 - Blanking plug		
5	D - 2 speed on hoist & cross travel		4 - Selector switch		
6	E - 2 speed on hoist, cross & long travel		5 - Ind light c/w cover		
7	F - Other combination - customised		6 - Symbols on buttons		
8	G - 3 speed on hoist		7 - Other buttons - specify		
9	H - 3 speed on hoist & cross travel		8 - Specific engraving		
10	J - 3 speed on hoist, cross & long travel		DP- Dust proof		
PART No	DESCRIPTION	PRICE	PART No	DESCRIPTION	PRICE
Standard NPA Pendants					
NPA2A16DP	1x 1-Sp Button +E/Stop		NPA6A16DP	5x 1-Sp Button +E/Stop	
NPA2A6DP	2x 1-Sp Buttons		NPA6A6DP	6x 1-Sp Buttons	
NPA2C6DP	2x 2-Sp Buttons		NPA6E6DP	6x 2-Sp Buttons	
NPA3A16DP	2x 1-Sp Button +E/Stop		NPA8A6DP	8x 1-Sp Buttons	
NPA3A6DP	3x 1-Sp Buttons		NPA8A136DP	6x 1-Sp Button +E/Stop	
NPA4A16DP	3x 1-Sp Button +E/Stop		NPA8E136DP	6x 2-Sp Button +E/Stop	
NPA4A6DP	4x 1-Sp Buttons		NPA8E6DP	2x 1-Sp +6x 2-Sp Button	
NPA4D6DP	4x 2-Sp Buttons		NPA10A6DP	10x 1-Speed Buttons	
NPA Replacement Parts			NPA Contact Blocks		
NPA0500	E/Stop M/Rm Button		NPA0502	1NC	
NPA0501	Lamp Socket/Holder		NPA0503	1NO	
NPA0513	Key Switch 3 Position		NPA0504	NO+NC+NO 1-Speed	
NPA0514	Selector Sw 3 Position		NPA0505	NO+NC+NO 2-Speed	
NPA0517	Blanking Plug		NPA0507	NO+NO+NO 3-Speed	
NPA0550	Button Operator				

Notes: - Operational ratings to AC-15: 380V 1.9A

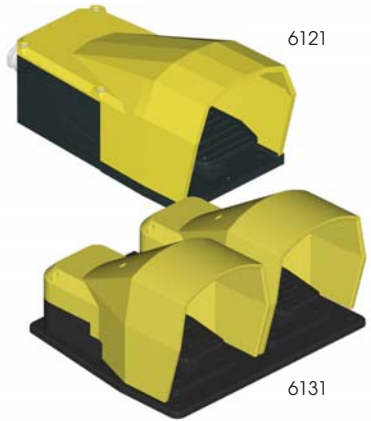


Pendants can be customised to suit individual applications

CE, UL, cUL

Plastic Foot Switches - IP53 (TER)

DESCRIPTION	PART NUMBER	TRADE PRICE
Single Pedal Footswitch - With Guard		
2 Position, Spring Return, 1NO/1NC	6121	
2 Position, Latching, 1NO/1NC	6121/LATCH	
2 Position, Spring Return, 2x 1NO/1NC	6122	
Twin Pedal Footswitch - With Guard		
2 Pos, Spring Return, 1NO/1NC (per pedal)	6131	
Replacement Contact Block		
1NO/1NC, Snap Action	SL0036	



Notes: - Operational ratings to AC-15: 250V 3A
 - Diecast Aluminium models available on request

Metal Foot Switches - IP65 (Bernstein)

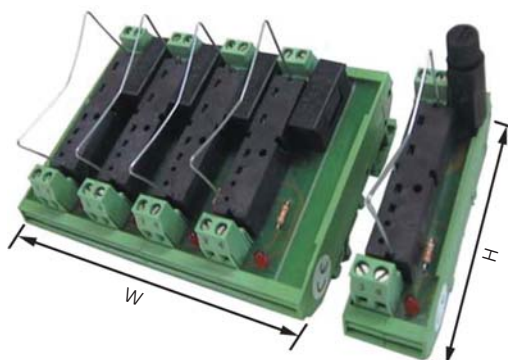
DESCRIPTION	PART NUMBER	TRADE PRICE
Single Pedal Footswitch		
2 POSITION, SPRING RETURN: - Without Guard, 1NO/1NC - With Full Guard, 1NO/1NC	F1-SU1 F1-SU1-UN	
2 POSITION, SPRING RETURN: - Without Guard, 2x 1NO/1NC - With Full Guard, 2x 1NO/1NC	F1-SU2 F1-SU2-UN	
PUSH ON - PUSH OFF, MAINTAINED: - Without Guard, 1NO/1NC - With Full Guard, 1NO/1NC	F1-U1Y F1-U1Y-UN	
3 POSITION (TWO STAGE): - Without Guard, 1NO/1NC (per stage) - With Full Guard, 1NO/1NC (per stage)	F1-U2D F1-U2D-UN	
2 POSITION WITH 10kΩ POT: - Without Guard, 1NO/1NC - With Full Guard, 1NO/1NC	F1-SU1-MI-RG F1-SU1-MI-RG-UN	
Twin Pedal Footswitch		
2 POSITION, SPRING RETURN: - Without Guard, 1NO/1NC (per pedal) - With Full Guard, 1NO/1NC (per pedal)	F2-SU1-SU1 F2-SU1-SU1-UN	
Triple Pedal Footswitch		
2 POSITION, SPRING RETURN: - Without Guard, 1NO/1NC (per pedal) - With Full Guard, 1NO/1NC (per pedal)	F3-U1-U1-U1 F3-U1-U1-U1-UN	
Replacement Contact Blocks		
SU1 : 1NO/1NC, Snap Action	600-6351-039	
U1 : 1NO/1NC, Slow Break	600-6101-036	
U1Y : 1NO/1NC, With Latch	600-6101-060	
SU2 : 2x 1NO/1NC, Snap Action	600-6451-040	
U2D : 2-Stage, 1NO/1NC (per stage)	600-6201-058	



Notes: Max op ratings for footswitch with 10kΩ POT: Microswitch - 250Vac 5A POT - 140Vac/dc 2W/70°C
 - Max operational rating for all other footswitches: 500Vac 10A
 - Other contact configurations and options available on request.

Extra heavy duty footswitches available on request

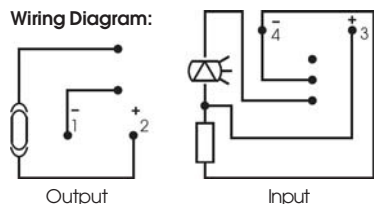
Multi Relay Plug-In Mounting Base - For Solid State Relays, DIN Rail Mount



Features:

- DIN rail mount (35mm)
- Output protected by fuses
- LED input indication
- Suit 870/871 and 88D SSRs


Wiring Diagram:



PART NUMBER	DESCRIPTION	DIMENSIONS			TRADE PRICE
		D	H	W	
IFCOMP-1	Mounting Base For 1 Relay	80	82	46	
IFCOMP-2	Mounting Base For 2 Relays	80	82	68	
IFCOMP-4	Mounting Base For 4 Relays	80	82	113	
IFCOMP-8	Mounting Base For 8 Relays	80	82	203	

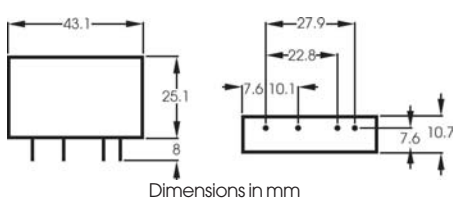
Notes: Bases up to 16 relays are available on request

Solid State Relays - For Printed Circuit Mounting or Plug-In Base Mount



Features:

- Low control current
- Peak voltage up to 600V (for AC models)
- RC filter protection (for AC models)



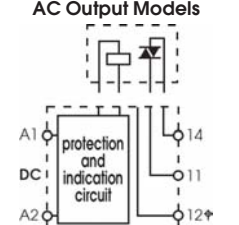
Dimensions in mm

PART NUMBER	OUTPUT CURRENT	OUTPUT VOLTAGE	INPUT VOLTAGE	TRADE PRICE
Zero-Crossing (Resistive AC Loads) - Triac Output Switching				
870-4240	4A	240V AC	3-32V DC	
Instant (Inductive AC Loads) - Triac Output Switching				
871-4240	4A	240V AC	3-32V DC	
DC Switching - Transistor Switched Output				
88D-360	3A	60V DC	3-32V DC	

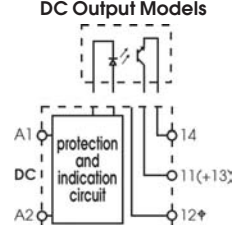
VDE CERTIFICATION
Reg. No: 115030-10146
(Model 870/871-4240; Model 88D-360)

Solid State Terminal Relays - 35mm DIN Rail Mount, 6.2mm Wide


AC Output Models



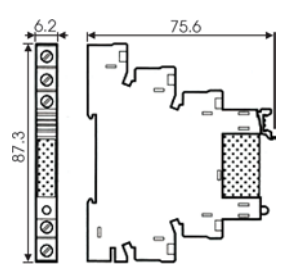
DC Output Models



(no connection on Terminal 12)




EZD-20P




Features:

- DIN rail mount (35mm)
- LED input indication
- Slim line 6.2mm wide
- Operating temp -20 to +55°C
- Protection degree IP20
- Non-polarised input



(no connection on Terminal 12)



INPUT VOLTAGE	OUTPUT CURRENT	OUTPUT VOLTAGE RANGE	PART NUMBER	TRADE PRICE	RELAY ONLY (replacement)
6VDC (5-12VDC)	2A DC	0 ~ 33VDC	EZD-24D-5RS224		SSR05D-224
24VDC (17-30VDC)	2A DC	0 ~ 33VDC	EZD-24D-RS224		SSR01D-224
6VDC (5-12VDC)	2A AC	12 ~ 275VAC	EZD-24D-5RS2240		SSR05A-2240
24VDC (17-30VDC)	2A AC	12 ~ 275VAC	EZD-24D-RS2240		SSR01A-2240
20 Pole Linking Comb			EZD-20P		

SO8 RANGE - General Purpose Loads

Designed for most types of loads:

- Zero cross with low zero-cross level (<12)
- Voltage protection on input (transil) with very high immunity according to IEC/EN61000-4-4
- IP20 protection
- Control current <13mA for all the voltage range at any operating temperature
- Control status LED
- Dimensions 45W x 58.5H x 30D mm

Introducing the new SO Series

PART NUMBER	SWITCHING		PEAK VOLTAGE	CONTROL		I _{ct}	TRADE PRICE
	CURRENT	VOLTAGE		VOLTAGE	CURRENT		
SO863970	35A	24~510 Vac	1200 V	20~265 Vac/dc	Ic <10mA	1250 A ² s	
SO865070	50A	24~510 Vac	1200 V	3.5~32 Vdc	Ic <13mA	2500 A ² s	
SO865970	50A	24~510 Vac	1200 V	20~265 Vac/dc	Ic <10mA	2500 A ² s	
SO867070	75A	24~510 Vac	1200 V	3.5~32 Vdc	Ic <13mA	7200 A ² s	
SO867970	75A	24~510 Vac	1200 V	20~265 Vac/dc	Ic <10mA	7200 A ² s	
SO868070	95A	24~510 Vac	1200 V	3.5~32 Vdc	Ic <13mA	14400 A ² s	
SO868970	95A	24~510 Vac	1200 V	20~265 Vac/dc	Ic <10mA	14400 A ² s	
SO869070	125A	24~510 Vac	1200 V	3.5~32 Vdc	Ic <13mA	24000 A ² s	
SO869970	125A	24~510 Vac	1200 V	20~265 Vac/dc	Ic <10mA	24000 A ² s	



SO8 Range

Notes: - 1600V peak voltage available on request.
 - These products must be mounted on the correctly sized heatsink in order to reach nominal current.

THE REPLACEMENT 'SO' MODELS ARE BASED ON THOSE HELD IN STOCK
 Other sizes are available on request

Replacement Table for SC8 Series

GENERAL PURPOSE LOADS				
Switching Voltage: 24~510Vac Control Input: 3~32Vdc		Switching Current	Switching Voltage: 24~510Vac Control Input: 20~265Vac/dc	
New SO8	Old SC8		Old SC8	New SO8
SO865070 (50A)	SC841110 SC861110	12A	SC841810 SC841910	SO863970 (35A)
	SC862110	25A	SC842810 SC842910 SC862810 SC862910	
	SC844110	40A	SC844810 SC844910	SO865970 (50A)
	SC864110	50A	SC864810 SC864910	
SO867070	SC867110	75A	SC867910	SO867970
SO868070	SC868110	95A	SC868910	SO868970
SO869070	SC869110	125A	SC869810 SC869910	SO869970



SO8 Range



SC8 Range (superseded)



SC7 Range (superseded)

Replacement Table for SC7 & SC9 Series

INDUCTIVE LOADS		Switching Current	HEATING LOADS	
Switching Voltage: 24~510Vac Control Input: 3.5~32Vdc			Switching Voltage: 24~600Vac Control Input: 3.5~32Vdc	
New SO7	Old SC7	Old SC9	New SO9	
SO763090 (35A)	SC741110	12A	SC941110	SO963460 (35A)
	SC742110 SC762110	25A	SC942110 SC952110 SC962100	
	SC744110	40A	SC944100 SC954100	
SO765090 (50A)	SC764110	50A	SC965100	SO965460 (50A)
	SO768090 (95A)	SC747110 SC767110	75A	SC947100 SC957100 SC967100
SC768110		95A	-	-
SO769090	SC769110	125A	-	-



SO7 Range



SC9 Range (superseded)



SO9 Range

SO7 RANGE - Inductive Loads

- Typical applications: Motors (AC-53), inductive loads and phase angle control applications.
- Random or instant switching
- Voltage protection on input (transil) and output (RC and VDR)
- IP20 protection
- Control status LED
- Dimensions 45W x 58.5H x 30D mm



SO7 Range

PART NUMBER	SWITCHING		PEAK VOLTAGE	CONTROL		I ² t	TRADE PRICE
	CURRENT	VOLTAGE		VOLTAGE	CURRENT		
SO763090	35A	24~510 Vac	1200 V	3.5~32 Vdc	Ic <13mA	1250 A²s	
SO765090	50A	24~510 Vac	1200 V	3.5~32 Vdc	Ic <13mA	2500 A²s	
SO768090	95A	24~510 Vac	1200 V	3.5~32 Vdc	Ic <13mA	14400 A²s	
SO769090	125A	24~510 Vac	1200 V	3.5~32 Vdc	Ic <13mA	24000 A²s	

Notes: - These products must be mounted on the correctly sized heatsink in order to reach nominal current.

SO9 & 860 RANGE - Heating Loads

- Typical applications: Resistive loads (AC-51)
- Zero cross
- Control status LED (SO9 relays only)
- IP20 protection - flaps required for SO9 (purchase separately)
- Regulated control current (SO9 range)



SO9 Range

860 Range (supplied with cover)

PART NUMBER	SWITCHING		PEAK VOLTAGE	CONTROL		I ² t	TRADE PRICE
	CURRENT	VOLTAGE		VOLTAGE	CURRENT		
860-25 440BS 860-25 440CS	25A	40~480 Vac	800 V	8~32 Vdc 90~240 Vac/dc	16mA 3~6mA	800 A²s	
SO963460	35A	24~600 Vac	1200 V	3.5~32 Vdc	Ic <13mA	1250 A²s	
860-40 440BS 860-40 440CS	40A	40~480 Vac	800 V	8~32 Vdc 90~240 Vac/dc	16mA 3~6mA	1250 A²s	
SO965460	50A	24~600 Vac	1200 V	3.5~32 Vdc	Ic <13mA	2500 A²s	
860-70 440BS 860-70 440CS	70A	40~480 Vac	800 V	8~32 Vdc 90~240 Vac/dc	16mA 6~15mA	5000 A²s	
SO967460	75A	24~600 Vac	1200 V	3.5~32 Vdc	Ic <13mA	7200 A²s	

Notes: - Dimensions: SO9: 45W x 58.5H x 30D mm 860: 45W x 58.5H x 34D mm
- These products must be mounted on the correctly sized heatsink in order to reach nominal current.



SF Range (Miniature SSR)



SK Range (PCB Mount)



XK Range (w/DIN Rail Base)

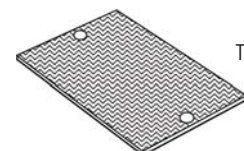
Interface Relays - Miniature & PCB Mount SSRs

To control loads such as resistors, indicators, solenoids, transformers, motors, power contact coils.

PART NUMBER	SWITCHING		CONTROL VOLTAGE	INPUT R	LED	SPECIFICATIONS	DIMENSIONS mm	TRADE PRICE
	CURRENT	VOLTAGE						
XKA20420	4A	12~275Vac	6~30Vdc	1 kΩ	Yes	AC synchronous output	12.2 x 76.4 x 53	
XKD10306	3A	2~60Vdc	5~30Vdc	1 kΩ	Yes	1 pole DC output		
SKA20420	4A	12~275Vac	4~30Vdc	1 kΩ	No	AC zero-cross output	43.2 x 10.2 x 25.4	
SKA21421	4A	12~275Vac	7~30Vdc	1 kΩ	Yes	AC random output		
SKD10306	3A	2~60Vdc	3~30Vdc	1 kΩ	No	1 pole DC output		
SF441310	10A	12~280Vac	3~30Vdc	1 kΩ	No	AC random output	21 x 35.5 x 15	
SF541310	10A	12~280Vac	4~30Vdc	1 kΩ	No	AC zero-cross output		

Accessories - for SO, SC & SG Relays

PART NUMBER	DESCRIPTION	TRADE PRICE
5TH15000	Heatsink Thermal Paste for up to 30 Relays	
5TH21000	Heatsink Thermal Pad (alternative to paste)	
1K453000	IP20 Protection Flaps for SO9 Series (each)	
1K199000	Protective Plastic Cover for SGR/SGT	
1K460000	Protective Plastic Cover for SC Range	
1LK00700	High Current Terminal Set for 25 & 50mm lugs	
1LK00300	Screw Kit (set) for older heatsinks	
1LD00000	DIN Rail Adaptor for SO & SC Range - direct mounting	
1LD00400	DIN Rail Adaptor Aluminium, 85W x 50H mm	
WF0507	Mounting Feet for WF05 & WF07 (set)	
VR-240	Varistor for External Mounting 240Vac	
VR-440	Varistor for External Mounting 440Vac	



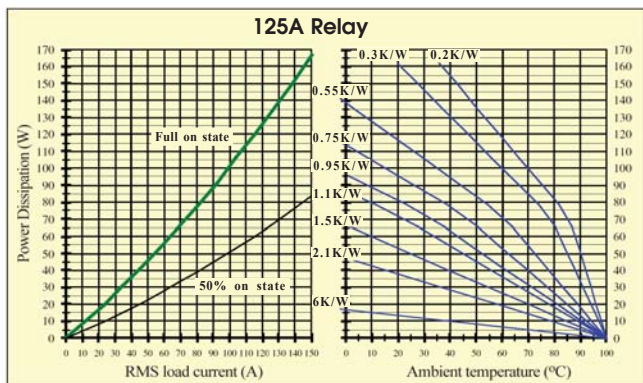
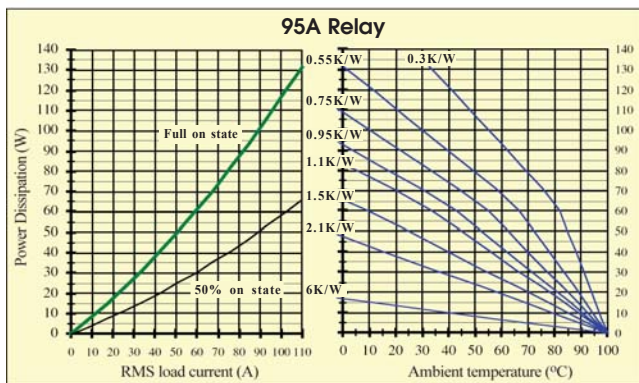
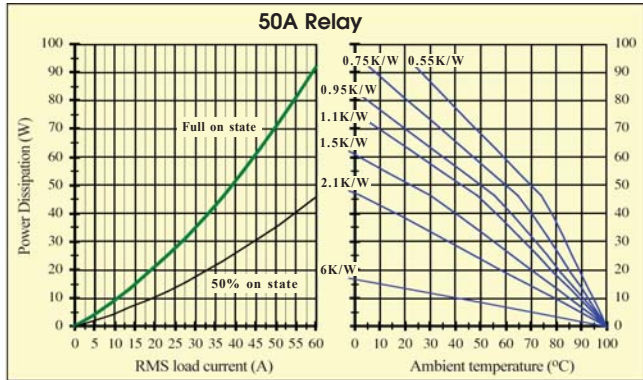
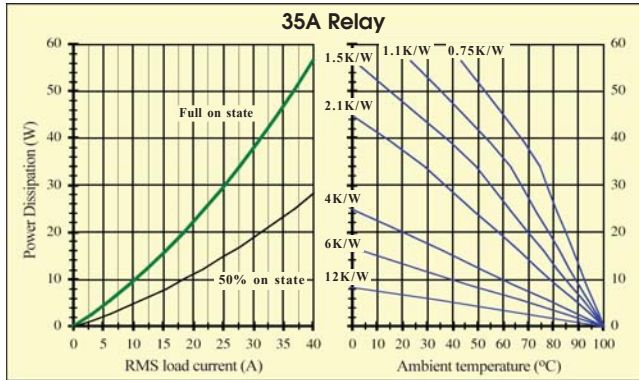
5TH21000 Thermal Pad



1LK00700 Terminal Kit

Guide to Selecting a Heatsink

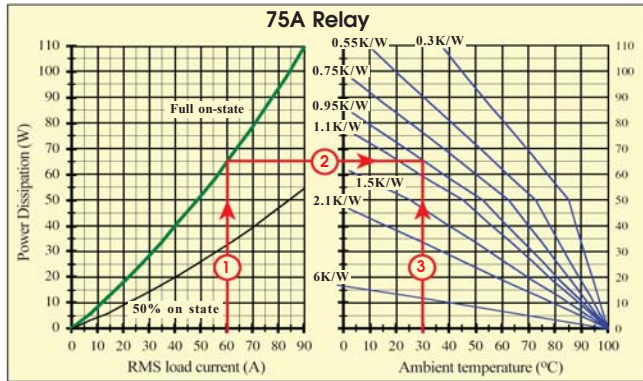
Dissipated Power / Choice of Heatsink - SO7, SO8 & SO9 Series



Choosing the Heatsink

Establish the load current to be passed by the relay. Draw a vertical line ① until it reaches the nominated wasted (dissipated) power curve. Draw a horizontal line ② across to the ambient temperature graph. Select the ambient temperature that the relay will operate in and draw a vertical line ③ until it intersects line ②. Select the nearest heatsink rating that is above this intersection point. In the chosen example (I=60A, ambient temperature=30°C), the nearest curve is the 0.95K/W. The nearest standard heatsink is the WF115100 - 0.95K/W.

EXAMPLE:

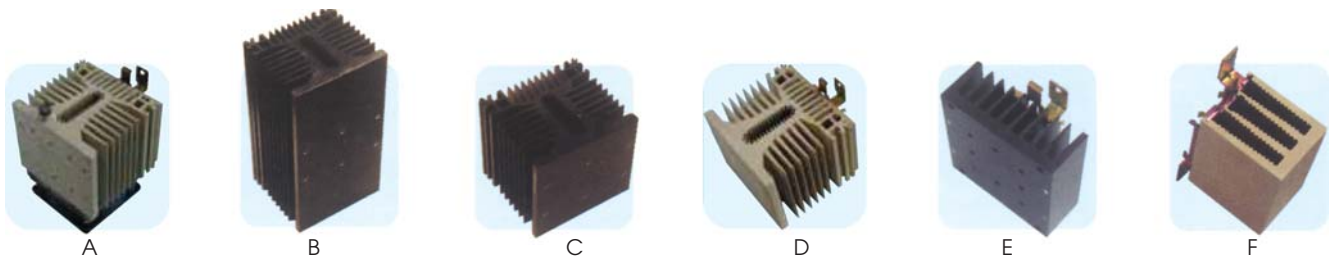


Heatsinks

PART NUMBER	THERMAL CHARACTERISTICS	SPECIFICATIONS	DIMENSIONS mm	RELAY TYPE	FIG No	TRADE PRICE
WF031100	0.3 K/W	Fan Cooled (230Vac) - DIN Rail or Screw	145H x 110W x 120D	SO,SC,SG	A	
WF050000	0.55 K/W	Screw Mounting ②	200H x 110W x 100D	SO,SC,SG	B	
WF070000	0.75 K/W	Screw Mounting ②	100H x 110W x 100D	SO,SC,SG	C	
WF115100	0.95 K/W	DIN Rail Mounting	90H x 110W x 110D	SO,SC,SG	D	
WF121000	1.2 K/W	DIN Rail Mounting	100H x 100W x 50D	SO,SC	E	
WF262100	2.2 K/W	DIN Rail Mounting	72H x 60W x 48D	SO,SC	F	

Notes: ① Also known as °C/W

② Panel mounting feet WF0507



SG4 & SO4 Range - Phase Angle Controller

This relay is designed to proportionally vary the switching point on a sinusoidal mains from an analog input, thereby varying the RMS voltage of the load.

Applications: light dimmer, heating regulation, single phase variable speed control (vibrating feeders, etc). Model with LED and RC and VDR networks.

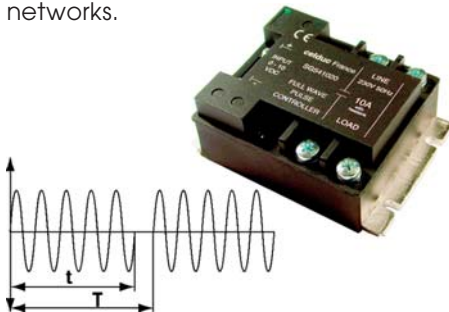


SG4 Series		SO4 Series Specification NEW PRODUCT			
PART NUMBER	SWITCHING		CONTROL INPUT	PART NUMBER	TRADE PRICE
	CURRENT	VOLTAGE			
SG441020	50A	100~280Vac	0 ~ 10Vdc	SO445020①	
SG444020	50A	100~280Vac	0 ~ 10Vdc	SO445020①	
SG444120	50A	100~280Vac	Potentiometer	SO445320①	
SG444 420	50A	100~280Vac	4 ~ 20mA	SO445420	
SG464020	50A	200~480Vac	0 ~ 10Vdc	SO465020①	③
SG464120	50A	200~480Vac	Potentiometer	SO465320①	③
SG464420	50A	200~480Vac	4 ~ 20mA	SO465420	③
SG468020	95A	200~480Vac	0 ~ 10Vdc	SO468020①	
SG468420	95A	200~480Vac	4 ~ 20mA	SO468420	
SG469020	125A	200~480Vac	0 ~ 10Vdc	SO469020①	

- ① To change from the SG4 series an 8~30Vdc power supply is required.
 - ② The SG4 has a larger foot print of 100x73.5 mm. The SO4 is 58.5x45 mm.
 - ③ Normally stocked items. Other relay stocks may vary.
- For further details go to www.celduc.com and select Relays.

SG5 Range - Full Wave Pulse Controller

This relay has an analog input isolated from the mains to proportionally vary the cyclic operating ratio of a load (t/T). Control and mains are synchronous and output only has full periods. Model with LED and RC and VDR networks.



PART NUMBER	SWITCHING		CONTROL INPUT	INPUT R	I _{ft}	TRADE PRICE
	CURRENT	VOLTAGE				
SG541020	10A	230Vac	0 ~ 10Vdc	250kΩ	72A ² s	
SG544120	40A	230Vac	Potentiometer	1MΩ	610A ² s	
SG564020	40A	400Vac	0 ~ 10Vdc	250kΩ	610A ² s	
SG564120	40A	400Vac	Potentiometer	1MΩ	610A ² s	
SG564420	40A	400Vac	4 ~ 20mA	350kΩ	610A ² s	

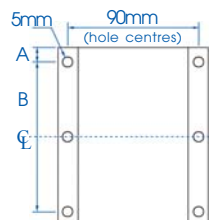
These products must be mounted on a heatsink to reach their rated current

Heatsinks - Screw Mounting

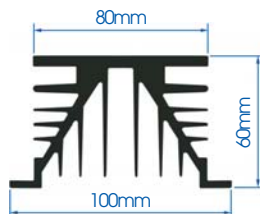
PART NUMBER	THERMAL ①② CHARACTERISTICS	DIMENSIONS mm	MOUNTING HOLES			TRADE PRICE
			A	B	℄	
WHS3-80	1.8 K/W	80H x 100W x 60D	-	-	40	
WHS3-150	1.2 K/W	150H x 100W x 60D	15	120	-	
WHS3-200	1.1 K/W	200H x 100W x 60D	20	160	-	
WHS3-250	1.0 K/W	250H x 100W x 60D	10	220	120	

- ① Also known as °C/W.
- ② Estimated rating based on an air temperature of 50°C.

Mounting Dimensions:



Overall Dimensions:



Motor Control Solid State Relays

with Heatsink



SMC3-15 480C DOL



SRC3-10 480A



STL3-15 480

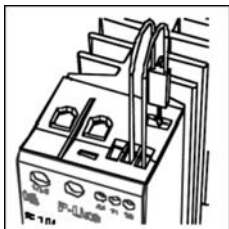


SMC3-25 480C

SMC3-15 480C



SMC3-3 480C



Optional thermal overload protection using Thermostat

SMC3-DOL Series – Semiconductor Motor Controllers (DOL)

Solid state contactor for motor control. Ideal for motors requiring frequent starts, inching/jogging and plugging. AC3 and AC4 applications.

PART NUMBER	LINE VOLTAGE	MOTOR LOAD	RATED CURRENT	TRADE PRICE
SMC3-15 480C DOL	380~480VAC	7.5kW / 10HP	15A	

SRC3 Series – AC Semiconductor Reversing Contactors

Solid state contactors for DOL motor reversing. Space saving model ideal for frequent motor reversing. AC3 and AC4 applications.

PART NUMBER	LINE VOLTAGE	CONTROL VOLTAGE	MOTOR LOAD	RATED CURRENT	TRADE PRICE
SRC3-10 480A	400~480VAC	5~24VDC	4kW / 5.5HP	10A	
SRC3-10 480C	400~480VAC	24~230VAC/DC	4kW / 5.5HP	10A	

STL3 Series – Starting Torque Limiter (Soft Starter)

Controls starting torque by ramping the voltage in one leg of the 3-phase supply. Can be used in some single phase motor applications.

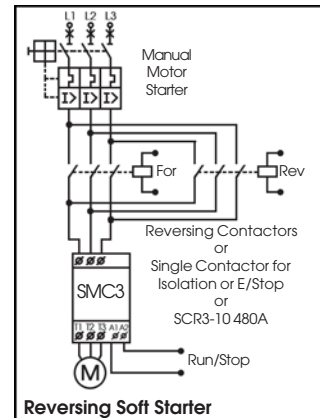
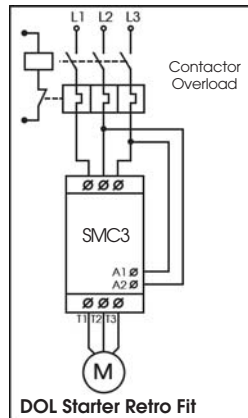
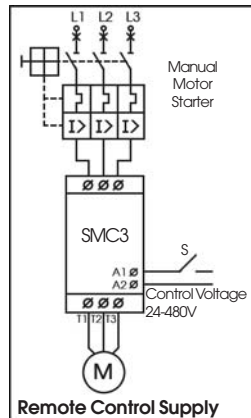
PART NUMBER	LINE VOLTAGE	MOTOR LOAD	RATED CURRENT	TRADE PRICE
STL3-15 480	380 ~ 480VAC	7.5kW / 10HP	15A	
STL3-25 480	380 ~ 480VAC	11kW / 15HP	25A	

SMC3-3 and SMC3-15/25 Series – AC Semiconductor Soft Starters

These soft starter modules reduce the starting torque by ramping up the voltage in two legs of the 3 phase supply. Kick start and ramp down also included.

PART NUMBER	LINE VOLTAGE	MOTOR LOAD	RATED CURRENT	TRADE PRICE
SMC3-3 480C	400 ~ 480VAC	1.5kW / 2HP	3.5A	
SMC3-15 480C	400 ~ 480VAC	7.5kW / 10HP	15A	
SMC3-25 480C	400 ~ 480VAC	11kW / 15HP	25A	

Typical Circuit Diagrams



PART NUMBER	TRADE PRICE
TO6290	

Celpac® Range
with Heatsink - Easy to install

PART NUMBER	SWITCHING		PEAK VOLTAGE	CONTROL		I ² t	SWITCHING TYPE	TRADE PRICE
	CURRENT	VOLTAGE		VOLTAGE	CURRENT			
SIL Range - Single Phase								
*() UL and AC-51. DIN Rail Mounting. Dimensions: 22.5W x 80H x 111D mm								
SIL765170	32A (22A)	24~510 Vac	1200 V	3.5~32 Vdc	Ic<=10mA	1500 A²s	Random	
SIL842170	25A (20A)	12~275 Vac	600 V	3~32 Vdc	Ic<=10mA	312 A²s	Zero-cross	
SIL842770	25A (20A)	12~275 Vac	600 V	17~60 Vac/dc	Ic<=10mA	312 A²s	Zero-cross	
SIL842970	25A (20A)	12~275 Vac	600 V	150~240 Vac/dc	Ic<=10mA	312 A²s	Zero-cross	
SIL863170	32A (22A)	12~510 Vac	1200 V	3~32 Vdc	Ic<=10mA	1500 A²s	Zero-cross	
SIL865170	32A (22A)	24~510 Vac	1200 V	3.5~32 Vdc	Ic<=10mA	1500 A²s	Zero-cross	
SIL865770	32A (22A)	24~510 Vac	1200 V	17~60 Vac/dc	Ic<=10mA	1500 A²s	Zero-cross	
SIL865970	32A (22A)	24~510 Vac	1200 V	150~240 Vac/dc	Ic<=10mA	1500 A²s	Zero-cross	
SIL867170	32A (22A)	24~510 Vac	1200 V	3.5~32 Vdc	Ic<=10mA	5000 A²s	Zero-cross	
SIM Range - Single Phase								
DIN Rail Mounting. Dimensions: 45W x 80H x 116D mm								
SIM765170	40A (32A)	24~510 Vac	1200 V	3.5~32 Vdc	Ic<=10mA	1500 A²s	Random	
SIM865170	40A (32A)	24~510 Vac	1200 V	3.5~32 Vdc	Ic<=10mA	1500 A²s	Zero-cross	
SIM865770	40A (32A)	24~510 Vac	1200 V	17~60 Vac/dc	Ic<=10mA	1500 A²s	Zero-cross	
SIM865970	40A (32A)	24~510 Vac	1200 V	150~240 Vac/dc	Ic<=10mA	1500 A²s	Zero-cross	
SIM867170	45A (35A)	24~510 Vac	1200 V	3.5~32 Vdc	Ic<=10mA	5000 A²s	Zero-cross	
SIB Range - Two Phase								
These are perfectly adapted to three phase applications with breaking of two phases only DIN Rail Mounting. Dimensions: 45W x 80H x 116D mm								
SIB765170	2 x 25A	24~510 Vac	1200 V	3.5~32 Vdc	Ic<=10mA	1500 A²s	Random	
SIB865170	2 x 25A	24~510 Vac	1200 V	3.5~32 Vdc	Ic<=10mA	1500 A²s	Zero-cross	
SIB865970	2 x 25A	24~510 Vac	1200 V	150~240 Vac/dc	Ic<=10mA	1500 A²s	Zero-cross	
SIB867170	2 x 25A	24~510 Vac	1200 V	3.5~32 Vdc	Ic<=10mA	5000 A²s	Zero-cross	
SILD Range - Single Phase Diagnostic								
Fault condition alarms: - Line or load open - Short circuit output DIN Rail Mounting. Dimensions: 22.5W x 80H x 116D mm								
SILD845160	25A	70~280 Vac	600 V	3~32 Vdc	Ic<=10mA	1500 A²s	Zero-cross	
SILD865170	25A	150~510 Vac	1200 V	3.5~32 Vdc	Ic<=10mA	1500 A²s	Zero-cross	
SILD867170	35A	150~510 Vac	1200 V	3.5~32 Vdc	Ic<=10mA	5000 A²s	Zero-cross	



SIL 22.5mm
Single Phase



SIM 45mm
Single Phase



SIB 45mm
Two Phase



SILD 22.5mm
Single Phase
Diagnostic

AVAILABLE WHILE STOCKS LAST
REFER EIC FOR NEW RANGE!

EASIBAR

Flexible Power Conductors

EASIBAR NO LONGER AVAILABLE



200 to 1270 Amps

Features & Benefits

- **EASIBAR** is a flexible, insulated flat electrical conductor that can be easily formed by hand.
- Benders and other special tools are not required.
- **EASIBAR** is cost effective, easier and faster to install than conventional cable and busbar systems.
- **EASIBAR** is available in sizes to suit your needs. Current ratings range from 200A to 1700A.
- **EASIBAR** saves space. It makes your conductor work neat and compact.
- **EASIBAR** saves maintenance. Less joints means greater reliability.

Ideal for
SWITCHBOARDS, PANELBOARDS AND MOTOR STARTERS

EASIBAR



Made in New Zealand by
Electrical Importing Company Ltd

EASIBAR Trade Price List

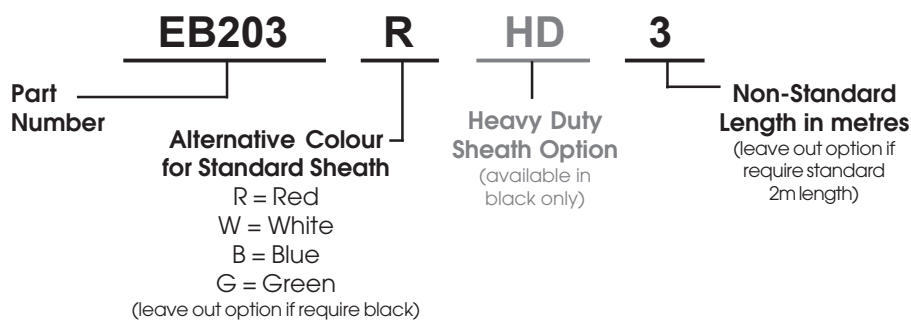
PART NUMBER	MAXIMUM RATING $\Delta t = 75^\circ$	NOMINAL RATING	SECTION sq mm	TRADE PRICE	
				STANDARD SHEATH	HEAVY DUTY SHEATH
EB203	345A	200A	60		
EB204	420A	250A	80		
EB205	488A	300A	100		
EB206	548A	350A	120		
EB253	450A	280A	75		
EB254	525A	340A	100		
EB255	618A	400A	125		
EB256	690A	450A	150		
EB324	630A	420A			
EB325	730A				
EB327	900A				
EB400			160		
		600A	200		
		680A	240		
	1095A	800A	320		
EB4010	1230A	900A	400		
EB653	900A	680A	195		
EB654	1050A	800A	260		
EB655	1193A	900A	325		
EB656	1335A	1000A	390		
EB658	1530A	1150A	520		
EB6510	1685A	1270A	650		

EASIBAR NO LONGER AVAILABLE

Prices are per two metre length

Notes: Unless otherwise specified, the standard sheath and heavy duty sheath colour supplied is black. Alternative colours are available for standard sheath only.

Customised Product Ordering Information



The Product

Easibar is a flexible, insulated flat electrical conductor. The conducting element consists of a stack of thin copper leaves which are held together by an outer sheath or high quality Airshrink insulating sleeving.

The conductor material is pure copper strip, specially annealed to give the required strength and flexibility. Tinned strip is available to order. The tough, durable insulating sheath is very flexible. Its smooth, glossy finish tends to be self cleaning in dusty situations.

Easibar supersedes conventional busbar and power cables in many switchboard, control gear and substation applications. It provides easily formed, neat and compact conductor work at minimum cost.

Features

- **FLEXIBILITY:** Easibar can be hand formed. Benders and other special tools are not required. A change of direction in one plane is simply achieved by rotating the bar on its axis as the bend is formed. Adjustment and rebending are carried out at the workplace.
- **CONNECTION:** Easibar fixes directly to equipment terminals. It eliminates the need for lugs, sockets, welding or crimping. A better electrical joint results.
- **PERFORMANCE:** Easibar has a substantially higher current rating, for the same temperature rise, than bare solid busbar or cable. This enables smaller cross-sections to be used. Bent links can be very short since bending radius, as for cables, is not applicable.
- **SPACE SAVING:** Easibar can be neatly dressed without regard for electrical clearances. Compact equipment grouping is now possible.

Current Ratings

Easibar has a greater performance than cable and cannot be directly compared by relating it to existing codes of practice. It is conservatively rated for a low temperature rise in enclosed spaces. However, this rise will depend upon bar width, number of leaves in the stack, bar orientation, type of ventilation, degree of enclosure and nature of the load cycle.

Current ratings do not vary appreciably when Easibar is laid flat or on edge.

The nominal ratings given in the selection chart are for Easibar run horizontally in any configuration. They are for a 30~40°C rise in free air at 30°C ambient temperature.

The maximum ratings are for a 75°C rise in free air at an ambient temperature of 30°C, under defined conditions.

Direct current ratings, multibar and specific enclosure derating factors are available on request.

User Benefits

- Individual requirements can be closely met. Easibar is available in a wide range of conductor sizes and current ratings.
- It is competitively priced. On an installed basis, an Easibar job is less costly than one using cable.
- Easibar is very simple to install. The saving in time is enormous.
- Equipment cubicles can be smaller and less costly. Internal space can be better utilised, especially at higher voltages and temperatures.

Standard EASIBAR Selection

Easibar selection is by leaf width and number of leaves in the stack. Leaf thickness is 1.0mm.
e.g. EB256 -> a 25mm leaf width with 6 leaves in the stack, giving a conductor cross section of 150mm²

The chart below groups Easibar into five leaf widths. These match the terminal flags of most power switching components (i.e. fuse switches, circuit breakers and contactors). Use Easibar with a width that most closely covers the flag. This will ensure a cool joint whilst maintaining interphase clearances.

Standard bar length is 2m. Other lengths can be supplied, the maximum length being dictated by transport means since Easibar is packed flat.

The insulating sheath can be supplied in two thicknesses;

- ⇒ **Standard Sheath:** 1.0mm thick for all normal use.
- ⇒ **Heavy Duty Sheath:** 2.0mm thick for high voltage and high short circuit applications. Also where abrasion or wear can occur.

Part Number	Nominal Rating	Maximum Rating	Leaf Width	No. of Leaves	Section in sq mm	Overall Dimensions	1sec Short Cct W/stand	Resistance milliohm/m
EB203	200A	345A	20 mm	3	60	22 x 5	9 kA	
EB204	250A	420A	20 mm	4	80	22 x 6		
EB205	300A	488A	20 mm	5	100	22 x 7		
EB206	350A	548A	20 mm	6	120			
EB253	280A	450A	25 mm	3	75	27 x 6	14 kA	0.227
EB254	340A	525A	25 mm	4	100	27 x 7	17 kA	0.171
EB255	400A	618A	25 mm	5	125	27 x 8	19 kA	0.137
EB256	450A	718A	25 mm	6	150			0.113
EB303	300A	488A	32 mm	4	128	34 x 6	17 kA	0.134
EB304	350A	548A	32 mm	5	160	34 x 7	20 kA	0.107
EB305	400A	618A	32 mm	7	224	34 x 9	24 kA	0.077
EB403	400A	618A	40 mm	4	160	42 x 6	19 kA	0.107
EB405	520A	720A	40 mm	5	200	42 x 7	24 kA	0.085
EB406	600A	840A	40 mm	6	240	42 x 8	30 kA	0.071
EB408	680A	945A	40 mm	8	320	42 x 10	34 kA	0.053
EB4010	800A	1095A	40 mm	10	400	42 x 12	38 kA	0.043
EB653	900A	1193A	65 mm	3	195	67 x 5	20 kA	0.087
EB654	680A	900A	65 mm	4	260	67 x 6	23 kA	0.066
EB655	800A	1050A	65 mm	5	325	67 x 7	30 kA	0.052
EB656	900A	1193A	65 mm	6	390	67 x 8	37 kA	0.044
EB658	1000A	1335A	65 mm	8	520	67 x 10	43 kA	0.033
EB6510	1150A	1530A	65 mm	10	650	67 x 12	48 kA	0.026

EASIBAR NO LONGER AVAILABLE

- **HIGH CURRENT:** Easibar may be used in multiple bar per phase stacks. Bar derating factors as for conventional busbar should be used.
- **COLOURS:** **Black** is standard and will be supplied if a colour is not specified.
Red, White, Blue and **Green** are available to order. Sheath colours other than black may require derating. Coloured ID bands and terminal insulating sleeves are available for all Easibar sizes.
- **SUPPORT:** A technical support service is available from EIC to assist the user in correct selection and installation of Easibar. Please request.

EASIBAR Application

Easibar is ideal for use in both the electrical distribution and control panel industries. Typical applications are:

Substations

- ⇒ Busbar expansion joints, Earth bonding straps
- ⇒ Equipment connections, flexible jumpers and cables
- ⇒ Connections to terminal bushings (e.g. transformers and capacitor banks)

Switchgear and Motor Control Centres

- ⇒ Cabling from supply alternators and transformers to distribution boards
- ⇒ Bus tee-offs to fuses and circuit breakers
- ⇒ Cabling from circuit breakers to field terminals
- ⇒ Current transformer links
- ⇒ Easy disconnection points
- ⇒ Starter module power cabling
- ⇒ Elimination of interphase barriers

Controlgear

- ⇒ Reduction of interphase clearances in equipment connections
- ⇒ Interconnections in reduced voltage starters
- ⇒ Panelboard power cabling
- ⇒ Current transformers links
- ⇒ Contactor and capacitor connections
- ⇒ Flexibles to plating baths, batteries and electric furnaces

Technical Specification

Complete Product

- ⇒ Operating temperature range -30°C to +105°C
- ⇒ Flammability Self extinguishing
- ⇒ Water absorption < 0.5%
- ⇒ Working voltage rating
 - Standard sheath 3000 volt grade
 - Heavy duty sheath 6000 volt grade
- ⇒ Power frequency withstand voltage
 - Standard sheath 7k rms for 1 min --
 - Heavy duty sheath 14kV rms for 1 min
- ⇒ Insulation resistance > 1000 MΩ
- ⇒ Min bending radius none
- ⇒ Flexibility as for flexible metal braid

Conductor

Electrolytic High Conductivity copper in annealed state.

- ⇒ Purity 99.9%
- ⇒ Tensile Strength 22.5 kg / sq mm
- ⇒ Elongation at rupture 45 %
- ⇒ Hardness 50 VPN
- ⇒ Conductivity 101 % IACS
- ⇒ Resistivity 17.1 mΩ sq mm / m
- ⇒ Condition Bright, clean, dry, non-greasy leaves

Insulating Sheath

Airshrink flexible PVC based shrink tubing tested to comply with Australian Standard 1977

- ⇒ Dielectric strength 14.8kV / mm
- ⇒ Volume resistivity 1000 x 10⁶ Ωm
- ⇒ Tensile strength 13.22 MPa
- ⇒ Elongation at break > 400 %
- ⇒ Hardness Shore A66
- ⇒ Cracking and splitting after heat aging Nil
- ⇒ Softening at 120°C Nil

EASIBAR Current Carrying Capacities

Part Number	Nominal Rating	Continuous AC Ratings (Single Bar)				Bars in Parallel Factor				DC Factor - Bars in Parallel			
		$\Delta t = 30^\circ$	$\Delta t = 40^\circ$	$\Delta t = 50^\circ$	$\Delta t = 60^\circ$	$\Delta t = 75^\circ$	2	3	4	1	2	3	4
EB203	200A	230A	260A	288A	310A	345A	1.85	2.50	3.10	1.00	1.85	2.50	3.20
EB204	250A	280A	317A	350A	378A	420A	1.85	2.50	3.10	1.00	1.85	2.50	3.20
EB205	300A	325A	368A	406A	439A	488A	1.85	2.50	3.10	1.00	1.85	2.50	3.20
EB206	350A	365A	414A	456A	493A	548A	1.85	2.50	3.10	1.00	1.85	2.50	3.20
EB253	280A	300A	340A	375A	405A	450A	1.85	2.50	3.10	1.00	1.85	2.50	3.20
EB254	340A	350A	396A	438A	473A	525A	1.85	2.50	3.10	1.00	1.85	2.50	3.20
EB255	400A	412A	467A	515A	566A	618A	1.85	2.50	3.10	1.01	1.87	2.53	3.23
EB256	450A	460A	520A	575A	620A	690A	1.85	2.50	3.10	1.01	1.87	2.53	3.23
EB324	420A	410A	470A	525A	580A	630A	1.80	2.40	2.95	1.00	1.85	2.50	3.20
EB325	500A	475A	550A	615A	670A	730A	1.80	2.40	2.95	1.01	1.87	2.53	3.23
EB327	630A	605A	685A	760A	835A	905A	1.80	2.40	2.95	1.01	1.87	2.53	3.23
EB404	520A	480A	543A	600A	648A	720A	1.80	2.40	2.95	1.00	1.85	2.50	3.20
EB405	600A	560A	635A	700A	755A	840A	1.80	2.40	2.95	1.01	1.87	2.53	3.23
EB406	680A	630A	713A	788A	850A	945A	1.75	2.30	2.75	1.01	1.87	2.53	3.23
EB408	800A	730A	827A	913A	986A	1095A	1.75	2.30	2.75	1.02	1.89	2.55	3.26
EB4010	900A	820A	930A	1025A	1107A	1230A	1.75	2.30	2.75	1.02	1.89	2.55	3.26
EB653	680A	600A	680A	750A	810A	900A	1.75	2.30	2.80	1.01	1.87	2.53	3.23
EB654	800A	700A	793A	875A	945A	1050A	1.75	2.30	2.80	1.02	1.89	2.55	3.26
EB655	900A	765A	900A	993A	1073A	1193A	1.75	2.30	2.80	1.02	1.89	2.55	3.26
EB656	1000A	890A	1008A	1113A	1202A	1335A	1.70	2.20	2.65	1.03	1.91	2.58	3.30
EB658	1150A	1020A	1155A	1275A	1377A	1530A	1.70	2.20	2.65	1.04	1.92	2.60	3.33
EB6510	1270A	1123A	1272A	1404A	1516A	1685A	1.70	2.20	2.65	1.05	1.94	2.63	3.36

Notes: 1. Δt indicates the temperature rise for a horizontal, black sheathed bar situated in free air at 30°C ambient temperature. The 30°, 40° and 50°C rises are for Easibar used in any configuration, bunched and run directly on a surface. The 60° and 75°C rises are for spaced bars positioned away from other components and surfaces. A minimum spacing equal to the bar thickness is satisfactory.

2. When placing two, three or four bars in parallel, multiply the chosen single bar rating by the Bars in Parallel Factor shown. Bar spacing should be equal to the bar thickness.

3. For DC systems, multiply the chosen AC single bar rating by the DC Factor shown.

EASIBAR User Instructions

When using Easibar, remember that the conductor material is soft and consists of a number of thin leaves. Follow these instructions;

1. Handling and Storage

Easibar is despatched flat, generally between wood packers. Keep it this way until just before use.

Carry individual lengths on edge with the hands spread apart, keeping the bar as straight as possible. Do not place over the shoulder or a single support, as the ends will quickly droop. Consequent straightening will require pressure due to slight work hardening at the kink point.

2. Forming

When bending to shape, allow the individual leaves to slip one against the other. Hand form along the bar length with a stroking movement, gradually tightening to the required curvature. A series of loops or curves is best.

Performing sharp angles and flattened bends will result in work hardening the leaves at the kink point. The resulting 'stiffness' may impair the short circuit rating of the finished bar work. Use a steel rod or tube as a mandrel and form around it.

Always complete the forming operation before punching the fixing holes.

Do not use sharp tools that may damage the insulating cover.

3. Terminations

Consistently clean terminating holes in Easibar can be achieved by using a Unibit step drill. Punching is also satisfactory for thicknesses up to five leaves. Punching thicker sections may lead to some tear through, particularly if the punch is worn.

Prepare the Easibar terminating palm by removing the insulating sheath with a sharp knife. If drilling, clamp the leaf ends tightly together with a Vice-grip to prevent their slipping during the operation. Use a sharp drill and a steady feed. Rest the Easibar palm on a solid wood block and drill well into the wood. Turn the Easibar over and lightly clear any burrs with the Unibit or a countersink.

If chips lodge between the leaves, clear these out with a knife. Then place the palm on a hard level surface and tap the leaves together with a flat hammer. Rerun the drill through all holes to clear any hammer burrs.

4. Installation

When passing Easibar through cubicle cutouts or around sharp edges, take care that the insulating sheath is not damaged. Where wear or abrasion can occur or a high short circuit withstand is important, specify Easibar with a heavy duty insulating sheath. In most applications, very little fixing is necessary since the insulating sheath gives adequate mechanical support. Allowing Easibar to flex under through fault conditions greatly assists in expending fault energy and relieves mechanical stress at the supports.

Longer lengths may require some centre support. Use a broad tie or fitted clamp when fixing to a cable rack or cubicle structure. Allow some flexibility on each side of the tie.

When attaching the terminations, round off any sharp edges on the component terminal flag with a fine file. This will prevent possible outer leaf damage due to conductor movement during an overload or short circuit fault.

Ensure that the terminal flag is flat and clean. Use the correct size and grade of bolt and nut. Place thick, large OD flat washers on both sides of the joint with a spring washer under the nut.

It is recommended that mating surfaces be given a light coating of petroleum jelly (Vaseline) before closing the joint.

Tighten the joint firmly. Check its tightness after 2~3 minutes; copper joints generally exhibit some initial permanent set. Finish the joint by slipping on an Airshrink insulating cut sleeve.

5. Cooling

Easibar may be safely used at higher temperatures than can conventional PVC covered cables. However, avoid continuous running at sheath temperature in excess of 105°C. In stacking multiple bars, leave a small air clearance between each bar.

SUPABAR

Large Power Conductors

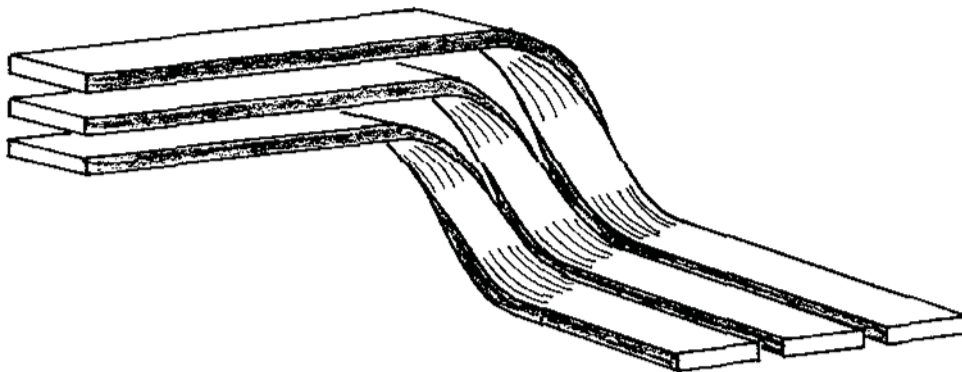
This "big brother" to Easibar will suit those applications where high current flow and large connections are required.

By using multiple SUPABARs in parallel, current ratings can be increased. SUPABAR comes sheathed in PVC with a 3kV insulation rating.

Typical applications:

- Large power transformers and alternators
- Busbar joints in switchgear
- Heating baths, battery banks and electric furnaces

SUPABAR is manufactured in lengths to suit the application, and priced per metre.



Supabar is 80mm wide and available in the following sizes:

PART NUMBER	CONDUCTOR CROSS SECTION	NOMINAL CURRENT RATING	TRADE PRICE (per metre)
EB805	80 x 5 mm	1050A	
EB806	80 x 6 mm	1200A	
EB808	80 x 8 mm	1380A	
EB8010	80 x 10 mm	1560A	

Made in New Zealand by
Electrical Importing Company Ltd



SUPABAR

SUPABAR NO LONGER AVAILABLE

AIRSHRINK

A New Dimension in Shrink Tubing



**SIMPLE
AS 1-2-3**

① *Remove from container*

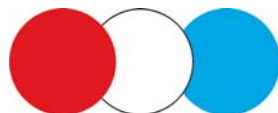


② *Slip it on*



③ *One hour later,
the perfect shrink*

Manufactured under licence in NZ by
Electrical Importing Company Ltd



AIRSHRINK

The Product

Airshrink is a very flexible PVC based tubing with unique properties. When exposed to air, it shrinks uniformly to fit any shape. One simply places Airshrink over the object to be covered. A perfect shrink takes place. The object is sheathed in a tough, durable skin having excellent insulating properties.

Airshrink appeals where low installed cost and superior finish is required. This premier shrink tubing is very suitable for use in a wide range of domestic, commercial and industrial applications.

Airshrink is easy to use since it shrinks on contact with air. An energy source (hot air or flame) is not required. As no operator skill is needed, installation costs are a fraction of those for other shrink tubing.

Made in New Zealand.

Being very flexible and having a smooth, glossy surface, Airshrink can be easily stretched over an object larger than itself. The ensuing shrink is uniform with no tears, wrinkles or voids. The final product is enhanced in a colour of your choice.

Airshrink is supplied in handy, resealable containers. 15~20 minutes is available to place the tubing with shrinkage taking around one hour to complete. To store unused tubing simply reseal in container and save for another day.



Benefits

Low Installed Cost

- ⇒ Airshrink shrinks on contact with air.
- ⇒ An energy source (hot air or flame) is not required.
- ⇒ No special operator skill is required.

Superior Finish

- ⇒ Ideal for covering irregular objects and tight bends.
- ⇒ Shrinks uniformly with no tears, wrinkles or voids.
- ⇒ Provides a flexible protective sheath with a smooth, glossy surface.
- ⇒ Available in a choice of colours.

Quality Product

- ⇒ Complies with recognised standards.
- ⇒ Excellent electrical insulating properties.
- ⇒ Wide operating temperature range.

AIRSHRINK Selection

Airshrink tubing is available in a wide range of colours and sizes, as shown below.

Tube length is normally five metres. However, we can supply in any length to suit your requirements.

Part Number	Internal Ø (mm)			Wall Thickness	Conduit Wire (sq mm size)	Busbar Size (mm)	Rod & Tube Diameter
	Shrunk	Preshrunk	Stretched				
AS1	1.0	1.3	1.6	0.50			
AS2	2.0	2.6	3.2	0.50			
AS3	3.0	3.9	4.8	0.50	1.5 , 2.5		
AS4	4.0	5.2	6.4	0.50	4.0 , 6.0		
AS5	5.0	6.5	8.0	0.50			6
AS6	6.0	7.8	9.6	0.50	10		
AS7	7.0	9.1	11.2	0.65	16		8
AS8	8.0	10.4	12.8	0.65	25		
AS9	9.0	11.7	14.4	0.65	35		10 , 11
AS10	10.0	13.0	16.0	0.65	50		12
AS12	12.0	15.6	19.2	0.85	70		14
AS14	14.0	18.2	22.4	0.85	95		16
AS16	16.0	20.8	25.6	0.85	120 , 150	25 x 6	18 , 20
AS19	19.0	24.7	30.4	0.85	185	32 x 6	22 , 24
AS22	22.0	28.6	35.2	0.85	240		25 , 27
AS25	25.0	32.5	40.0	0.85	300	38 x 6	30
AS30	30.0	39.0	48.0	1.00		50 x 6	35 , 36
AS35	35.0	45.5	56.0	1.00		60 x 6	42
AS40	40.0	52.0	64.0	1.00			
AS45	45.0	58.5	72.0	1.00		75 x 6 75 x 9 80 x 6	50
AS60	60.0	78.0	96.0	1.00		100 x 6 100 x 9 100 x 12	
AS70	70.0	91.0	112.0	1.00		125 x 6 125 x 9 125 x 12	83
AS85	85.0	110.5	136.0	1.30		150 x 12	101

➤ **COLOURS:** Select colour by adding colour code to the end of the Part Number:

Blue Black Red White Green Yellow
B **BK** **R** **W** **G** **Y**

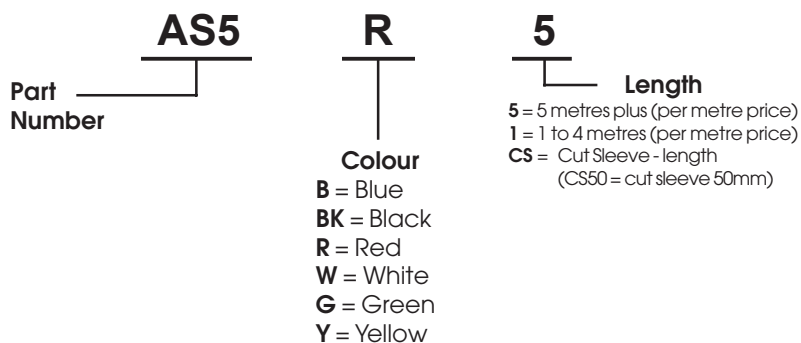
➤ **SUPPORT:** A technical support service is available from EIC to assist you in correct selection and installation of Airshrink. Please call.

AIRSHRINK Trade Price List

PART NUMBER	DESCRIPTION	TRADE PRICE - PER METRE		
		5.0m LENGTHS	1.0m LENGTHS	CUT SLEEVES
AS1	Airshrink, 1mm Ø tube			
AS2	Airshrink, 2mm Ø tube			
AS3	Airshrink, 3mm Ø tube			
AS4	Airshrink, 4mm Ø tube			
AS5	Airshrink, 5mm Ø tube			
AS6	Airshrink, 6mm Ø tube			
AS7	Airshrink, 7mm Ø tube			
AS8	Airshrink, 8mm Ø tube			
AS9	Airshrink, 9mm Ø tube			
AS10	Airshrink, 10mm Ø tube			
AS12	Airshrink, 12mm Ø tube			
AS14	Airshrink, 14mm Ø tube			
AS16	Airshrink, 16mm Ø tube			
AS19	Airshrink, 19mm Ø tube			
AS22	Airshrink, 22mm Ø tube			
AS25	Airshrink, 25mm Ø tube			
AS30	Airshrink, 30mm Ø tube			
AS35	Airshrink, 35mm Ø tube			
AS40	Airshrink, 40mm Ø tube			
AS45	Airshrink, 45mm Ø tube			
AS50	Airshrink, 50mm Ø tube			
AS60	Airshrink, 60mm Ø tube			
AS70	Airshrink, 70mm Ø tube			
AS85	Airshrink, 85mm Ø tube			

Note: - Prices are **per Metre of tube** (eg: 6m = 6 x \$2.00 (5m price) = \$12.00)
 - Sizes shown above are "shrunk sizes". Refer Airshrink Selection Chart for more information

Ordering Information



AIRSHRINK User Instructions

Airshrink tubing begins to shrink once exposed to air when removed from the container. **No heat is required to shrink the tubing.**

Steps to follow:

- ⇒ Before opening, turn the Airshrink container upside-down and shake vigorously. This will ensure that the Airshrink tubing inside is in top condition for application.
- ⇒ Use in a well ventilated area.
- ⇒ Prepare the object to be covered. Clean down, remove all dirt, burrs and sharp edges. Check any fixings for tightness.
- ⇒ Open the Airshrink container. Coat the object with a little of the oily solution found inside.
- ⇒ Airshrink tubing shrinks a little longitudinally as well as diametrically. To allow for this, wet Airshrink sleeves should be approximately 15% longer than the length of the object.
- ⇒ Select a wet length of Airshrink tubing and slip over the object. Push free tube along in ripples using the pressure of both hands. Do **not** pull the tube along. Position with equal amounts of excess protruding at each end. Cut off the remainder with a sharp knife or scissors.
- ⇒ To ensure uniform longitudinal shrinkage, push the protruding ends of the Airshrink sleeve back flush with each end of the object. This will cause a wrinkled effect along the entire length. Try to ensure that the wrinkles are spread uniformly and that the tubing does not fold over itself as shrinkage occurs. In the case of a 90° bend, a wrinkle must be left in the inside of the bend to ensure that the tubing does not stretch across the corner as it shrinks.
- ⇒ Place the object between supports. This will ensure that the Airshrink sleeve shrinks uniformly and does not collect dust and dirt.
- ⇒ The Airshrink sleeve will now slowly shrink on to the object. You may reposition it during the first 15~20 minutes; shrinkage takes around one hour to complete. The sleeve will set firm over a further 12~18 hours. The ends can then be trimmed as required.
- ⇒ Ventilation or placing outside will speed up the shrink process. Allow the tube to cool in shade before trimming its ends as the material becomes soft if left in the sun for a long time.
- ⇒ Wet Airshrink is extremely flexible. It can be easily stretched over objects larger than itself or with protruding bumps. For example, if you wish to sheath over a bolted through joint, ensure the correct length of bolt is used (flush with nut). After tightening the joint, lubricate well and push on wet tube with a twist motion. At sudden increases in section, a screwdriver may be used to assist the tube mouth to ride up, but be careful not to puncture the Airshrink sheath.
- ⇒ To expose a section of the object inside (e.g. to make a T-joint) wait until the sleeving is fully shrunk and cured firm (overnight). It can then be cut with a sharp knife.
- ⇒ If a cut sleeve becomes dirty during application, clean by wiping with a cloth dipped in a little of the container liquid.
- ⇒ Upon job completion, replace the container lid and seal tightly. Store in a cool, ventilated area away from sunlight, as for containers of paint. Wash hands thoroughly with soap and water.
- ⇒ If the container lid is accidentally left off and the top layers of Airshrink tubing dry out, push the dry tubing to the bottom so that it is covered by the oily solution. Reseal the container and give it a vigorous shake. After one hour the Airshrink tubing will be fresh and ready for use. A regular shake-up is a good practice as it ensures that the top layers of Airshrink are always wet, ensuring easy application.

Disposal of Waste Holding Solution:

- ⇒ When the Airshrink container is empty, do **not** throw the left-over holding solution into a fire or pour down a drain.
- ⇒ Scatter it gently over an area of waste ground, sandy soil or discarded non-flammable rubbish away from personnel or buildings. The oily solution will soon evaporate leaving no residue.

AIRSHRINK Application

Excellent for:

- ⇒ Handle coverings on tools, appliances and machinery
- ⇒ Sleeving and corrosion protection of cables, ropes and chains
- ⇒ Wear sleeves on conveyor rollers
- ⇒ Colour coding and strain relief of cable terminations
- ⇒ Insulation of switchboard busbars
- ⇒ Protective sleeving for cable looms, air and hydraulic hoses
- ⇒ All types of field service and repair work
- ⇒ Petro-chemical and other hazardous industry applications
- ⇒ And many more

Technical Specification

Standards

Airshrink tubing fully complies and has been tested in accordance with Australian Standard 1977-1977; Flexible Insulating Sleeving. Its use in the electrical industry is covered by Australian Certificate of Suitability No. CS333W.

Electrical

- ⇒ Type of Sleeving 3/105T
- ⇒ Working Voltage 3000 volt grade
- ⇒ Power Frequency Withstand
 - Voltage 7kV rms for 1 min
- ⇒ Insulation Resistance > 1000 MΩ

Mechanical (after heat aging)

- ⇒ Hardness Shore A66
- ⇒ Tensile Strength 13.22 MPa
- ⇒ Elongation at Break 413%

Thermal

- ⇒ Shrink Temperature Ambient
- ⇒ Flammability (Wet State) Flammable
- ⇒ Flammability (When Shrunken) Self Extinguishing
- ⇒ Operating Temperature Range -30°C to +105°C

Physical

- ⇒ Shrink Ratio (diameter) 1.35 : 1
- ⇒ Linear Shrinkage 1.15 : 1
- ⇒ Stretch Ratio (diameter) 2 : 1
- ⇒ Linear Stretch 2 : 1
- ⇒ Cracking & Splitting After Heat Aging Nil
- ⇒ Ability to Cover Sharp Edges Very Good

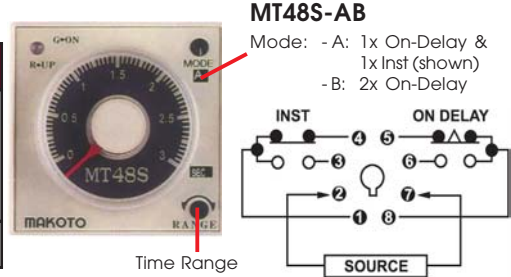
Chemical

- ⇒ Copper Corrosion Non-corrosive
- ⇒ Water Absorption 0.5%
- ⇒ Resistance to Aqueous Acids, Alkalies Good
- ⇒ Resistance to Hydrocarbon Solvents Fair

Electronic Plug-In Timers

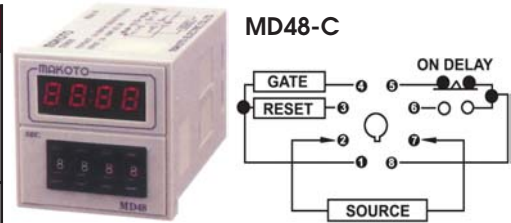
Standard Multi Range, Multi Voltage 24~240V AC/DC

TIME RANGE	CONTACT	PART NUMBER	TRADE PRICE
1s, 10s, 1m, 10m 3s, 30s, 3m, 30m 6s, 60s, 6m, 60m 3m, 30m, 3h, 30h	Selectable: 2x C/O On-Delay or 1x On-Delay / 1x Instant	MT48S-AB-10M MT48S-AB-30M MT48S-AB-60M MT48S-AB-30H	
DIN Rail Mounting Base		P2CF-08	



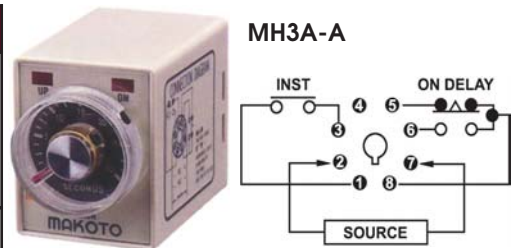
Digital Multi Range, Multi Voltage 24~240V AC/DC

TIME RANGE	CONTACT	PART NUMBER	TRADE PRICE
0 ~ 99.99 sec 0 ~ 9999 sec 0 ~ 99.99 min 0 ~ 999.9 min	1x C/O On-Delay 1x Electronic	MD48-C-99S MD48-C-9999S MD48-C-99M MD48-C-999M	
DIN Rail Mounting Base		P2CF-08	



Standard Single Range, Fixed Voltage 240V AC

TIME RANGE	CONTACT	PART NUMBER	TRADE PRICE
0 ~ 3 sec 0 ~ 30 sec 0 ~ 6 min 0 ~ 12 min 0 ~ 60 min	1x C/O On-Delay 1x C/O Instant	MH3A-A-3S MH3A-A-30S MH3A-A-6M MH3A-A-12M MH3A-A-60M	
DIN Rail Mounting Base		085A	



Accessories

DESCRIPTION	PART NUMBER	TRADE PRICE
Mounting Plate - MT48S, MD48	NY-48	
Door Mounting Clamp - MT48S, MD48	Y-48	
Door Mounting Base Block - MT48S, MD48	P3G-08	
Transparent Cover - MD48	A-48	




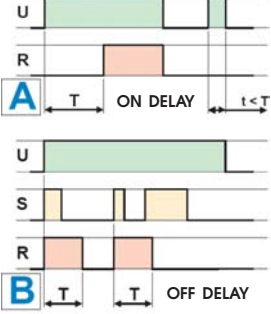
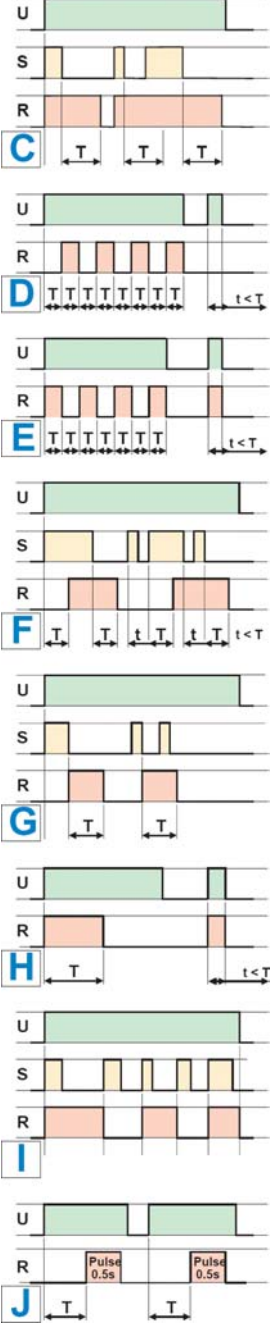
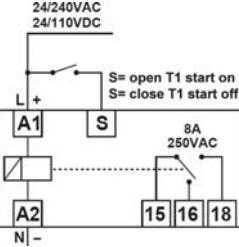
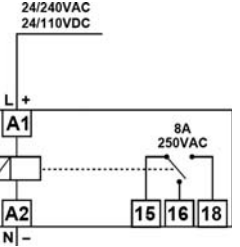
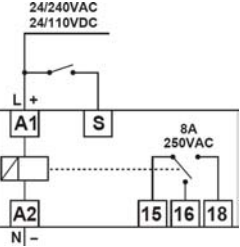
Technical Data

Operating Voltage85% ~ 110% of rated voltage
 Power Consumption .. approx 2VA
 Contact RatingAC 250V 3A (Resistive)
 Service Life:
 - Electrical 100,000 op min
 - Mechanical 10,000,000 op min

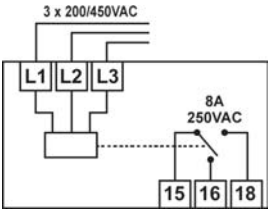



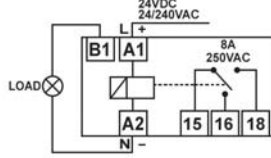
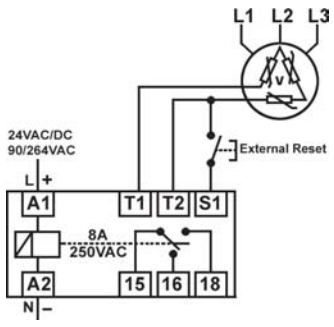
Modular Timers




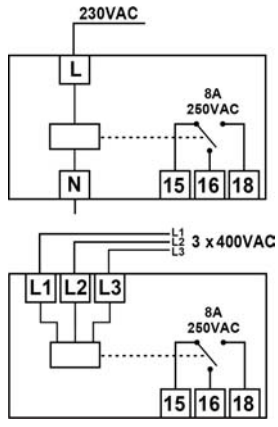
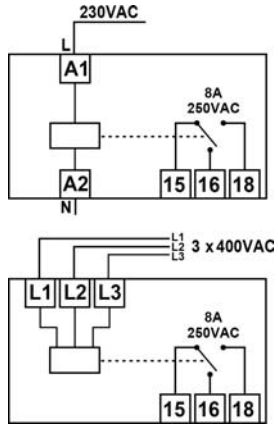
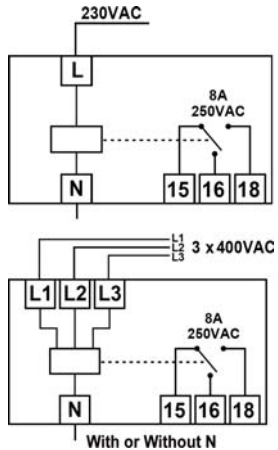
TESD Star-Delta Timer	Features	Technical Specs continued ...	Wiring Diagram						
	- Compact size - 1 Module (17.5 mm) - DIN rail mounting - Time range : Start: 6-60 sec Transition: 20-300ms - Signalling LED (Transition) - 2 output relays with 1 pole changeover contact	OUTPUT RELAY (x2) Rated current: 8A Rated operational voltage: 250VAC / 24VDC Changeover contact: 1 Au+AgCdO							
	Technical Specifications INPUT Power supply voltage DC: TESD240: 24 VAC/DC Power supply voltage AC: TESD240: 240VAC TESD415: 415VAC Power consumption (max AC): VA: 3.9 (0.8W)	GENERAL FEATURES Time delay (Start): 6-60sec Time delay (Transition): 20-300ms Operating temperature: -10/+50°C Storage temperature: -30/+70°C Isolation voltage: 4kV Protection degree: IP40 Relative humidity: 95RH% Weight: 65g Dimensions: 98 x 17.5 x 64 mm							
			<table border="1"> <thead> <tr> <th>PART NUMBER</th> <th>TRADE PRICE</th> </tr> </thead> <tbody> <tr> <td>TESD240</td> <td></td> </tr> <tr> <td>TESD415</td> <td></td> </tr> </tbody> </table>	PART NUMBER	TRADE PRICE	TESD240		TESD415	
PART NUMBER	TRADE PRICE								
TESD240									
TESD415									

Modular Timers

TEMSA Programmable Asymmetrical Timer		TEMS Multi-Scale Timer		TEMFS Multi-Function Timer		Timer Functions	
						 <p>A ON DELAY $t < T$</p> <p>B OFF DELAY</p>	
Features							
<ul style="list-style-type: none"> - Compact size - 1 Module (17.5 mm) - Output relay 1 pole changeover contact - DIN rail mounting - Time range 0.2sec - 100hr - 10 Time scales selectable - Universal power supply 24-110VDC / 24-240VAC 		<ul style="list-style-type: none"> - Compact size - 1 Module (17.5 mm) - Output relay 1 pole changeover contact - DIN rail mounting - Multi-scale - Universal power supply 24-110VDC / 24-240VAC 		<ul style="list-style-type: none"> - Compact size - 1 Module (17.5 mm) - Output relay 1 pole changeover contact - DIN rail mounting - 10 functions selectable - Time range 0.1 sec - 10days - Universal power supply 24-110VDC / 24-240VAC 		 <p>C</p> <p>D $t < T$</p> <p>E $t < T$</p> <p>F $t < T$</p> <p>G</p> <p>H $t < T$</p> <p>I</p> <p>J Pulse 0.5s</p>	
Wiring Diagrams							
 <p>24/240VAC / 24/110VDC</p> <p>L+ S= open T1 start on / S= close T1 start off</p> <p>A1, A2, 8A 250VAC, 15, 16, 18, N -</p>		 <p>24/240VAC / 24/110VDC</p> <p>L+ A1, A2, 8A 250VAC, 15, 16, 18, N -</p>		 <p>24/240VAC / 24/110VDC</p> <p>L+ A1, A2, 8A 250VAC, 15, 16, 18, N -</p>			
Technical Specifications							
<p>INPUT</p> <p>Power supply voltage DC: 24-110VDC</p> <p>Power supply voltage AC: 24-240VAC</p> <p>Power consumption (max AC): VA: 8.5 (2.6W)</p> <p>OUTPUT RELAY</p> <p>Rated current: 8A</p> <p>Rated operational voltage: 250VAC / 24VDC</p> <p>Changeover contact: 1 Au+AgCdO</p> <p>GENERAL FEATURES</p> <p>Time range rotary switch: 0.2s-100h</p> <p>Operating temperature: -10/+50°C</p> <p>Storage temperature: -30/+70°C</p> <p>Isolation voltage: 4kV</p> <p>Protection degree: IP40</p> <p>Relative humidity: 95RH%</p> <p>Weight: 65g</p> <p>Dimensions: 98 x 17.5 x 64mm</p>		<p>INPUT</p> <p>Power supply voltage DC: 24-110VDC</p> <p>Power supply voltage AC: 24-240VAC</p> <p>Power consumption (max AC): VA: 8.5 (2.6W)</p> <p>OUTPUT RELAY</p> <p>Rated current: 8A</p> <p>Rated operational voltage: 250VAC / 24VDC</p> <p>Changeover contact: 1 Au+AgCdO</p> <p>GENERAL FEATURES</p> <p>Time range rotary switch: 0.1s-10days</p> <p>Operating temperature: -10/+50°C</p> <p>Storage temperature: -30/+70°C</p> <p>Isolation voltage: 4kV</p> <p>Protection degree: IP40</p> <p>Relative humidity: 95RH%</p> <p>Weight: 60g</p> <p>Dimensions: 98 x 17.5 x 64mm</p>		<p>INPUT</p> <p>Power supply voltage DC: 24-110VDC</p> <p>Power supply voltage AC: 24-240VAC</p> <p>Power consumption (max AC): VA: 8.5 (2.6W)</p> <p>OUTPUT RELAY</p> <p>Rated current: 8A</p> <p>Rated operational voltage: 250VAC / 24VDC</p> <p>Changeover contact: 1 Au+AgCdO</p> <p>GENERAL FEATURES</p> <p>Time range rotary switch: 0.1s-10days</p> <p>Operating temperature: -10/+50°C</p> <p>Storage temperature: -30/+70°C</p> <p>Isolation voltage: 4kV</p> <p>Protection degree: IP40</p> <p>Relative humidity: 95RH%</p> <p>Weight: 65g</p> <p>Dimensions: 98 x 17.5 x 64mm</p>			
PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE		
TEMSA		TEMS		TEMFS			

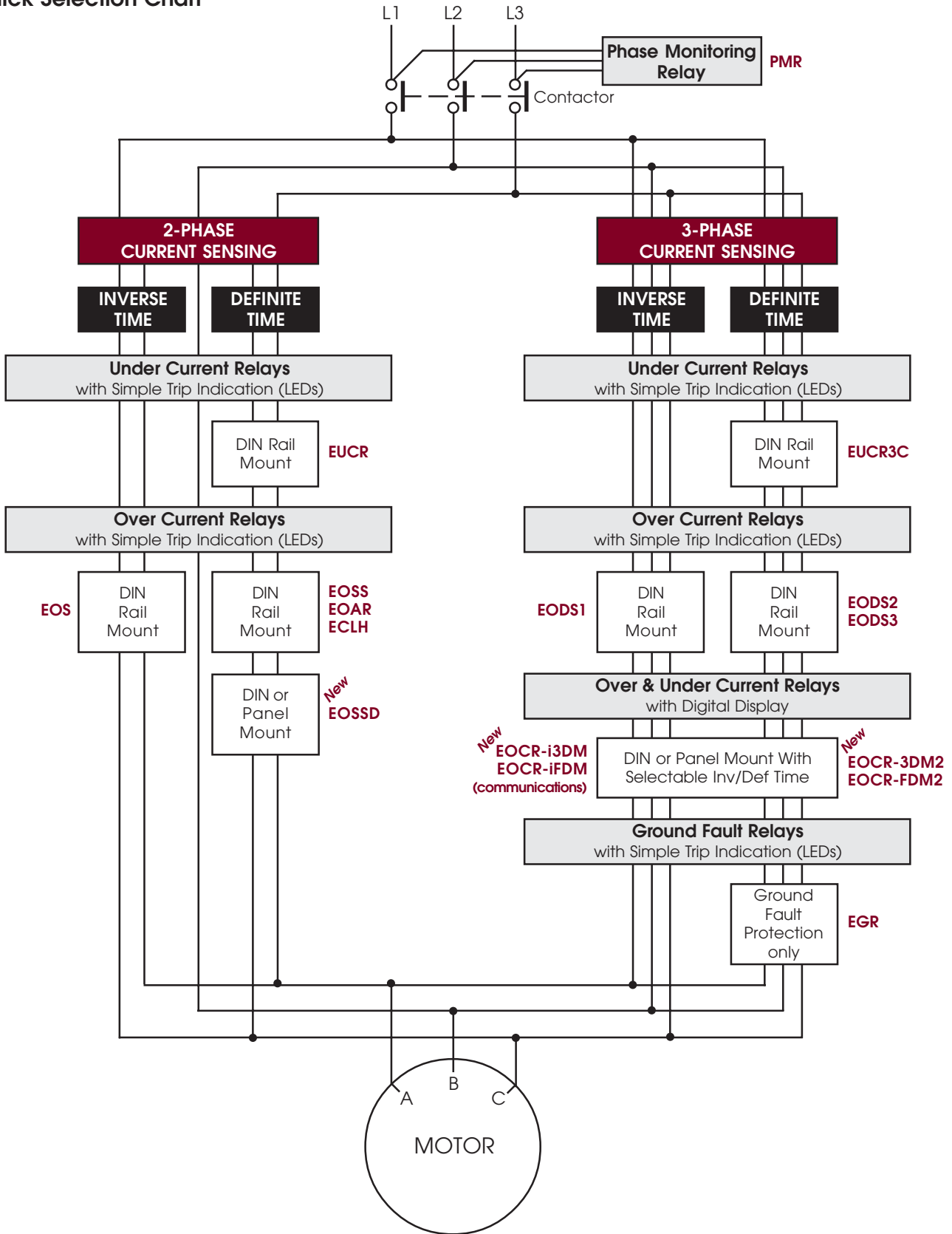
Motor Protection Relays

Wiring Diagrams	SFE Phase Sequence Relay	CRE-5 Current Relay	MPR PTC-Motor Protection											
<p>SFE Phase Sequence Relay</p> 														
Features														
<p>CRE-5 Current Relay</p> 	<ul style="list-style-type: none"> - Phase sequence / Rotation control - Universal three phase supply 3x200-450VAC - Compact size - 1 Module (17.5 mm) - DIN rail mounting - Output relay 1 pole changeover contact 	<ul style="list-style-type: none"> - Usable for current sensing from current transformers - Supply isn't galvanically isolated from measured current, it must be in the same phase - Time range 0-10sec - Current range AC/DC (0.25-5A +/-5%) - Universal power supply 24VDC/24-240VAC - Compact size - 1 Module (17.5mm) - DIN rail mounting - Output relay 1 pole changeover contact 	<ul style="list-style-type: none"> - Protection relay for motor with PTC sensor - Manual or automatic reset - Memory and failure set - Sensortest - Compact size - 1 Module (17.5 mm) - Output relay 1 pole changeover contact - DIN rail mounting 											
Technical Specifications														
<p>MPR PTC-Motor Protection</p> 	<p>INPUT Power supply voltage AC: 3x200-450VAC Power consumption (max AC): VA: 9 (L1/L2) 1.2 (L3) W: 1.9 Total</p> <p>OUTPUT RELAY Rated current: 8A Rated operational voltage: 250VAC / 24VDC Changeover contact: 1 Au+AgCdO</p> <p>GENERAL FEATURES Operating temperature: -10/+50°C Storage temperature: -30/+70°C Isolation voltage: 4kV Protection degree: IP40 Relative humidity: 95RH% Weight: 60g Dimensions: 98 x 17.5 x 64 mm</p>	<p>INPUT Power supply voltage DC: 24VDC Power supply voltage AC: 24-240 (+ 10%~15%) VAC Power consumption (max AC): VA: 0.25-5</p> <p>OUTPUT RELAY Rated current: 8A Rated operational voltage: 250VAC / 24VDC Changeover contact: 1 Au+AgCdO</p> <p>GENERAL FEATURES Time delay: sec 0-10T Operating temperature: -10/+50°C Storage temperature: -30/+70°C Isolation voltage: 4kV Protection degree: IP40 Relative humidity: 95RH% Weight: 65g Dimensions: 98 x 17.5 x 64 mm</p>	<p>INPUT Power supply voltage: MPR24: 24VAC/DC MPR230: 90-264 VAC Power consumption (max AC): VA: 14 (2.7W)</p> <p>OUTPUT RELAY Rated current: 8A Rated operational voltage: 250VAC / 24VDC Changeover contact: 1 Au+AgCdO</p> <p>GENERAL FEATURES Operating temperature: -10/+50°C Storage temperature: -30/+70°C Isolation voltage: 4kV Protection degree: IP40 Relative humidity: 95RH% Weight: 55g Dimensions: 98 x 17.5 x 64 mm</p>											
<table border="1" style="width: 100%; text-align: center;"> <tr> <th style="width: 50%;">PART NUMBER</th> <th style="width: 50%;">TRADE PRICE</th> </tr> <tr> <td>SFE 2/4</td> <td></td> </tr> </table>	PART NUMBER	TRADE PRICE	SFE 2/4		<table border="1" style="width: 100%; text-align: center;"> <tr> <th style="width: 50%;">PART NUMBER</th> <th style="width: 50%;">TRADE PRICE</th> </tr> <tr> <td>CRE-5</td> <td></td> </tr> </table>	PART NUMBER	TRADE PRICE	CRE-5		<table border="1" style="width: 100%; text-align: center;"> <tr> <th style="width: 50%;">PART NUMBER</th> <th style="width: 50%;">TRADE PRICE</th> </tr> <tr> <td>MPR24 MPR230</td> <td></td> </tr> </table>	PART NUMBER	TRADE PRICE	MPR24 MPR230	
PART NUMBER	TRADE PRICE													
SFE 2/4														
PART NUMBER	TRADE PRICE													
CRE-5														
PART NUMBER	TRADE PRICE													
MPR24 MPR230														

VEU Under Voltage Relay		VEM Over Voltage Relay		VEUM Under-Over Voltage Phase Sequence & Loss		Wiring Diagrams	
						<p>VEU Under Voltage Relay</p> 	
Features							
<ul style="list-style-type: none"> - Monitor own supply and detects if one or more phases exceed the set under voltage trip levels - Measuring phase to phase voltage - Adjustment for under voltage trip level - Adjustment for time delay (from under voltage condition) - Compact size - 1 Module (17.5 mm) - DIN rail mounting - Output relay 1 pole changeover contact 		<ul style="list-style-type: none"> - Monitor own supply and detects if one or more phases exceed the set over voltage trip levels - Measuring phase to phase voltage - Adjustment for over voltage trip level - Adjustment for time delay (from over voltage condition) - Compact size - 1 Module (17.5 mm) - DIN rail mounting - Output relay 1 pole changeover contact 		<ul style="list-style-type: none"> - Monitor own supply and detects if one or more phases exceed the set under or over voltage trip levels - Measuring phase to phase voltage - Adjustment for under and over voltage trip level - Adjustment for time delay (from under or over voltage condition) - Phase sequence and phase loss (only for VEUM400 / VEUM400N) - Neutral loss (only for VEUM400N) - Compact size - 1 Module (17.5 mm) - DIN rail mounting - Output relay 1 pole changeover contact 		<p>VEM Over Voltage Relay</p> 	
Technical Specifications							
<p>INPUT Power supply voltage AC: VEU230: 230VAC VEU400: 3x 400VAC Power consumption (max AC): VA: VEU230: 13 (1.5W) VA: VEU400: 15 (2.2W)</p> <p>OUTPUT RELAY Rated current: 8A Rated operational voltage: 250VAC / 24VDC Changeover contact: 1 Au+AgCdO</p> <p>GENERAL FEATURES Operating temperature: -10/+50°C Storage temperature: -30/+70°C Isolation voltage: 4kV Protection degree: IP40 Relative humidity: 95RH% Weight: 60g Dimensions: 98 x 17.5 x 64mm</p>		<p>INPUT Power supply voltage AC: VEM230: 230VAC VEM400: 3x 400VAC Power consumption (max AC): VA: VEM230: 13 (1.5W) VA: VEM400: 15 (2.2W)</p> <p>OUTPUT RELAY Rated current: 8A Rated operational voltage: 250VAC / 24VDC Changeover contact: 1 Au+AgCdO</p> <p>GENERAL FEATURES Operating temperature: -10/+50°C Storage temperature: -30/+70°C Isolation voltage: 4kV Protection degree: IP40 Relative humidity: 95RH% Weight: 60g Dimensions: 98 x 17.5 x 64mm</p>		<p>INPUT Power supply voltage AC: VEUM230: 230VAC VEUM400: 3x 400VAC VEUM400N: 3x 400VAC+N Power consumption (max AC): VA: VEUM230: 13 (1.5W) VA: VEUM400/N: 15 (2.2W)</p> <p>OUTPUT RELAY Rated current: 8A Rated operational voltage: 250VAC / 24VDC Changeover contact: 1 Au+AgCdO</p> <p>GENERAL FEATURES Operating temperature: -10/+50°C Storage temperature: -30/+70°C Isolation voltage: 4kV Protection degree: IP40 Relative humidity: 95RH% Weight: 60g Dimensions: 98 x 17.5 x 64mm</p>		<p>VEUM Under-Over Voltage Phase Sequence & Phase Loss</p> 	
PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE		
VEU230 VEU400		VEM230 VEM400		VEUM230 VEUM400 VEUM400N			

Samwha Motor Protection Relays

Quick Selection Chart



QUESTION: How much money should I spend on an overload relay?

ANSWER: How much will it cost to replace the motor should it burn out, in both money and down time?

THE RIGHT SELECTION WILL SAVE MONEY EVERY TIME

2-Phase Sensing Overcurrent Relays

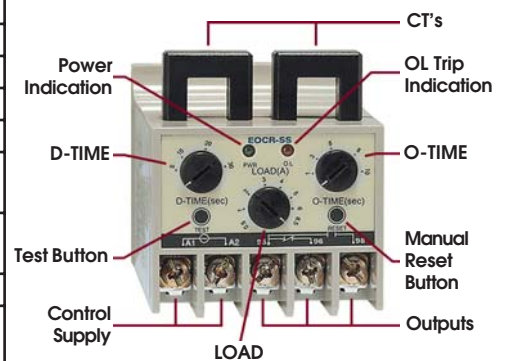
Summary Table

MODEL		EOSS	EOAR	EOS	ECLH
Time Characteristics	Definite Time	●	●		●
	Inverse Time			●	
Protection Functions	Over-Current	●	●	●	●
	Phase Loss	□	□		□
	Locked Rotor	□	□		□
	Short Circuit			●	
Other Features	Auto Reset Timer		●		
	Separate Start Timer	●			
	Shear-Pin Function	●			●
	Fine Load				●
Wiring & Mounting	Pass-Thru CT	●	●	●	●
	Contact Mount				
	DIN Rail Mount	●	●	●	●
Technical Specifications	Processor	Solid State Circuitry			
	Control Voltage	90 ~ 260V AC		200 ~ 240V AC	
	Rated Voltage	Max 600V AC			
	Output Contacts	SPDT			
	Mode & Rating	3A @ 250V AC (resistive)			
	Fail Safe Operation	"No Volt Release"			
	Trip Indication	LEDs			
	Reset Method	Manual Reset Button or Electrical (remote) Reset by interrupting power supply (EOAR also has auto-reset facility)			

Model EOSS - Definite Time, Shear-Pin



EOSS 100 (EOSS 052 with external CT's)



Model EOSS - Definite Time, Shear-Pin

Applications

Ideal for situations where motor loads can be stalled or jammed (eg. Conveyors).

Features

- Electronic shear-pin function
- Separate adjustable starting and operating trip delay timers
- DIN rail and stand alone mounting
- Dimensions: 66H x 72W x 60D mm

PART NUMBER	CURRENT RANGE	TRADE PRICE
EOSS 0524 ^①	0.5 ~ 6.5A	
EOSS 052	0.5 ~ 6.5A	
EOSS 302	3 ~ 30A	
EOSS 602 ^②	6 ~ 60A	
EOSS 100 ^③	20 ~ 100A	
EOSS 200 ^③	40 ~ 200A	

Notes: ^① EOSS 0524 has 24Vac/dc supply voltage. All other models are 90~260Vac. Other supply voltages available on request.
^② Cable size maybe a limiting factor for 60A models.
^③ Supplied with a 2CT module (see EOSS 100 image).
 - For ranges over 60A, use EOSS 052 with external CT's.

Model EOSSD - Shear-Pin



Features

- MCU (micro controller unit) based / 2-CT type
- Real time processing / Higher precision
- Current setting range: 0.5~6A, 3~30A, 10~60A
- Digital display: Trip cause / Easy troubleshooting
- Reset: Manual (on relay) / Electrical (remote)
- Load selection by DIP switch: 1 phase / 3 phase
- Fail safe (N) / Non-fail safe (R)

Specifications

- Starting Delay Time - D-TIME: 1~30 sec
- Trip Time (overcurrent) - O-TIME: 0.2~30 sec
- Tripping Characteristic: Definite Time
- Output Relays: Trip 1NC, Alarm 1NO (2x SPST)
- Mounting: 35mm Din rail or direct panel mount

PART NUMBER	CONTROL SUPPLY	CURRENT RANGE	TRADE PRICE
EOSSD 0524	24V AC/DC	0.5 ~ 6A	
EOSSD 3024	24V AC/DC	3 ~ 30A	
EOSSD 6024	24V AC/DC	10 ~ 60A	
EOSSD 052	230V AC	0.5 ~ 6A	
EOSSD 302	230V AC	3 ~ 30A	
EOSSD 602	230V AC	10 ~ 60A	

Model EOAR - Definite Time, Auto-Reset

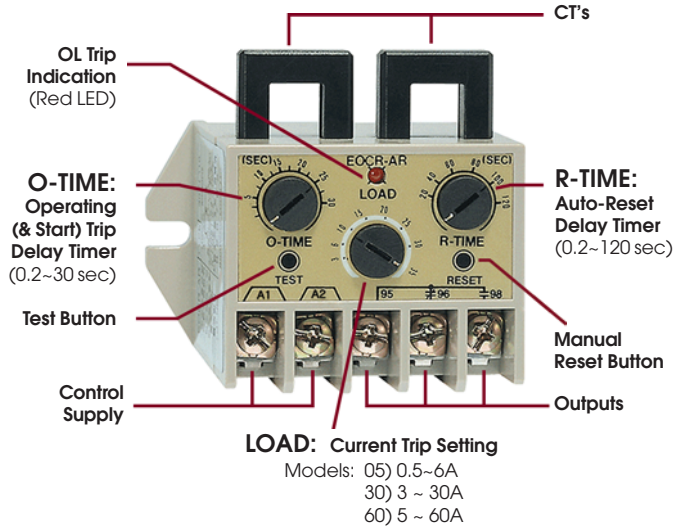
PART NUMBER	CURRENT RANGE	TRADE PRICE
EOAR 052	0.5 ~ 6A	
EOAR 302	3 ~ 30A	
EOAR 602❶	5 ~ 60A	

Applications

Ideal for controlling conveyors feeding crushers or similar applications.

Features

- Adjustable auto reset time 0.2 ~ 120 seconds
- Single timer for starting and operating trip delay
- DIN rail and stand alone mounting
- Dimensions: 66H x 72W x 60D mm



Model EOS - Inverse Time, Short Circuit

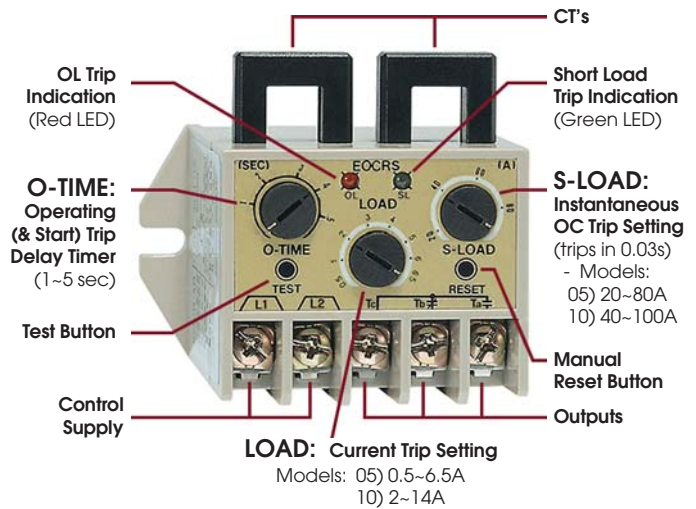
PART NUMBER	CURRENT RANGE		TRADE PRICE
	Main	Instantaneous	
EOS 052	0.5 ~ 6.5A	20 ~ 80A	
EOS 102	2 ~ 14A	40 ~ 100A	

Applications

Ideal for large and high voltage motors.

Features

- Adjustable instantaneous overcurrent protection
- Adjustable trip curve (1~5 sec) @ 600% of load
- Single timer for starting and operating trip delay
- DIN rail and stand alone mounting
- Dimensions: 66H x 72W x 60D mm



Model ECLH - Definite Time, Fine Loads

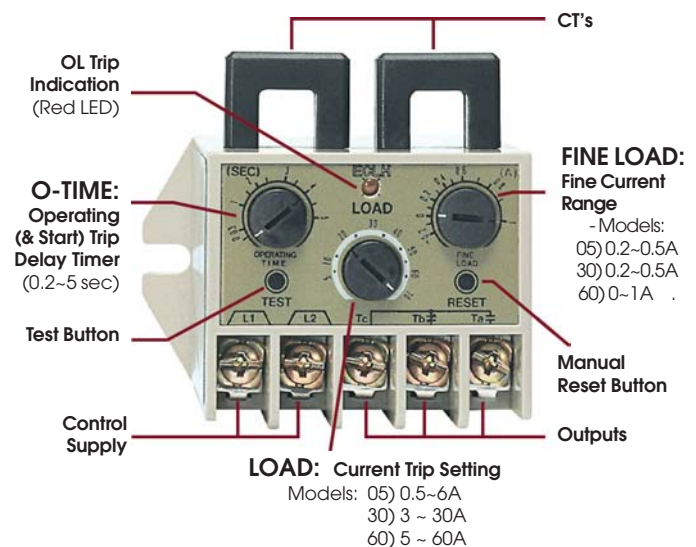
PART NUMBER	CURRENT RANGE		TRADE PRICE
	Main	Fine	
ECLH 052	0.5 ~ 6.5A	0.2 ~ 0.5A	
ECLH 302	3 ~ 30A	0.2 ~ 0.5A	
ECLH 602❶	5 ~ 60A	0.2 ~ 1.0A	

Applications

For hoists, lifts, elevators and applications where fine overload settings are required.

Features

- Two separate load current adjustments:
 - Main Load Knob & Fine Load Knob
- Electronic shear-pin function
- Manual or electric reset, with options:
 - Type SH: Instant electrical reset
 - Type RD: Delayed reset (set by O-TIME)
- Single timer for starting and operating trip delay
- DIN rail and stand alone mounting
- Dimensions: 66H x 72W x 60D mm



Notes: ❶ Cable size maybe a limiting factor for 60A models.
 - For ranges over 60A, use EOAR/EOS/ECLH 052 with external CT's.

3-Phase Sensing Current Relays

Summary Table

MODEL		EODS1	EODS2	EODS3	EOCR-3DM2 & FDM2		EGR
Time Characteristics	Definite Time		●	●	Selectable		●
	Inverse Time	●			Definite or Inverse Time		
Protection Functions	Over-Current	●	●	●	●	●	
	Short Circuit						
	Under-Current				●	●	
	Ground Fault						●
	Phase Loss	●	●	●	●	●	
	Locked Rotor	●	●	●	●	●	
	Stall				●	●	
	Phase Reversal			●	●	●	
	Phase Unbalance				●	●	
Other Features	Selectable Alert OP's				●	●	
	Digital Display				●	●	
Technical Specifications	Processor	MCU (microprocessor control unit) Based					SS Circuitry
	Control Voltage	180 ~ 260V AC (standard)			85 ~ 250V AC/DC (stnd)		110 or 220V AC
	Output Contacts Mode & Rating	O-Load: 2x SPST			O-Load: 2x SPST (1NO+1NC) Alert: 1x SPST (1NO)		1x SPDT
		3A @ 250V AC (resistive)					
	Fail Safe Operation	"No Volt Release" (NVR) Protection as standard			Selectable by NVR DIP switch		NVR Protection
	Trip Indication	LEDs			Digital Display		LEDs
	Reset Method	Manual Reset button or Electrical (remote) Reset by interrupting power supply (EOCR models - Auto-Reset option also included)					

Model EODS1/DS2/DS3 - Compact

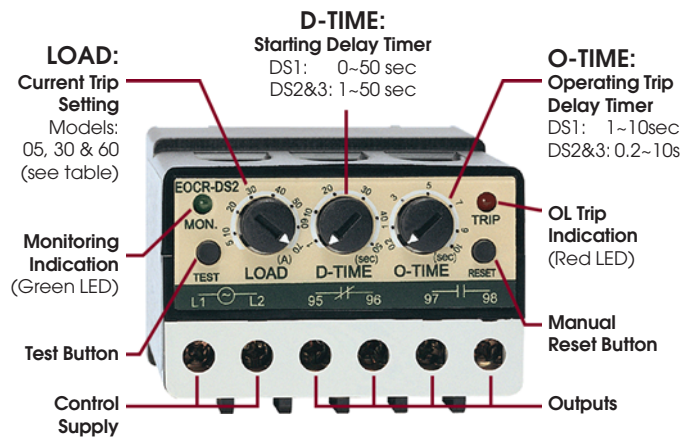
PART NUMBER	CURRENT RANGE	TRADE PRICE
EODS1 052	0.5 ~ 6A	
EODS1 302	3 ~ 30A	
EODS2 052❶	0.5 ~ 6A	
EODS2 302❶	3 ~ 30A	
EODS2 602❶	5 ~ 60A	
EODS3 052	0.5 ~ 6A	
EODS3 302	3 ~ 30A	
EODS3 602	5 ~ 60A	

Applications

Suitable for general motor overload protection. The 3 models cover applications from pumps, fans and conveyors to mobile plants.

Features

- Compact design
- Electronic shear-pin function (DS2 & DS3)
- Separate adjustable starting and operating trip delay timers
- Fail-safe operation (no voltage release)
- MCU (microprocessor control unit) based
- Straight through cabling (terminal kit optional)
- DIN rail mounting
- Dimensions: 70H x 47W x 61D mm



Time Specifications

- Time Characteristics - DS1: Inverse
- DS2: Definite
- DS3: Definite
- Phase Loss Trip Within 4 sec
- Locked Rotor Trip Just after D-TIME
- Phase Reversal Trip 0.1 sec (DS3 only)

- Notes: ❶ 24Vac/dc also stocked in the EODS2 model. To order, add a "4" to the end of the part number (eg: EODS2 0524).
- Other supply voltages available on request.
 - Cable size maybe a limiting factor for 60A models.
 - For ranges over 60A, use EODSx052 with external CT's.

NEW MULTI FUNCTION DIGITAL RELAYS



EOCR-3DM2



EOCR-FDM2



Button Hole Type ①

Digital Motor Protection Relays

Selection Guide

MODEL		3DM2 / FDM2 ①	OTHER MODELS ②
Control Voltage		100 ~ 240V AC/DC ①	
		24V AC/DC	
Frequency		50/60 Hz	
Single Phase		●	●
Three Phase		●	●
CT Type	Window Hole	●	●
	Button Hole	● ①	●
	Terminal	●	●
Protection Function	Overcurrent	●	●
	Undercurrent	●	●
	Stall	●	●
	Jam	●	●
	Phase Loss	●	●
	Phase Reversal	●	●
	Imbalance	●	●
	Ground Fault		3MZ2/FMZ2 - i3MZ/iFMZ
	Short Circuit		i3MS/iFMS
Thermal Inverse		i3DM - i3MZ - i3M420 - i3MS	
4-20mA Output			i3M420/iFM420
Additional Function	Alert Output	A, F, H	i3DM/iFDM
	Bar Graph	●	●
	Display	5 Digit 7 Segment	
	Password Function		i3DM - i3MZ - i3M420 - i3MS
	Fail Safe ON/OFF	●	●
	Trip Cause Display and Store	●	●
	Total Running Hour	●	●
	Running Hour Timer	●	i3DM/iFDM
	Reset	Manual / Auto / Electric	
Comm. Protocol - MODBUS RS-485			i3DM - i3MZ - i3M420 - i3MS

Notes: ① Standard stock model
② Stocks may vary - check with EIC

Conversion

OLD MODEL	NEW MODEL
3DD	3DM2 or i3DM
3DE	
3DM	
FD	FDM2 or iFDM
FDE	
FDM	
3DZ	3MZ2 or i3MZ
3EZ	
3MZ	
FDZ	FMZ2 or iFMZ
FEZ	
FMZ	
3D420	i3M420
3E420	
3M420	
FD420	iFM420
FE420	
FM420	
3DS	i3MS
3MS	
FDS	iFMS
FMS	

Alert Indication

Condition / ALO Setting	Motor Stop	Motor Starting	Normal Running	Exceeds Alert Setting	TRIP
Flicker "F"					
Hold "H"					
Aux "A"					

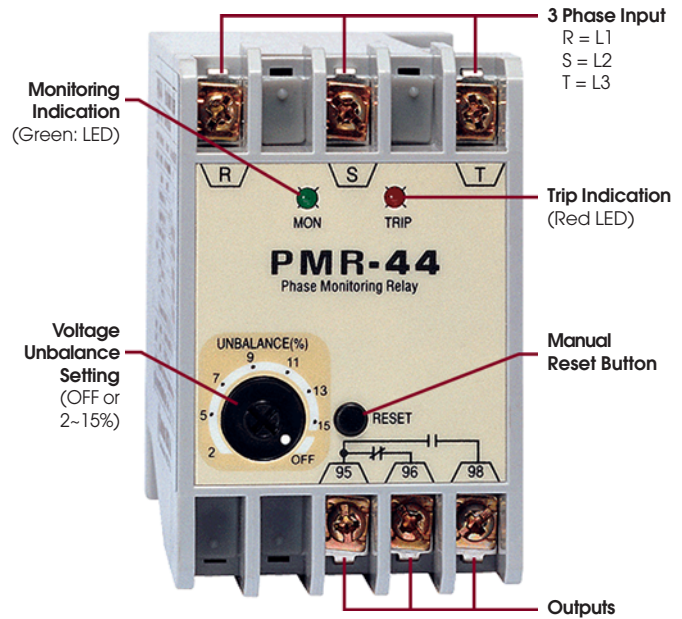
Ordering Information

PART NUMBER	DESCRIPTION	TRADE PRICE
EOCR-3DM2	Panel Mount	
EOCR-FDM2	Door Mount	

Notes: Refer to EIC for pricing and details of other relays shown in the Selection Guide

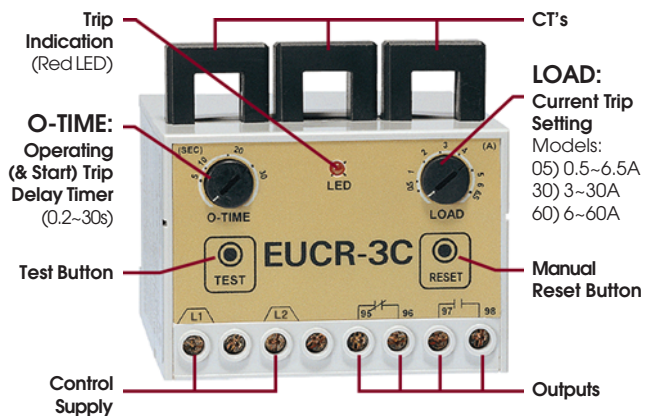
Model PMR - Phase Monitoring Relay

PART NUMBER	APPLICATION VOLTAGE	TRADE PRICE												
PMR-440	340~480Vac													
<p>Applications Ideal for use on submersible pumps, refrigeration compressors, supplies for portable generating plants, etc. Designed to detect 3-phase line inputs for monitoring phase conditions.</p> <p>Features</p> <ul style="list-style-type: none"> Phase reversal, phase loss and adjustable voltage unbalance protection. Fail-safe operation (no voltage release) Panel and DIN rail mounting Dimensions: 107H x 50W x 79D mm <p>Technical Specifications Application Voltage.....3-Phase 340~480V 50/60Hz Output Contact.....SPDT 3A / 250Vac resistive Reset Method..... - Auto-Reset 5 sec - Manual or remote electrical</p> <table border="1"> <thead> <tr> <th>PROTECTION</th> <th>TRIP TIME</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>Phase Reversal</td> <td>Within 0.1 sec</td> <td>When abnormal phase sequence power is applied</td> </tr> <tr> <td>Phase Loss</td> <td>Within 1 sec</td> <td>When phase failure occurs</td> </tr> <tr> <td>Voltage Unbalance</td> <td>5 sec</td> <td>OFF or / 2 ~ 15% (adjustable) % = $\frac{\text{max deviation from AVERAGE} \times 100}{\text{AVERAGE}}$</td> </tr> </tbody> </table>			PROTECTION	TRIP TIME	DESCRIPTION	Phase Reversal	Within 0.1 sec	When abnormal phase sequence power is applied	Phase Loss	Within 1 sec	When phase failure occurs	Voltage Unbalance	5 sec	OFF or / 2 ~ 15% (adjustable) % = $\frac{\text{max deviation from AVERAGE} \times 100}{\text{AVERAGE}}$
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Phase Reversal	Within 0.1 sec	When abnormal phase sequence power is applied												
Phase Loss	Within 1 sec	When phase failure occurs												
Voltage Unbalance	5 sec	OFF or / 2 ~ 15% (adjustable) % = $\frac{\text{max deviation from AVERAGE} \times 100}{\text{AVERAGE}}$												



Models EUCR - Undercurrent Relays

PART NUMBER	CURRENT RANGE	TRADE PRICE
2 Phase Sensing Model		
EUCR 052	0.5 ~ 5A	
EUCR 302	3 ~ 30A	
EUCR 602	5 ~ 60A	
3 Phase Sensing Model		
EUCR3C 052	0.5 ~ 5A	
EUCR3C 302	3 ~ 30A	
EUCR3C 602	5 ~ 60A	
<p>Applications Suitable for protecting pumps from drying running. ➤ EUCR model - Ideal for delta connected and single phase heater elements. ➤ EUCR3C model - Ideal for star connected heater elements.</p> <p>Features</p> <ul style="list-style-type: none"> DIN rail or panel mounting Dimensions: - EUCR: 65H x 54W x 60D mm - EUCR3C: 71H x 70W x 66D mm <p>Technical Specifications Control Supply.....220 ~ 240Vac Output Contact.....3A / 250Vac resistive - EUCR: SPDT - EUCR3C: DPDT (fail-safe) Reset Method..... Manual or remote electrical</p>		



Notes: ① Cable size maybe a limiting factor for 60A models.
- For ranges over 60A, use EUCR(3C) 052 with external CT's.

Model EGR - Electronic Ground Fault Relay

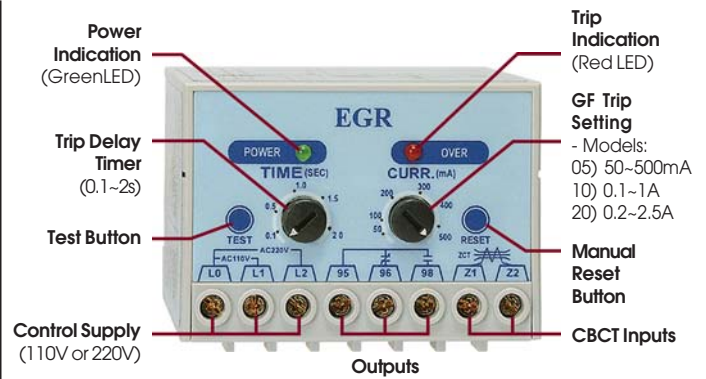
PART NUMBER	CURRENT RANGE	TRADE PRICE
EGR 05	50 ~ 500mA	
EGR 10	100 ~ 1000mA	
EGR 20	200 ~ 2500mA	

Applications

Designed to detect mA signals from CBCT and compare with preset trip level of earth leakage current. Suitable for protecting non-grounded systems of 3kV and 70kV, and resistance and reactor ground systems of 60kV and 70kV, and similar applications.

Features

- Adjustable ground fault protection
- Fail-safe operation (no voltage release)
- Panel or DIN rail mounting
- Dimensions: 71H x 70W x 53D mm



Other relays available on request:

- Model ELR - Earth Leakage Relay
- Model EFR2.5 - Ground (Earth) Fault Relay

International Approvals


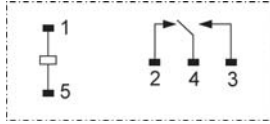
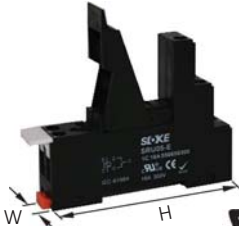

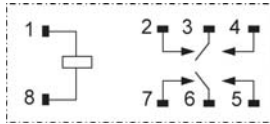
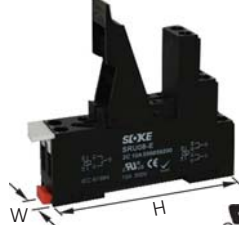
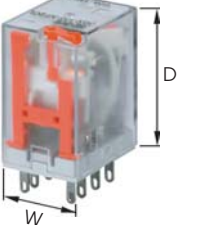
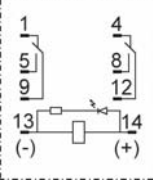

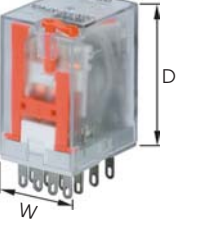
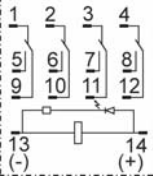

APPROVED			SS	AR	ST	SPx	SE	DSx	EVR	EGR	PMR	3DD	FD	3DZ	FDZ	3DM	FDM	3DE	FDE	FM 420	PMZ PFZ	SSD	CT	ZCT
			①	①	②	②	②	①	②	①	①	③	③	③	③	③	③	③	③	③	③	①	①	①
CE		Community European	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
UL		Underwriters Laboratories Inc	•					•									•	•		•				•
KR		Korean Register of Shipping	•		•		•					•	•	•	•	•	•							
ABS		American Bureau of Shipping	•										•		•		•							
SEV		Association Suisse Des Electriciens	•																					
CCS		China Classification Society	•						•			•												
TÜV		TUV Germany															•							
CSA		Canadian Standards Association																						
RINA		Registro Italiano Navale											•		•		•							
CCC		Certificate for China Certification	•				•	•			•	•	•	•	•	•	•	•	•	•	•	•		

Notes: ① Current model ② Obsolete model ③ Updated model available - refer EIC for further information


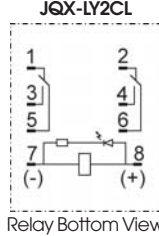


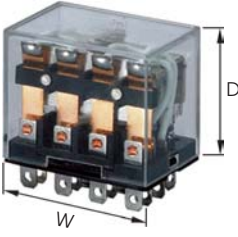
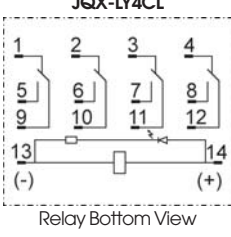


CT Selection

<p>2CT & 3CT</p> <ul style="list-style-type: none"> • Definite Time Devices • Measuring Class 1.0 • Panel Mount 	<p>SR3CT (3x CT set)</p> <ul style="list-style-type: none"> • Inverse Time Devices • Protection Class 10P10 • Panel and DIN Mount 	<p>ZCT (CBCT type)</p> <ul style="list-style-type: none"> • Ground Fault Protection Devices • Detect Zero Phase Current • Panel Mount 																																																
			<table border="1"> <thead> <tr> <th>Current Ratio</th> <th>2CT PART No</th> <th>TRADE PRICE</th> <th>3CT PART No</th> <th>TRADE PRICE</th> <th>SR3CT PART No</th> <th>TRADE PRICE</th> <th>ZCT PART No</th> <th>TRADE PRICE</th> </tr> </thead> <tbody> <tr> <td>100 : 5A</td> <td>2CT100SQ</td> <td></td> <td>3CT100SQ</td> <td></td> <td>SR3CT100</td> <td></td> <td rowspan="5"> Hole dimensions: ZCT-32(mm) ZCT-78(mm) (Other hole sizes available) </td> <td></td> </tr> <tr> <td>150 : 5A</td> <td>-</td> <td></td> <td>-</td> <td></td> <td>SR3CT150</td> <td></td> <td></td> </tr> <tr> <td>200 : 5A</td> <td>2CT200SQ</td> <td></td> <td>3CT200SQ</td> <td></td> <td>SR3CT200</td> <td></td> <td></td> </tr> <tr> <td>300 : 5A</td> <td>2CT300SQ</td> <td></td> <td>3CT300SQ</td> <td></td> <td>SR3CT300</td> <td></td> <td></td> </tr> <tr> <td>400 : 5A</td> <td>-</td> <td></td> <td>3CT400SQ</td> <td></td> <td>SR3CT400</td> <td></td> <td></td> </tr> </tbody> </table>	Current Ratio	2CT PART No	TRADE PRICE	3CT PART No	TRADE PRICE	SR3CT PART No	TRADE PRICE	ZCT PART No	TRADE PRICE	100 : 5A	2CT100SQ		3CT100SQ		SR3CT100		Hole dimensions: ZCT-32 (mm) ZCT-78 (mm) (Other hole sizes available)		150 : 5A	-		-		SR3CT150			200 : 5A	2CT200SQ		3CT200SQ		SR3CT200			300 : 5A	2CT300SQ		3CT300SQ		SR3CT300			400 : 5A	-		3CT400SQ	
Current Ratio	2CT PART No	TRADE PRICE	3CT PART No	TRADE PRICE	SR3CT PART No	TRADE PRICE	ZCT PART No	TRADE PRICE																																										
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150 : 5A	-		-		SR3CT150																																													
200 : 5A	2CT200SQ		3CT200SQ		SR3CT200																																													
300 : 5A	2CT300SQ		3CT300SQ		SR3CT300																																													
400 : 5A	-		3CT400SQ		SR3CT400																																													

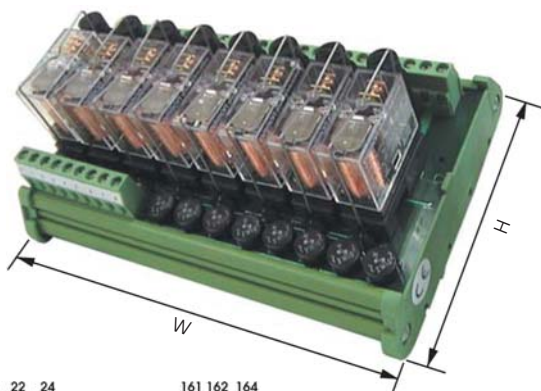
General Purpose Control Relays - Plug-In Type

PART NUMBER	FORM	COIL	RESISTIVE LOAD	INDUCTIVE LOAD	TRADE PRICE	DIMENSIONS		
						W	H	D
1 Pole 10 Amps		JQX-14FT-1C				16 Amps 300 Volts (max rating)		
Standard Relay (G2R-1)								
JQX-14FT-1C-240VAC	SPDT	240V AC	10A 250VAC 10A 30VDC	7.5A 250VAC 5A 30VDC		13	29	29
JQX-14FT-1C-24VAC		24V AC				13	29	29
JQX-14FT-1C-24VDC		24V DC				13	29	29
SRU05-E	Base					18.5	77	62
2 Poles 5 Amps		JQX-14FT-2C				10 Amps 300 Volts (max rating)		
Standard Relay (G2R-2)								
JQX-14FT-2C-240VAC	DPDT	240V AC	5A 250VAC 5A 30VDC	2A 250VAC 3A 30VDC		13	29	27.5
JQX-14FT-2C-24VAC		24V AC				13	29	27.5
JQX-14FT-2C-24VDC		24V DC				13	29	27.5
SRU08-E	Base					18.5	77	62
2 Poles 5 Amps		JQX-13F-KF2CL				10 Amps 300 Volts (max rating)		
LED Indicator and Push-to-Test Button (MY2)								
JQX-13F-KF2CL-240VAC	DPDT	240V AC	5A 250VAC 5A 30VDC	2A 250VAC 2A 30VDC		21.5	28	36
JQX-13F-KF2CL-24VAC		24V AC				21.5	28	36
JQX-13F-KF2CL-24VDC		24V DC				21.5	28	36
PYF08A-E	Base					22	75	30
4 Poles 3 Amps		JQX-13F-KF4CL				7 Amps 300 Volts (max rating)		
LED Indicator and Push-to-Test Button (MY4)								
JQX-13F-KF4CL-240VAC	4PDT	240V AC	3A 250VAC 3A 30VDC	0.8A 250VAC 1.5A 30VDC		21.5	28	36
JQX-13F-KF4CL-24VAC		24V AC				21.5	28	36
JQX-13F-KF4CL-24VDC		24V DC				21.5	28	36
PYF14A-E	Base					29	75	30

General Purpose Power & Control Relays - Plug-In Type

PART NUMBER	FORM	COIL	RESISTIVE LOAD	INDUCTIVE LOAD	TRADE PRICE	DIMENSIONS		
						W	H	D
2 Poles 10 Amps 			JQX-LY2CL 				10 Amps 300 Volts (max rating) 	
With LED Indicator (LY2)								
JQX-LY2CL-240VAC	DPDT	240V AC	10A 250VAC 10A 30VDC	1/2HP 240VAC		21.5	28	36
JQX-LY2CL-24VAC		24V AC				21.5	28	36
JQX-LY2CL-24VDC		24V DC				21.5	28	36
PTF08A-E	Base					28	78	33
4 Poles 10 Amps 			JQX-LY4CL 				10 Amps 300 Volts (max rating) 	
With LED Indicator (LY4)								
JQX-LY4CL-240VAC	4PDT	240V AC	10A 250VAC 10A 30VDC	1/2HP 240VAC		41.5	28	36
JQX-LY4CL-24VAC		24V AC				41.5	28	36
JQX-LY4CL-24VDC		24V DC				41.5	28	36
PTF14A-E	Base					46	78	33

Multi Relay Interface Modules - DIN Rail Mount, PLC I/O

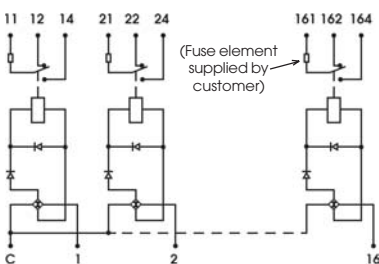


Features:

- Compact size
- Suit relays 1 pole 10A C/O
- LED indication on relay input
- Surge suppression diode on relay coils
- Suitable for 35mm DIN rail mounting
- Fuse protection for output circuits
- Non-polarised input
- Operating temperature -20 to +55°C

Other Options:

- Modules with connector and terminal inputs
- Modules for 2 pole C/O relays and connectors
- Modules with test push buttons
- A selection of connecting cable are available on request



Wiring diagram of electromechanical relays with 24VDC non-polarised power supply (12VDC modules available on request)

PART NUMBER	DESCRIPTION	TRADE PRICE	DIMENSIONS		
			W	H	D
RM4-24DFZ	4 Relay Module 24VDC		79.5	92	74
RM8-24DFZ	8 Relay Module 24VDC		136.5	92	74

Notes: 12 and 16 relay modules available on request

Temperature & Process Controllers

Features:

- Digital microprocessor based controllers
- PID adjustment
- Auto-tuning
- Heater break function
- Suit thermocouples type: J, K, S or PT100
- Output: 2x relays or 2x SSRs
- Input: 0/4...20mA (process control)
- Single or double display
- IP65 mounted in panel with gasket (GU-E33)
- Compact size 33H x 75W mm



KEY01-5

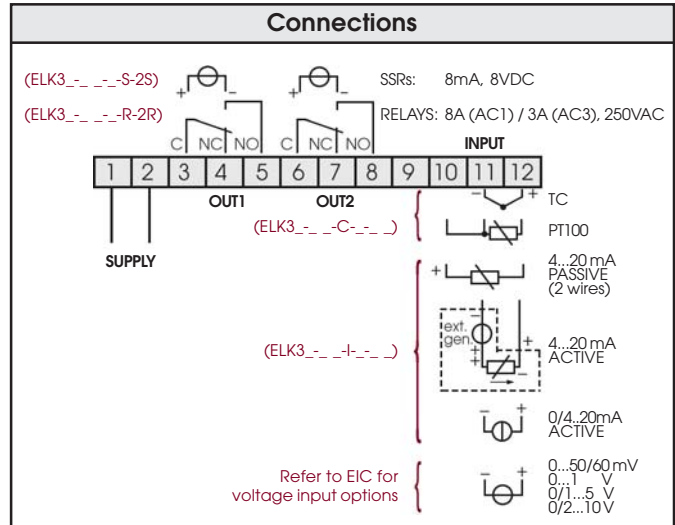
ELK38 Series
Single Line
Display



ELK39 Series
Double Line
Display



Input Data	
Thermocouples	<ul style="list-style-type: none"> • J, K, S: According to IEC 584-2, accuracy class 1 or 2 • PT100: According to IEC 751, accuracy class A or B
ELCO Infrared Thermocouples	IRS J and K: 0...50mV, 0...60mV, 12...60mV
Analogue Input Impedance	<ul style="list-style-type: none"> • For 0/4...20mA input: 51Ω • For mV and V input: 1MΩ
Output Data	
Relay	Up to 2 outputs SPDT 8A (AC1), 3A (AC3), 250VAC
Relay Electric Life	100,000 operations
Voltage For SSR Driving	Up to 2 outputs - 8mA / 8VDC (with protection against short circuits)

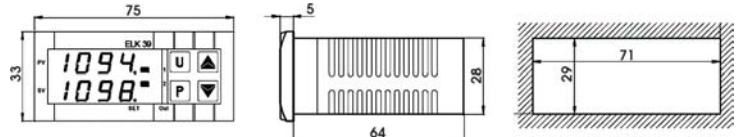


ELCO offer a variety of temperature controllers (on indent).

In the 33x75 mm series, the range includes models with:
- RS485 communication and models suitable for refrigeration applications.

Other models include:
- Analogue 8 pin, 48x48, 72x72, 96x96, 48x96mm and DIN rail mount controllers.

























Dimensions:





Ordering Information

PART NUMBER	SUPPLY VOLTAGE		INPUT		OUTPUT		TRADE PRICE
	24V AC/DC	100-240V AC	TC (J,K,S,IR)	0/4~20mA	2x Relays	2x SSRs	
ELK38 - Single Line Display							
ELK38-24-C-R-2R	●		●		●		
ELK38-240-C-R-2R		●	●		●		
ELK38-240-C-S-2S		●	●			●	
ELK38-24-I-R-2R	●			●	●		
ELK39 - Double Line Display							
ELK39-24-C-R-2R	●		●		●		
ELK39-240-C-R-2R		●	●		●		
ELK39-240-C-S-2S		●	●			●	
ELK39-24-I-R-2R	●			●	●		
Accessories							
KEY01-5	Programming Key - for multiple programming copying for ELK38&39 controllers						
TRL-3F-D6-G10-GS3	Probe PT100 - working temperature 0°C to +350°C						























S-A Series 10A 230/400V - Complete Sets (Female + Male Connectors)

3 Pole + E - Complete Sets		4 Pole + E - Complete Sets					
PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE
Plastic Type Top Entry Hood Bulkhead Housing		Plastic Type Top Entry Hood 90° Bulkhead Housing		Plastic Type Top Entry Hood Bulkhead Housing		Plastic Type Top Entry Hood 90° Bulkhead Housing	
 <p>7000.6839.0</p>		 <p>7000.6839.0</p>		 <p>7000.6839.0</p>		 <p>7000.6839.0</p>	
 <p>7803.6227.0</p>		 <p>7803.6227.0</p>		 <p>7803.6227.0</p>		 <p>7803.6227.0</p>	
 <p>7203.6101.0</p>		 <p>7203.6101.0</p>		 <p>7204.6102.0</p>		 <p>7204.6102.0</p>	
 <p>7203.6001.0</p>		 <p>7203.6001.0</p>		 <p>7204.6002.0</p>		 <p>7204.6002.0</p>	
 <p>7803.6201.0</p>		 <p>7803.6203.0</p>		 <p>7803.6201.0</p>		 <p>7803.6203.0</p>	
Complete Kitset WC0300		Complete Kitset WC0310		Complete Kitset WC0400		Complete Kitset WC0410	
Alternative - Cord Connectors							
 <p>7803.6231.0</p>		 <p>7803.6231.0</p>		 <p>7803.6231.0</p>		 <p>7803.6231.0</p>	
Complete Kitset WC03000		Complete Kitset WC03100		Complete Kitset WC04000		Complete Kitset WC04100	

Plastic Covers

<p>Cover and Gasket For Female Insert</p> 	<p>Size A "21x21" IP65 Protection</p> <table border="1"> <tr> <td>7803.6801.0</td> <td>PART NUMBER</td> <td>7803.6803.0</td> </tr> <tr> <td></td> <td>TRADE PRICE</td> <td></td> </tr> </table>	7803.6801.0	PART NUMBER	7803.6803.0		TRADE PRICE		<p>Cover For Male Insert</p> 
7803.6801.0	PART NUMBER	7803.6803.0						
	TRADE PRICE							

S-E Series 16A 500V - Complete Sets (Female + Male Connectors)

6 Pole + E - Complete Sets							
PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE
Top Entry Hood + Surface Mounting Housing 1 Lever		Top Entry Hood + Bulkhead Mounting Housing 1 Lever		Side Entry Hood + Surface Mounting Housing 1 Lever		Side Entry Hood + Bulkhead Mounting Housing 1 Lever	
Cable Gland (M25)  7000.6849.0		Cable Gland (M25)  7000.6849.0		Cable Gland (M25)  7000.6849.0		Cable Gland (M25)  7000.6849.0	
Hood Top Entry (M25)  7806.6554.0		Hood Top Entry (M25)  7806.6554.0		Hood Side Entry (M25)  7806.6552.0		Hood Side Entry (M25)  7806.6552.0	
Male Insert - Screw Terminals  7306.6103.0		Male Insert - Screw Terminals  7306.6103.0		Male Insert - Screw Terminals  7306.6103.0		Male Insert - Screw Terminals  7306.6103.0	
Female Insert - Screw Terminals  7306.6003.0		Female Insert - Screw Terminals  7306.6003.0		Female Insert - Screw Terminals  7306.6003.0		Female Insert - Screw Terminals  7306.6003.0	
Housing - Surface Mounting (M20) ①  7806.6351.0		Housing - Bulkhead Mounting  7806.6401.0		Housing - Surface Mounting (M20) ①  7806.6351.0		Housing - Bulkhead Mounting  7806.6401.0	
Complete Kitset WC0621		Complete Kitset WC0641		Complete Kitset WC0626		Complete Kitset WC0646	
Alternative - Bulkhead Mounting Housing with Cover							
Notes: ① M20 cable gland not supplied as part of Kitset. Order separately (Part No. 7000.6848.0)		Housing - Bulkhead Mounting with Cover  7806.6402.0		Notes: ① M20 cable gland not supplied as part of Kitset. Order separately (Part No. 7000.6848.0)		Housing - Bulkhead Mounting with Cover  7806.6402.0	
		Complete Kitset WC0661				Complete Kitset WC0666	



6 Pole + E
Kitset WC0646
(Cable gland not shown)


Multipole Industrial Connectors
Inserts in accordance with
EN 61984 - UL 1977



6 Pole + E
Kitset WC0641

S-E Series 16A 500V - Complete Sets (Female + Male Connectors)

10 Pole + E - Complete Sets							
PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE
Top Entry Hood + Bulkhead Mounting Housing 1 Lever		Top Entry Hood + Bulkhead Mounting Housing 2 Levers		Side Entry Hood + Bulkhead Mounting Housing 1 Lever		Side Entry Hood + Bulkhead Mounting Housing 2 Levers	
Cable Gland (M32) 		Cable Gland (M32) 		Cable Gland (M32) 		Cable Gland (M32) 	
7000.6850.0		7000.6850.0		7000.6850.0		7000.6850.0	
Hood Top Entry - Single Lever (M32) 		Hood Top Entry - Double Lever (M32) 		Hood Side Entry - Single Lever (M32) 		Hood Side Entry - Double Lever (M32) 	
7810.6451.0		7810.6443.0		7810.6493.0		7810.6485.0	
Male Insert - Screw Terminals 		Male Insert - Screw Terminals 		Male Insert - Screw Terminals 		Male Insert - Screw Terminals 	
7310.6104.0		7310.6104.0		7310.6104.0		7310.6104.0	
Female Insert - Screw Terminals 		Female Insert - Screw Terminals 		Female Insert - Screw Terminals 		Female Insert - Screw Terminals 	
7310.6004.0		7310.6004.0		7310.6004.0		7310.6004.0	
Housing - Bulkhead Mounting Single Lever with Cover 		Housing - Bulkhead Mounting Double Lever 		Housing - Bulkhead Mounting Single Lever with Cover 		Housing - Bulkhead Mounting Double Lever 	
7810.6404.0		7810.6412.0		7810.6404.0		7810.6412.0	
Complete Kitset WC1042		Complete Kitset WC1052		Complete Kitset WC1047		Complete Kitset WC1057	

ACCESSORIES	PART NUMBER	TRADE PRICE
Single Code Pin (Stainless Steel) 	7000.6874.0	
Double Code Pins (Stainless Steel) Male  Female 	7000.6875.0 7000.6876.0	
Metric Adapters 	M20 - M25 7000.6870.0 M25 - M32 7000.6871.0 M32 - M40 7000.6872.0 M40 - M50 7000.6873.0 M50 - M63 7000.7772.0	
Metric Blanking Plugs with Gaskets 	M20 x 1.5 7000.6975.0 M25 x 1.5 7000.6976.0 M32 x 1.5 7000.6977.0 M40 x 1.5 7000.6978.0 M50 x 1.5 7000.6979.0	



S-E Series 16A 500V - Complete Sets (Female + Male Connectors)

16 Pole + E - Complete Sets							
PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE
Top Entry Hood + Bulkhead Mounting Housing 1 Lever		Top Entry Hood + Bulkhead Mounting Housing 2 Levers		Side Entry Hood + Bulkhead Mounting Housing 1 Lever		Side Entry Hood + Bulkhead Mounting Housing 2 Levers	
Cable Gland (M32)  7000.6850.0		Cable Gland (M32)  7000.6850.0		Cable Gland (M32)  7000.6850.0		Cable Gland (M32)  7000.6850.0	
Hood Top Entry - Single Lever (M32)  7816.6453.0		Hood Top Entry - Double Lever (M32)  7816.6445.0		Hood Side Entry - Single Lever (M32)  7816.6495.0		Hood Side Entry - Double Lever (M32)  7816.6487.0	
Male Insert - Screw Terminals  7316.6105.0		Male Insert - Screw Terminals  7316.6105.0		Male Insert - Screw Terminals  7316.6105.0		Male Insert - Screw Terminals  7316.6105.0	
Female Insert - Screw Terminals  7316.6005.0		Female Insert - Screw Terminals  7316.6005.0		Female Insert - Screw Terminals  7316.6005.0		Female Insert - Screw Terminals  7316.6005.0	
Housing - Bulkhead Mounting Single Lever with Cover  7816.6406.0		Housing - Bulkhead Mounting Double Lever  7816.6413.0		Housing - Bulkhead Mounting Single Lever with Cover  7816.6406.0		Housing - Bulkhead Mounting Double Lever  7816.6413.0	
Complete Kitset WC1662		Complete Kitset WC1652		Complete Kitset WC1667		Complete Kitset WC1657	

Standards and Specifications

The multipole connectors for industrial purposes are used in electric and electronic machinery, robots, electric panels, control equipment and wherever connections are required for power, control and signal circuits.

In conformance with European Standard EN 60204-1, the connectors are designed for heavy-duty industrial applications and are suitable for use with alternate or direct current and facilitate the manufacture, installation and maintenance of sectional electric parts in complex machinery.

Referring standard:


- EN 61984: Connector safety requirements and tests
- VDE 0110: Table 4 - clearance and creepage distances
- VDE 0627: Connectors
- EN 60512: Connectors for electronic equipment - tests and measurements
- UL 1977: Component connectors for use in data, signal, control and power applications




(continued on page 101)



16 Pole + E
Kitset WC1652

S-E Series 16A 500V - Complete Sets (Female + Male Connectors)

24 Pole + E - Complete Sets							
PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE
Top Entry Hood + Bulkhead Mounting Housing 1 Lever		Top Entry Hood + Bulkhead Mounting Housing 2 Levers		Side Entry Hood + Bulkhead Mounting Housing 1 Lever		Side Entry Hood + Bulkhead Mounting Housing 2 Levers	
Cable Gland (M40) 		Cable Gland (M40) 		Cable Gland (M40) 		Cable Gland (M40) 	
7000.6851.0		7000.6851.0		7000.6851.0		7000.6851.0	
Hood Top Entry - Single Lever (M40) 		Hood Top Entry - Double Lever (M40) 		Hood Side Entry - Single Lever (M40) 		Hood Side Entry - Double Lever (M40) 	
7824.6456.0		7824.6448.0		7824.6498.0		7824.6490.0	
Male Insert - Screw Terminals 		Male Insert - Screw Terminals 		Male Insert - Screw Terminals 		Male Insert - Screw Terminals 	
7324.6107.0		7324.6107.0		7324.6107.0		7324.6107.0	
Female Insert - Screw Terminals 		Female Insert - Screw Terminals 		Female Insert - Screw Terminals 		Female Insert - Screw Terminals 	
7324.6007.0		7324.6007.0		7324.6007.0		7324.6007.0	
Housing - Bulkhead Mounting Single Lever with Cover 		Housing - Bulkhead Mounting Double Lever 		Housing - Bulkhead Mounting Single Lever with Cover 		Housing - Bulkhead Mounting Double Lever 	
7824.6408.0		7824.6414.0		7824.6408.0		7824.6414.0	
Complete Kitset WC2463		Complete Kitset WC2453		Complete Kitset WC2468		Complete Kitset WC2458	

ACCESSORIES	PART NUMBER	TRADE PRICE
Single Code Pin (Stainless Steel) 	7000.6874.0	
Double Code Pins (Stainless Steel) Male  Female 	7000.6875.0 7000.6876.0	
Metric Adapters 	M20 - M25 7000.6870.0 M25 - M32 7000.6871.0 M32 - M40 7000.6872.0 M40 - M50 7000.6873.0 M50 - M63 7000.7772.0	
Metric Blanking Plugs with Gaskets 	M20 x 1.5 7000.6975.0 M25 x 1.5 7000.6976.0 M32 x 1.5 7000.6977.0 M40 x 1.5 7000.6978.0 M50 x 1.5 7000.6979.0	



S-E Series 16A 500V - Complete Sets (Female + Male Connectors)



32 Pole + E - Complete Sets							
PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE	PART NUMBER	TRADE PRICE
Top Entry Hood + Bulkhead Mounting Housing 1 Lever		Top Entry Hood + Bulkhead Mounting Housing 2 Levers		Side Entry Hood + Bulkhead Mounting Housing 1 Lever		Side Entry Hood + Bulkhead Mounting Housing 2 Levers	
Cable Gland (M40)  7000.6851.0		Cable Gland (M50)  7000.6852.0		Cable Gland (M40)  7000.6851.0		Cable Gland (M50)  7000.6852.0	
Hood Top Entry - Single Lever (M40)  7832.6562.0		Hood Top Entry - Double Lever (M50)  7832.6580.0		Hood Side Entry - Single Lever (M40)  7832.6561.0		Hood Side Entry - Double Lever (M50)  7832.6577.0	
Male Insert - Screw Terminals  1-16: 7316.6105.0 17-32: 7316.6106.0		Male Insert - Screw Terminals  1-16: 7316.6105.0 17-32: 7316.6106.0		Male Insert - Screw Terminals  1-16: 7316.6105.0 17-32: 7316.6106.0		Male Insert - Screw Terminals  1-16: 7316.6105.0 17-32: 7316.6106.0	
Female Insert - Screw Terminals  1-16: 7316.6005.0 17-32: 7316.6006.0		Female Insert - Screw Terminals  1-16: 7316.6005.0 17-32: 7316.6006.0		Female Insert - Screw Terminals  1-16: 7316.6005.0 17-32: 7316.6006.0		Female Insert - Screw Terminals  1-16: 7316.6005.0 17-32: 7316.6006.0	
Housing - Bulkhead Mounting Single Lever with Cover  7832.6410.0		Housing - Bulkhead Mounting Double Lever  7832.6415.0		Housing - Bulkhead Mounting Single Lever with Cover  7832.6410.0		Housing - Bulkhead Mounting Double Lever  7832.6415.0	
Complete Kitset WC3263		Complete Kitset WC3254		Complete Kitset WC3268		Complete Kitset WC3259	

(Standards and Specifications continued from page 99)

- CSA (C22.2, 182.3): Special use attachments, plugs, receptacles and connectors
- EN 60529: Degree of protection provided by enclosure (IP code)
- EN 50262: Metric cable glands for electrical installation
- EN 60423: Conduits for electrical purposes - outside diameter of conduits for electrical installations and thread for conduits and fittings

Approvals (UL and CSA for inserts):

The inserts are designed and manufactured in conformity with EN 61984 (IEC 61984), VDE 0627 and UL 1977/CSA C22.2 182.3 standards. They are certified and identified with the UL and CSA marks.

The Westec connectors are therefore in conformity with both European/International and American systems. This permits use in the widest range of applications worldwide.



32 Pole + E
Kitset **WC3254**
(cable gland not shown)



Intelligent Control Series

SR - EXPANDABLE SERIES

MODEL	DESCRIPTION			
P / NUMBER	POWER	INPUT	OUTPUT	TRADE PRICE
SR-12MRAC	AC 100-240V	8 points AC Input	4 points relay output 10A	①
SR-12MRDC	DC 12-24V	8 points DC (analog) input	4 points relay output 10A	①
SR-22MRAC	AC 100-240V	14 points AC Input	8 points relay output 10A	①
SR-22MRDC	DC 12-24V	14 points DC (analog) input	8 points relay output 10A	①
SR-22MGDC	DC 12-24V	14 points DC (analog) input	8 points transistor output (equivalent)2A	①
SR-20ERA	AC 100-240V	12 points AC Input	8 points relay output 10A	②
SR-20ERD	DC 12-24V	12 points DC Input	8 points relay output 10A	②
SR-RCA-KIT	100-240VAC Receiver module inc Tx and Bridge CH42			
SR-RCD-KIT	12-24VDC Receiver module inc Tx and Bridge CH40			
SR-RCA	100-240VAC A type receiver module			
SR-RCD	12-24VDC D type receiver module			
SR-TC	DC3V 6 Button Transmitter module (310-340 MHz) 40mW			
SR-EANT	Remote Antenna Kit			
SR-HMI-L	Human Machine Interface (LCD panel)			
SR-HMI-B	Human Machine Interface (LCD panel) with backup			
SR-CBA	AC TYPE Bridge Connection			
SR-CBD	DC TYPE Bridge Connection			
SR-CP	Programming cable (side mount) DB9			
SR-DCP	Programming cable (front mount) DB9			
SR-DUSB	The interface between SR and PC USB port			
SR-ECBA	AC TYPE Remote I/O Cable			
SR-ECBD	DC TYPE Remote I/O Cable			
SR-EHC	Remote mounting rack for LCD panel c/w cable			
SR-LED	Cover			

(analogue) means the DC input can be used as analogue input.

Notes: ① without ICD

② expansion

Program Capability	127 Blocks
Counter	127
Timer	127
RTC	127 Switches
Maximum I/O	82
LCD Display	4x10 Characters

FEATURES:

- Wireless remote control
- Function key
- Removable HMI and WRT
- Easily change preset value
- Display alarm message
- Can be extended to 82 I/O
- 8 channel analogue input



SR-12MRDC + SR-20ERD



GENERAL SPECIFICATION

ITEM	SPECIFICATION
Output Current	10A (Resistive)
FDB Capacity	127
Program Memory	127
Internal Relay	127
Counter	127
Timer	127
RTC Step	127
Power Supply	Transistor and Relay
Output	AC 85-240V DC 12-24V

P / NUMBER	POWER	INPUT	OUTPUT	TRADE PRICE
AF-10MR-A	AC 85-260V	6 points AC	4 points relay	
AF-20MR-A	AC 85-260V	12 points AC	8 points relay	
AF-10MR-D	DC 12-24V	6 points DC (analog or digital)	4 points relay	
AF-20MR-D	DC 12-24V	12 points DC (analog or digital)	8 points relay	
AF-LCD	Removable LCD Panel			
AF-C232	RS232 Programming Cable - PC to FAB			
AF-D232				

Switch Mode Power Supplies

- Wide Input Range: 85 ~ 260 VAC
- Overvoltage Protection
- Overcurrent Protection
- CE Approval



AVAILABILITY PENDING

MODEL		WTC-30-12 WTC-50-12 / WTC-75-12	WTC-30-24 WTC-50-24 / WTC-75-24	WTC-100-24 / WTC-150-24	WTC-300-24
INPUT	Voltage	AC85~264V / AC90~132 • 180~264V		AC90~132 • 180~264V	
	Frequency	50/60 Hz (47~440Hz or DC)			
	Efficiency	75% / 70% typ	78% / 75% typ	75% / 78% typ	80% typ
OUTPUT	Voltage (V)	12	24		
	Regulation Line (mV)	60 max	120 max		
	Regulation Load (mV)	120 max	240 max		
	Ripple (mVp-p)	120 max	240 max		
	Ripple Noise (mVp-p)	170 max	290 max		
	Temp Drift 0~50°C (mV)	120 max	240 max		
	Rise Time (ms)	100 / 600 max (AC IN 85V lo = 100%)		600 max	300 max
	Holding Time (ms)	15 typ (AC IN 85V lo = 100%)		15 typ	20 typ
PROTECTION CIRCUIT	Over Current Protection	Works at over 110% of rating and recovers automatically			
	Over Voltage Protection	Works at 115 ~ 140% of rating			
ELECTRICALLY ISOLATED	Input ~ Output	AC 1500V 1 minute, DC 500V 100MΩ (at room temperature & humidity)			
	Input ~ Case.FG	AC 1500V 1 minute, DC 500V 100MΩ (at room temperature & humidity)			
	Output ~ Case	AC 500V 1 minute, DC 500V 100MΩ (at room temperature & humidity)			
ENVIRONMENT	Operating Temp & Humidity	0 ~ +50°C, 20 ~ 90% RH (non-Condensing)			
	Storage Temp & Humidity	-20 ~ +75°C, 20~ 90% RH (non-Condensing)			
GENERAL	Cooling	Convection Cooling		Fan Cooling	
	Function	-		V-Sensor	

Dimensions

Size	H x W x D mm
30 Watt	80 x 38 x 98
50 Watt	83 x 40 x 125
75 Watt	96 x 40 x 135
100 Watt	96 x 40 x 135
150 Watt	105 x 46 x 205
300 Watt	120 x 92 x 225



50 Watt shown with Mounting Bracket

Ordering Information

PART NUMBER	POWER	OUTPUT VOLTAGE	OUTPUT CURRENT	TRADE PRICE
Power Supplies				
WTC-30-12	30 Watts	12 V DC	2.5 A	
WTC-50-12	50 Watts	12 V DC	4.2 A	
WTC-75-12	75 Watts	12 V DC	6.5 A	
WTC-30-24	30 Watts	24 V DC	1.3 A	
WTC-50-24	50 Watts	24 V DC	2.1 A	
WTC-75-24	75 Watts	24 V DC	3.1 A	
WTC-100-24	100 Watts	24 V DC	4.2 A	
WTC-150-24	150 Watts	24 V DC	6.3 A	
WTC-300-24	300 Watts	24 V DC	12.5 A	
Mounting Brackets				
WTC-30-10	Suit 30 to 100 Watt Power Supplies			
WTC-15-30	Suit 150 to 300 Watt Power Supplies			

E22 Series Pushbuttons

Standard Pushbuttons

BUTTON COLOUR	BEZEL TYPE	PART NUMBER	TRADE PRICE
Flush Button			
Black Button	Chrome Bezel	E22P1	
Black Button	Black Bezel	E22PB1	
Red Button	Chrome Bezel	E22P2	
Red Button	Black Bezel	E22PB2	
Green Button	Chrome Bezel	E22P3	
Green Button	Black Bezel	E22PB3	
Yellow Button	Chrome Bezel	E22P4	
Yellow Button	Black Bezel	E22PB4	
White Button	Black Bezel	E22P5	
Blue Button	Chrome Bezel	E22P6	
Blue Button	Black Bezel	E22PB6	
Grey Button	Chrome Bezel	E22P7	
Grey Button	Black Bezel	E22PB7	
Extended Button			
Black Button	Chrome Bezel	E22E1	
Red Button	Chrome Bezel	E22E2	
Green Button	Chrome Bezel	E22E3	
Yellow Button	Chrome Bezel	E22E4	
White Button	Chrome Bezel	E22E5	
Blue Button	Chrome Bezel	E22E6	
Grey Button	Chrome Bezel	E22E7	



E22P1
Standard Flush
Black Pushbutton

Illuminated Pushbuttons ①

BUTTON COLOUR	BEZEL TYPE	PART NUMBER	TRADE PRICE
Flush Button			
Red Button	Chrome Bezel	E22N2	
Red Button	Black Bezel	E22NB2	
Green Button	Chrome Bezel	E22N3	
Green Button	Black Bezel	E22NB3	
White Button	Chrome Bezel	E22N5	
White Button	Black Bezel	E22NB5	
Blue Button	Chrome Bezel	E22N6	
Blue Button	Black Bezel	E22NB6	
Amber Button	Chrome Bezel	E22N9	
Amber Button	Black Bezel	E22NB9	
Extended Button			
Red Button	Chrome Bezel	E22T2	
Green Button	Chrome Bezel	E22T3	
Yellow Button	Chrome Bezel	E22T4	
White Button	Chrome Bezel	E22T5	
Blue Button	Chrome Bezel	E22T6	
Amber Button	Chrome Bezel	E22T9	



E22E2
Standard Extended
Red Pushbutton

Notes: ① Select Light Sourced from page 107

E22 Series Mushroom Operators

Mushroom Operators



E22J2
Spring Return
Operator



E22GD2
Illuminating
Latching Operator

M/ROOM TYPE	RELEASE MECHANISM	M/ROOM COLOUR	BEZEL TYPE	PART NUMBER	TRADE PRICE
Spring Return Type					
Ø28 mm Plastic	Spring Return	Black	Chrome	E22M1	
		Red		E22M2	
		Green		E22M3	
		Yellow		E22M4	
Ø40 mm Plastic	Spring Return	Red	Chrome	E22L2	
		Red	Black	E22LB2	
		Green	Chrome	E22L3	
Ø50 mm Aluminium	Spring Return	Red	Chrome	E22J2	
Latching Type					
Ø28 mm Plastic	Twist to Release	Red	Chrome	E22ML2	
		Red	Black	E22MLB2	
Ø40 mm Plastic	Twist to Release	Red	Chrome	E22LL2	
	Twist to Release	Red	Black	E22LLB2	
	Key Release	Red	Chrome	E22G2	
Push-Pull Type					
Ø40 mm Plastic	Pull to Release	Red	Chrome	E22ED2	
Ø40 mm Illuminated Ⓞ	Pull to Release	Red	Chrome	E22GD2	
		Red Ⓞ		E22GD2N8	
		Green		E22GD3	
Ø40 mm Illuminated Ⓞ	Pull to Release & S/R to Centre	Red	Chrome	E22HD2	
		Green		E22HD3	
Ø50 mm Aluminium	Pull to Release	Red	Chrome	E22JL2	
		Red Ⓞ		E22JL2N8	

Notes: Ⓞ Select Light Sourced from page 107
Ⓞ Engraved EMERGENCY STOP

E22 Series Selector Switches

Key Selector Switches



E22K53
2 Position
Key Switch

POSITION	OPERATING MODE			BEZEL TYPE	PART NUMBER	TRADE PRICE
	Left	Center	Right			
2 Pos	M*	-	M*	Chrome Black	E22K53 E22KB53	
	-	M	M*	Chrome	E22KF1	
	-	M*	M	Chrome	E22KF4	
	-	M*	M*	Chrome	E22KF5	
	-	M*	S	Chrome Black	E22KE4 E22KBE4	
3 Pos	M	M*	M	Chrome	E22KG4Ⓞ	
	M*	M*	M*	Chrome	E22KG7Ⓞ	
	M*	M*	M*	Chrome	E22KH7	

Notes: M = Maintained S = Spring Return
Ⓞ These units have Cam Code 1. All Others have Cam Code 2.
* Key Removal Position

AVAILABLE WHILE STOCKS LAST
REFER EIC FOR NEW RANGE!

E22 Series Selector Switches

Selector Switches - Non Illuminating

POSITIONS	OPERATING MODE			BEZEL TYPE	PART NUMBER	TRADE PRICE
	Left	Center	Right			
Knob Type						
2 Pos	M	-	M	Chrome Black	E22X51 E22XB51	
	-	M	M	Chrome Black	E22XF1 E22XBF1	
	-	M	S	Chrome Black	E22XE1 E22XBE1	
3 Pos	M	M	M	Chrome Black Chrome	E22XG1 ⓪ E22XBG1 ⓪ E22XH1	
	S	M	S	Chrome Black	E22XL1 ⓪ E22XBL1 ⓪	
	M	M	S	Chrome Black	E22XN1 ⓪ E22XBN1 ⓪	
Lever Type						
2 Pos	M	-	M	Chrome	E22V51	
	-	M	M	Chrome Black	E22VF1 E22VBF	
	-	M	S	Chrome	E22VE1	
3 Pos	M	M	M	Chrome Black Chrome	E22VG1 ⓪ E22VBG1 ⓪ E22VH1	
	S	M	S	Chrome	E22VJ1	
	S	M	S	Chrome Black	E22VL1 ⓪ E22VBL1 ⓪	
	M	M	S	Chrome	E22VN1 ⓪	



E22XF1
2-Pos Knob
Selector Switch



E22VG1
3-Pos Lever
Selector Switch

Notes: M = Maintained S = Spring Return
⓪ These models have Cam Code 1. All others have Cam Code 2.

Selector Switches - Illuminating

OPERATING MODE			LENS COLOUR	BEZEL TYPE	PART NUMBER	TRADE PRICE
Left	Center	Right				
2 Position - Knob						
M	-	M	Red Green	Black Chrome	E22SB52 E22S53	
-	M	M	Red Green Amber	Chrome Chrome Chrome	E22SF2 E22SF3 E22SF9	
3 Position - Knob						
M	M	M	Red Green Yellow Amber Red	Chrome Chrome Chrome Chrome Chrome	E22SG2 ⓪ E22SG3 ⓪ E22SG4 ⓪ E22SG9 ⓪ E22SH2	
S	M	S	Red	Chrome	E22SL2 ⓪	
M	M	S	Red	Chrome	E22SN2 ⓪	



E22SG9
Illuminating 3-Pos
Knob Selector Sw

Notes: M = Maintained S = Spring Return
⓪ These models have Cam Code 1. All others have Cam Code 2.

E22 Series Indicating Lights ①



E22H2

DESCRIPTION	PART NUMBER	TRADE PRICE
Clear Lens	E22H0	
Red Lens	E22H2	
Green Lens	E22H3	
Yellow Lens	E22H4	
White Lens	E22H5	
Blue Lens	E22H6	
Amber Lens	E22H9	

Notes: ① Select Light Source from below

E22 Series Accessories



E22B11



E22D + Bulb



E22BGM



E22BA1

DESCRIPTION	PART NUMBER	TRADE PRICE
Contact Blocks		
Contact Block 1NC	E22B1	
Contact Block 1NO/1NC	E22B11	
Contact Block 1NO	E22B2	
Contact Block 2NO	E22B20	
Contact Block 1NO Early Break	E22B3	
Contact Block 1NC Late Break	E22B4	
Light Source Units		
Transformer Type 110V w/ Bulb	E22TL1	
Transformer Type 240V w/Bulb	E22TL2	
Transformer Type 400V w/Bulb	E22TL3	
Transformer Type 440V w/Bulb	E22TL4	
Resistor/Diode Type 230V w/110V Bulb	E22R1	
Resistor Unit type 110V w/60V Bulb	E22R2	
Direct Voltage Type 6~110V No Bulb	E22D	
Protective Boots for Pushbuttons		
Boot Black IP66 Oil/Water Tight	E22BBM	
Boot Clear IP66 Oil/Water Tight	E22BCM	
Boot Red IP66 Oil/Water Tight	E22BRM	
Boot Greeb IP66 Oil/Water Tight	E22BGM	
Misc Accessories		
Hole Plug IP66	E22BHP	
Mounting Adaptor 3-Way	E22BA1	
Mounting Adaptor 5-Way	E22BA11	
Mounting Adaptor 5-Way (3Pos Sel Sw)	E22BA12	
Half Shroud for M/Room up to 40mm	E22MS	
Full Shroud for M/Room up to 40mm	E22MSF	
P/Lock Transp Cover for Flush & Ext P/Bs	E22PCM	
P/Lock Transp Cover for Ext P/Buttons	E22PCPM	
P/Lock Transp Cover for 28mm M/Room & Knob & Key Selector Switches	E22BA9	

AVAILABLE WHILE STOCKS LAST
REFER EIC FOR NEW RANGE

E22 Series Accessories

Legend Plates

SIZE mm	LETTERING	BACKGROUND COLOUR	PART NUMBER	TRADE PRICE
30 x 45	(blank)	Black	E22NS36	
	(blank)	Red	E22NS37	
	AUTO OFF HAND	Black	E22NS49	
	CLOSE	Black	E22NS11	
	DOWN	Black	E22NS12	
	EMERGENCY STOP	Red	E22NS13	
	FOR OFF REV	Black	E22NS50	
	FOR REV	Black	E22NS38	
	FORWARD	Black	E22NS15	
	HAND AUTO	Black	E22NS39	
	HAND OFF AUTO	Black	E22NS51	
	HIGH LOW	Black	E22NS40	
	IN	Black	E22NS17	
	INCH	Black	E22NS18	
	INCH REVERSE	Black	E22NS69	
	JOG	Black	E22NS19	
	JOG FOR	Black	E22NS16	
	JOG REV	Black	E22NS21	
	LOW	Black	E22NS22	
	LOWER	Black	E22NS23	
	MAN AUTO ①	Black	E22NS17	
	MAN OFF AUTO	Black	E22NS68	
	MOTOR RUN	Black	E22NS81	
	MOTOR RUNNING	Black	E22NS56	
	MOTOR STOP	Black	E22NS82	
	OFF	Red	E22NS24	
	OFF ON ①	Black	E22NS42	
	OFF ON ②	Black	E22NS105	
	ON	Black	E22NS25	
	OPEN	Black	E22NS26	
	OPEN CLOSE ①	Black	E22NS43	
	OPEN OFF CLOSE	Black	E22NS53	
	OUT	Black	E22NS27	
	OVERLOAD TRIPPED	Black	E22NS98	
	POWER ON	Black	E22NS80	
	RAISE	Black	E22NS28	
	READY	Black	E22NS86	
	RESET	Black	E22NS29	
	REVERSE	Black	E22NS30	
	RUN	Black	E22NS31	
START	Black	E22NS33		
START STOP ①	Black	E22NS47		
STOP	Red	E22NS34		
STOP RESET	Red	E22NS58		
TEST	Black	E22NS83		
UP	Black	E22NS35		
UP DOWN ②	Black	E22NS48		
40 x 45	(blank)	Black	E22NF36	
ø70	(blank)	Yellow	E22VA1	
ø45	(black)	Yellow	E22VA2	
ø70	EMERGENCY STOP	Yellow	E22VA8	



E22NS12



E22VA8

Notes: ① For selector switches with left/right switch angle
② For selector switches with centre/right switch angle

E22 Series Enclosures



E22ESP2

DESCRIPTION	PART NUMBER	TRADE PRICE
56mm Deep		
1 Hole - 1 Block Deep	E22ESP1	
2 Hole - 1 Block Deep	E22ESP2	
3 Hole - 1 Block Deep	E22ESP3	
4 Hole - 1 Block Deep	E22ESP4	
86mm Deep		
1 Hole - 2 Blocks Deep	E22EDP1	
2 Hole - 2 Blocks Deep	E22EDP2	
3 Hole - 2 Blocks Deep	E22EDP3	
4 Hole - 2 Blocks Deep	E22EDP4	
6 Hole - 2 Blocks Deep	E22EDP6	
9 Hole - 2 Blocks Deep	E22EDP9	

- Notes:
- Polycarbonate enclosures
 - IP65 ingress protection
 - Double insulated
 - Colour light grey

Replacement Lamps for Indicating Lights

Standard Incandescent Lamps

DESCRIPTION	PART NUMBER	TRADE PRICE
Direct Voltage Applications for E22 Series		
Type BA9s bayonet bulbs	6V 28-2225-23	
	12V 28-2225-29	
	24V 28-2225-30	
	48V 28-2225-31	
	80V 28-2225-32	
	110V 28-2225-24	
	240V 28-2225-38	

DESCRIPTION	PART NUMBER	TRADE PRICE
Transformer Type for E22, E34 & 'T' Series		
Type 755 BA9 bulbs	6V 28-2202	

AVAILABLE WHILE STOCKS LAST
REFLECTED FOR NEW RANGE

E50 Modular Limit Switches

For a complete switch unit, select:

- 1) Switch Body
- 2) Receptacle
- 3) Operating Head
- 4) Actuator



E50SA
Body

E50 Switch Bodies

DESCRIPTION	PART NUMBER	TRADE PRICE
1 Pole 1NO/1NC	E50SA	
1 Pole 1NO/1NC w/LED	E50SAL	
2 Pole 2NO/2NC	E50SB	
2 Pole 2NO/2NC w/LED	E50SBL	
2 Pole 2NO/2NC w/Neon	E50SBN	
1NO/1NC Gravity Return	E50SG	
Neutral Position	E50SN	
2 Step	E50ST	



E50RA20
Receptacle

E50 Receptacles

DESCRIPTION	PART NUMBER	TRADE PRICE
1 Pole 5 Terms - Surface Mount	E50RA20	
1 Pole 5 Terms - Manifold Mount	E50RAM	
1 Pole 5 Terms - Epoxy Filled	E50RAS	
2 Pole 9 Terms - Surface Mount	E50RB20	
2 Pole 9 Terms - Manifold Mount	E50RBM	
2 Pole 9 Terms - Epoxy Filled	E50RBS	



E50DR1
Head



E50DW1
Head

E50 Operating Heads

DESCRIPTION	PART NUMBER	TRADE PRICE
Side Rotary - Stnd S/Return	E50DR1	
Side Rotary - Low Temp S/Ret	E50DR19	
Side Rotary - Low Force S/Ret	E50DL1	
Side Rotary - 2 Pos Maintained	E50DM1	
Side Push - P/Button S/Return	E50DS1	
Side Push - Adj P/Button S/Ret	E50DS2	
Side Push - Push Roller S/Ret	E50DS3	
Side Push - P/Button Maintain	E50DH1	
Top Push - P/Button S/Return	E50DT1	
Top Push - Adj P/Button S/Ret	E50DT2	
Top Push - Push Roller S/Ret	E50DT3	
For Wobble - Standard Duty	E50DW1	
For Wobble - Heavy Duty	E50DW2	
For Two Step	E50DD1	
For Gravity Return	E50DG1	
For Neutral Position - 5° Travel	E50DN1	
For Neutral Position - 15° Travel	E50DN2	

Actuators on the following page

E50 Limit Switches also available in factory sealed 6P+ submersible versions

E50 Modular Limit Switches

E50 Actuators

DESCRIPTION	PART NUMBER	TRADE PRICE
Standard Roller Levers		
7/8" Long - Metal Roller	E50KL39	
1.5" Long - Nylon Roller	E50KL200	
1.5" Long - Nylon Roller	E50KL377	
1.5" Long - Metal Roller	E50KL355	
1.5" Long - Ball Bearing	E50KL531	
2" Long - Nylon Roller	E50KL546	
2" Long - Nylon Roller	E50KL572	
2" Long - Metal Roller	E50KL549	
2" Long - Ball Bearing	E50KL552	
2.5" Long - Nylon Roller	E50KL547	
2.5" Long - Nylon Roller	E50KL575	
2.5" Long - Metal Roller	E50KL550	
3" Long - Nylon Roller	E50KL548	
3" Long - Nylon Roller	E50KL574	
3" Long - Nylon Roller	E50KL576	
3" Long - Metal Roller	E50KL551	
3" Long - Ball Bearing	E50KL554	
Non-Standard Roller Levers		
1.5" Long - Roller on Rev Side	E50KL310	
1.45" Long - Roller on Rev Side	E50KL536	
1.5" Long - Inboard Roller	E50KL26	
1.5" Long - Outboard Roller	E50KL27	
1.5" Long - Outboard Roller	E50KL28	
1 1/16" Long - Bantam	E50KL532	
1.5" Long - Precision Adjust	E50KL465	
Adjustable Roller Levers		
3.25" Long - Nylon Roller	E50KL598	
3.75" Long - Nylon Roller	E50KL201	
3.75" Long - Nylon Roller	E50KL443	
3.75" Long - Nylon Roller	E50KL537	
3.75" Long - Nylon Roller	E50KL599	
3.75" Long - Metal Roller	E50KL538	
3.75" Long - Ball Bearing	E50KL539	
3.9" Long - Wide Roller	E50KL37	
Fork Lever Rollers		
1.5" - Nylon Rollers Same Side	E50KL204	
1.5" - Nylon Rollers Same Side	E50KL543	
1.5" - Metal Rollers Same Side	E50KL544	
1.5" - Nylon Rollers Opp Sides	E50KL203	
Adjustable Rod Levers		
5.5" Long - Nylon Rod	E50KL399	
5.5" Long - Metal Rod	E50KL202	
5.5" Long - Metal Square Rod	E50KL581	
9" Long - Stainless Steel Rod	E50KL220	
12" Long - Steel Rod	E50KL226	
Spring Rod & Wire Levers		
Spring Rod 11-5/8" - Metal Rod	E50KL421	
Spring Rod 12-1/8" - Nylon Rod	E50KL556	
Adj Wire Lever - 12-1/8" Long	E50KL533	
Nylon Loop 6" Long	E50KL142	
Wobble Sticks		
Nylon Rod dia 1.4"	E50KW2	
Stainless Steel Rod Dia 1/16"	E50KW3	
Coil Spring Dia 11/32"	E50KW4	



E50KL200
Roller Lever



E50KL201
Adj Roller
Lever



E50KL37
Adj Wide
Roller Lever



E50KL204
Fork Lever
Rollers



E50KL142
Nylon Loop



E50KW2
Wobble
Stick

30mm Pushbuttons

Standard Pushbuttons

BUTTON COLOUR	BEZEL TYPE	PART NUMBER	TRADE PRICE
Flush Button			
Black Button	Chrome Bezel	T101	
Black Button	Black Bezel	E34PB1	
Red Button	Chrome Bezel	T102	
Red Button	Black Bezel	E34PB2	
Green Button	Chrome Bezel	T103	
Green Button	Black Bezel	E34PB3	
Yellow Button	Chrome Bezel	T104	
Yellow Button	Black Bezel	E34PB4	
Grey Button	Chrome Bezel	T105	
Grey Button	Black Bezel	E34PB7	
White Button	Chrome Bezel	T106	
White Button	Black Bezel	E34PB5	
Brown Button	Chrome Bezel	T107	
Blue Button	Chrome Bezel	T108	
Blue Button	Black Bezel	E34PB6	
Extended Button			
Black Button	Chrome Bezel	T111	
Black Button	Black Bezel	E34EB1	
Red Button	Chrome Bezel	T112	
Red Button	Black Bezel	E34EB2	
Green Button	Chrome Bezel	T113	
Green Button	Black Bezel	E34EB3	
Blue Button	Chrome Bezel	T118	
Blue Button	Black Bezel	E34EB6	
Yellow Button	Chrome Bezel	T120	
Yellow Button	Black Bezel	E34EB4	



T103



T112

Illuminated Pushbuttons (order lens separately)

VOLTAGE	BEZEL TYPE	PART NUMBER	TRADE PRICE
Transformer Type			
110V w/Bulb	Chrome Bezel	T411	
110V w/Bulb	Black Bezel	E34XB120	
230V w/Bulb	Chrome Bezel	T412	
230V w/Bulb	Black Bezel	E34XB240	
400V w/Bulb	Chrome Bezel	T413	
400V w/Bulb	Black Bezel	E34XB380	
Direct Voltage Type			
6~240V no Bulb	Chrome Bezel	T441	
6~240V no Bulb	Black Bezel	E34CB	



T441

Plastic Lenses (for Illuminated Pushbuttons)

LENS COLOUR	PART NUMBER	TRADE PRICE
Red	TC21N / E34V2	
Green	TC22N / E34V3	
Yellow	TC23N / E34V4	
Amber	TC43N / E34V9	
Blue	TC24N / E34V6	
Clear	TC25N / E34V0	
White	TC26N / E34V5	



TC42N

30mm Mushroom Operators

Mushroom Operators



T124



T172

M/ROOM TYPE	RELEASE MECHANISM	M/ROOM COLOUR	BEZEL TYPE	PART NUMBER	TRADE PRICE
Operators c/w Mushroom					
Ø38.1 mm Mushroom Head	Spring Return	Black	Chrome	T121	
		Black	Black	E34LB1	
		Red	Chrome	T122	
		Red	Black	E34LB2	
		Green	Chrome	T123	
		Green	Black	E34LB3	
		Yellow	Chrome	T124	
		Yellow	Black	E34LB4	
Ø40 mm Palm Head	Spring Return	Black	Chrome	T171	
		Red		T172	
		Red @		T17213	
		Green		T173	
Components					
Spare Bare Shaft Operators	Spring Return	-	Chrome	T100	
	Twist (shaft) to Release	-	Chrome	T140	
Spare Mushroom Heads	Ø38.1 mm Mushroom Head	Black	-	T281	
		Red		T282	
		Green		T283	
		Yellow		T284	
		Blue		T288	
	Ø40 mm Palm Head	Black	-	T291	
Red	T292				
Green	T293				

Notes: @ Engraved EMERGENCY STOP

30mm Push-Pull Operators

Stalock Push-Pull Operators



T129P

M/ROOM TYPE	SPECIAL FEATURE	M/ROOM COLOUR	BEZEL TYPE	PART NUMBER	TRADE PRICE
Operators c/w Mushroom					
Ø38 mm Mushroom Head	-	Red	Chrome	T129M	
		Red	Chrome	T129P	
Ø63.5 mm Palm Head	-	Red	Chrome	T176M	
		Red	Chrome	T176P	

Standard Push-Pull Operators on the following page

30mm Push-Pull Operators

Standard Push-Pull Operators

TYPE		M/ROOM COLOUR	BEZEL TYPE	PART NUMBER	TRADE PRICE
Bare Operators (add light source if illuminating required)					
Momentary Push & Pull		-	Chrome	10250T4	
Maintained Push & Pull		-	Chrome	10550T5	
Maintained Push & Pull		-	Black	E34GDB	
Maintain Push & Moment Pull		-	Chrome	10250T9	
Buttons & Lenses					
Non Illuminating Buttons	Standard Button	Green Red Red @	-	TB61 / E34C3 TB62 / E34C2 TB63 / E34C2N8	
	Jumbo Button	Red Red @	-	E34J2 E34J2N8	
Illuminating Lenses	Standard Lenses	Red	-	TC47 / E34M2	
		Green		TC48 / E34M3	
		Blue		TC49 / E34M6	
		Amber		TC50 / E34M9	
		White		TC51 / E34M5	
Light Modules (if illuminating required)					
Transformer Type 110V w/Bulb		-	-	10250T63	
Transformer Type 230V w/Bulb		-	-	10250T65	
Direct Voltage Type 24V		-	-	10250T79	

Notes: @ Engraved EMERGENCY STOP



10250T5



TB63



10250T63

30mm Selector Switches

Key Selector Switches

POSITION	OPERATING MODE			BEZEL TYPE	PART NUMBER	TRADE PRICE
	Left	Center	Right			
2 Pos	M		M*	Chrome	T15111	
	M*		M	Chrome	T15112	
	M*	-	M*	Black	T15113	
	M*		M*	Chrome	E34KFB3	
	M*	-	S	Chrome	T15712	
3 Pos	M*	M*	M*	Chrome	T15237	
	M	M*	M	Chrome	T15224	
	M	M*	M	Chrome	T15234	
	M	M*	M	Chrome	T15264	
	S	M*	S	Chrome	T15434	

Notes: M = Maintained S = Spring Return
* Key removal position

T15111

More Selector Switches on the following page

30mm Selector Switches

Selector Switch Operators



T4011



10250T5971



TKB



TLB

POSITIONS	OPERATING MODE			XFMR VOLT	PART NUMBER	TRADE PRICE
	Left	Center	Right			
Non-Illuminating Bare Operators (order knob or lever separately)						
2 Pos	M	-	M	-	T4011	
	M	-	S	-	T4081	
3 Pos	M	M	M	-	T4022 T4023 T4024 T4026	
	S	M	M	-	T4033	
	S	M	S	-	T4043	
	M	M	S	-	T4052 T4053	
Illuminating Bare Operators (order knob or lever separately)						
2 Pos	M	-	M	120V 240V	10250T5971 10250T5981	
3 Pos	M	M	M	120V 120V 240V	10250T6032 10250T6033 10250T6043	
	M	M	S	120V	10250T6203	
	S	M	M	120V	10250T6213	
	S	M	S	240V	10250T6162	
Knobs & Levers						
Non-Illuminating	Knob	Black		TKB / E34K1		
	Lever	Black		TLB / E34L1		
Illuminating	Knob	Green		10250TEG		
		Red		10250TER		
		White		10250TEW		
		Yellow		10250TEA		
Illuminating	Lever	Amber		10250TFM		
		Green		10250TFG		
		Red		10250TFR		
		White		10250TFW		
		Yellow		10250TFA		

Contact Blocks and Accessories on page 117

30mm Indicating Lights**Standard Indicating Lights**

DESCRIPTION	BEZEL TYPE	PART NUMBER	TRADE PRICE
Bare Operator (order lens separately)			
Transformer Type c/w Bulb	110V	Chrome	T181N
	110V	Black	E34TB120
	230V	Chrome	T182N
	230V	Black	E34TB240
	400V	Chrome	T183N
Resistor Type c/w Bulb	120V	Chrome	T201N
	230V	Chrome	T202N
Direct Voltage 6~240V	MCC	Chrome	T197N
	MCC	Black	E34FB
	SBC	Chrome	T200N
Lenses			
Plastic	Red		TC1N / E34H2
	Green		TC2N / E34H3
	Amber		TC19N / E34H9
	Blue		TC4N / E34H6
	Clear		TC5N / E34H0
	White		TC6N / E34H5
Glass	Red		TC7N
	Green		TC8N
	Amber		TC9N
	Blue		TC10N
	Clear		TC11N
	White		TC12N



T182N

PresTest Indicating Lights

DESCRIPTION	BEZEL TYPE	PART NUMBER	TRADE PRICE
Bare Operator (order lens separately)			
Transformer Type c/w Bulb	110V	Chrome	T221N
	110V	Black	E34TPB120
	230V	Chrome	T222N
	230V	Black	E34TPB240
Lenses			
Plastic	Red		TC21N / E34V2
	Green		TC22N / E34V3
	Amber		TC43N / E34V9
	Blue		TC24N / E34V6
	Clear		TC25N / E34V0
	White		TC26N / E34V5
	Yellow		TC23N / E34V4
	Glass		Red
Green		TC14N	
Amber		TC15N	
Blue		TC16N	
Clear		TC17N	
White		TC18N	



TC19N

TC23N

TC7N

30mm Accessories



T1



TA3N



TA38N

DESCRIPTION	PART NUMBER	TRADE PRICE
Contact Blocks		
Standard - 1NC	T51	
Standard - 1NO	T53	
Standard - 1NO/1NC	T1	
Standard - 2NO	T2	
Standard - 2NC	T3	
Standard - 2NO/2NC	T44	
Standard - 1LONC	T71	
Standard - 1LONC/1ECNO	T55	
Base Mount - 1NC	T52	
Base Mount - 1NO	T54	
Base Mount - 1NO/1NC	T6	
Logic Level - 1NO	T53E	
Protective Boots for Pushbuttons		
For Extended Pushbutton - Black	TA3N	
For Extended Pushbutton - Red	TA4N	
For Extended Pushbutton - Green	TA10N	
For Extended Pushbutton - Clear	TA25N	
For Flush Pushbutton - Blue	TA46N	
For Flush Pushbutton - Black	TA47N	
For Flush Pushbutton - Red	TA48N	
For Flush Pushbutton - Green	TA49N	
For Flush Pushbutton - Yellow	TA50	
Misc Accessories		
Hole Plug - Light Grey	10250TA7	
Hole Plug - Stainless Steel	TA7S	
Guard Sleeve for Flush Pushbutton	TA12	
Guard Sleeve for Illum Pushbutton	TA15	
Guard Sleeve for Mushroom	TA6	
Padlock Attach for P/B & Knob Sel Sw	TA38N	
Padlock Attach for Stop P/Button	TA2	
Spacer Base Mnt - 1 Block Deep	TA22	
Spacer Base mnt - 2 Block Deep	TA23	

30mm Legend Plates

TYPE	LETTERING	BACKGROUND COLOUR	PART NUMBER	TRADE PRICE
Medium Legend	(blank)	Black	TM36	
	(blank)	Red	TM37	
	AUTO OFF HAND ①	Black	TM49	
	CLOSE	Black	TM11	
	DOWN	Black	TM12	
	EMERGENCY STOP	Red	TM13	
	FAST	Black	TM14	
	FOR OFF REV ②	Black	TM50	
	FOR REV ①	Black	TM38	
	FORWARD	Black	TM15	
	HAND AUTO ①	Black	TM39	
	HAND OFF AUTO ②	Black	TM51	
	HIGH	Black	TM16	
	HIGH LOW ①	Black	TM40	
	IN	Black	TM17	
	INCH	Black	TM18	
	INCH FOR	Black	TM20	
	INCH REV	Black	TM21	
	INCH RUN ①	Black	TM41	
	INCH SAFE RUN ②	Black	TM52	
	INCH STOP RUN ②	Black	TM72	
	LOW	Black	TM22	
	LOWER	Black	TM23	
	MAN AUTO ①	Black	TM67	
	MAN OFF AUTO ②	Black	TM68	
	MOTOR RUNNING	Black	TM56	
	MOTOR STOP	Red	TM59	
	MOTOR STOPPED	Black	TM57	
	OFF	Red	TM24	
	OFF ON ①	Black	TM42	
	ON	Black	TM25	
	OPEN	Black	TM26	
	OPEN CLOSE ①	Black	TM43	
	OPEN OFF CLOSE ②	Black	TM53	
	OUT	Black	TM27	
	RAISE	Black	TM28	
	RESET	Black	TM29	
	REVERSE	Black	TM30	
	RUN	Black	TM31	
	RUN INCH ①	Black	TM44	
	RUN SAFE JOG ②	Black	TM70	
	SAFE RUN ①	Black	TM45	
	SLOW	Black	TM32	
	START	Black	TM33	
	START INCH ①	Black	TM46	
	START STOP ①	Black	TM47	
	STOP	Red	TM34	
	UP	Black	TM35	
UP DOWN ①	Black	TM48		
UP OFF DOWN ②	Black	TM54		
Large Legend	(blank)	Black	TJ36	
	(blank)	Red	TJ37	
	EMERGENCY STOP	Red	TJ13	
	STOP	Red	TJ34	
	START	Black	TJ33	
Jumbo Legend	STOP Pull to Reset ③	Red/Silver	D2179-53CP	
Joystic Legend	(NSEW arrows)	Silver	92229H009-4	
	(blank)	Silver	92229H009-0	



TM25

Notes: ① For 2 position selector switches
② For 3 position selector switches
③ For Stalock push-pull operators

30mm Enclosures



TN11

DESCRIPTION		PART NUMBER	TRADE PRICE
Die Cast Aluminium Alloy Enclosures IP65			
56 mm Deep	No Hole - 1 Block Deep	TN01	
	1 Hole - 1 Block Deep	TN1	
	2 Hole - 1 Block Deep	TN2	
	3 Hole - 1 Block Deep	TN3	
	4 Hole - 1 Block Deep	TN4	
76 mm Deep	1 Hole - 2 Block Deep	TN11	
	1 Hole - 2 Block Deep ①	E34N11	
	2 Hole - 2 Block Deep	TN12	
	2 Hole - 2 Block Deep ①	E34N12	
	3 Hole - 2 Block Deep	TN13	
	3 Hole - 2 Block Deep ①	E34N13	
	4 Hole - 2 Block Deep	TN14	
	4 Hole - 2 Block Deep ①	E34N14	
81 mm Deep	5 Hole - 2 Block Deep	TN15	
Fibreglass Enclosures IP65			
75 mm Deep	1 Hole - 1 Block Deep	TFG11	
	2 Hole - 1 Block Deep	TFG12	
	3 Hole - 1 Block Deep	TFG13	

Notes: ① E34 Die Cast Enclosures feature a corrosion resistant coating identical to the finish on the E34 operators, except light grey in colour.
- TN Die Cast Enclosures are painted light grey (RAL7032).



Joystick Controllers

OPERATION		PART NUMBER	TRADE PRICE	
2 Pos	Spring Return	No Latch	T452	\$148.73
4 Pos	Spring Return	No Latch	T450	\$198.29
		With Latch	T460	\$198.65
	Field Adjustable Spring Return to Stayput	No Latch	T451	\$189.91
		With Latch	T461	\$208.54

Notes: - Supplied with 4 position gate fitted
- 3 additional gates supplied which allows conversion to 3 or 8 positions
- Order contact blocks separately

Contact Blocks and Accessories on page 117

MINIATURE CIRCUIT BREAKERS	6kA C-Curve MT60C AS/NZS60898			10kA C-Curve MT100C AS/NZS60898		
	PART NUMBER	AMPS	TRADE PRICE	PART NUMBER	AMPS	TRADE PRICE

SINGLE POLE 17.5mm WIDE 35mm DIN MOUNT



Single Pole MCB

GW92002	2A				
GW92004	4A				
GW92005	6A			GW92605	6A
GW92006	10A			GW92606	10A
GW92007	16A			GW92607	16A
GW92008	20A			GW92608	20A
GW92009	25A			GW92609	25A
GW92010	32A			GW92610	32A
GW92011	40A			GW92611	40A
GW92012	50A			GW92612	50A
GW92013	63A			GW92613	63A

DOUBLE POLE 35mm WIDE 35mm DIN MOUNT



Double Pole MCB

GW92042	2A				
GW92044	4A				
GW92045	6A			GW92645	6A
GW92046	10A			GW92646	10A
GW92047	16A			GW92647	16A
GW92048	20A			GW92648	20A
GW92049	25A			GW92649	25A
GW92050	32A			GW92650	32A
GW92051	40A			GW92651	40A
GW92052	50A			GW92652	50A
GW92053	63A			GW92653	63A


TRIPLE POLE 52.5mm WIDE 35mm DIN MOUNT

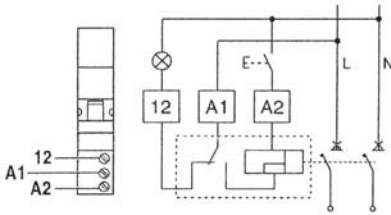
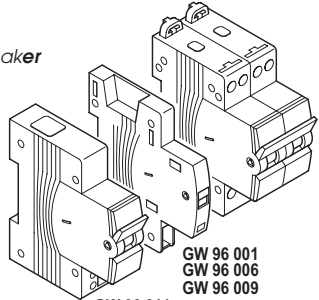


Triple Pole MCB




GW92062	2A				
GW92064	4A				
GW92065	6A			GW92665	6A
GW92066	10A			GW92666	10A
GW92067	16A			GW92667	16A
GW92068	20A			GW92668	20A
GW92069	25A			GW92669	25A
GW92070	32A			GW92670	32A
GW92071	40A			GW92671	40A
GW92072	50A			GW92672	50A
GW92073	63A			GW92673	63A

PIN TYPE	Insulated Bus Bars 63AMP						FORK TYPE			
	PT NUMBER	PRICE	PHASES	MODULES	PT NUMBER	PRICE				
<p>Pin Type Bus Bar</p>	GW96984		1	12 (MODULE =17.5mm)	GW96992		<p>Fork Type Bus Bar</p>			
	GW96985		2		GW96993					
	GW96986		3		GW96994					
	GW96988		1	56 (MODULE =17.5mm)	GW96996					
	GW96989		2		GW96997					
	GW96990		3		GW96998					
BUS BAR END CAPS		GW96963	1PH		GW96964	2PH		GW96965	3PH	

10kA D-Curve MT100D AS/NZS60898			HIGH CURRENT MODULAR CIRCUIT BREAKERS	10kA Series MTHP		
PART NUMBER	AMPS	TRADE PRICE		PART NUMBER	AMPS	TRADE PRICE
SINGLE POLE			 <p>GW93307</p>	C-CURVE 26.25mm WIDE		
GW92702	2A			GW93307	80A	
GW92704	4A			GW93308	100A	
GW92705	6A			GW93309	125A	
GW92706	10A			D-CURVE 26.25mm WIDE		
GW92707	16A			GW93356	63A	
GW92708	20A			GW93357	80A	
GW92709	25A			GW93358	100A	
GW92710	32A			Complies with EN60898		
GW92711	40A					

DOUBLE POLE			2 POLE AND 4 POLE AVAILABLE ON REQUEST		
			Accessories: Up to max 2 accessories can be fitted to each breaker		
GW92745	6A		 <p>Circuit for Shunt Trip GW96012</p>  <p>GW 96 001 GW 96 006 GW 96 009 GW 96 011 GW 96 012 GW 96 016 GW 96 017 GW 96 018</p>		
GW92746	10A				
GW92747	16A				
GW92748	20A				
GW92749	25A				
GW92750	32A				
GW92751	40A				

TRIPLE POLE			C-CURVE 79mm WIDE					
GW92762	2A		 <p>GW93339</p>					
GW92764	4A					GW93337	80A	
GW92765	6A					GW93338	100A	
GW92766	10A					GW93339	125A	
GW92767	16A					D-CURVE 79mm WIDE		
GW92768	20A					GW93386	63A	
GW92769	25A					GW93387	80A	
GW92770	32A					GW93388	100A	
GW92771	40A					35mm DIN RAIL MOUNT		




 <p>Auxiliary Contact Block 1/2 Module Width (9mm)</p>	Accessories for MT60/100 and MTHP Series				 <p>MCB / RCD Padlock</p>  <p>Phase Bar Terminal</p>
	PT NUMBER	DESCRIPTION	WIDTH	TRADE PRICE	
	GW96041	MCB / RCBO Padlock	-		
	GW96001	Auxiliary Contact Position 1CO	0.5M 9mm		
	GW96006	Auxiliary Contact Fault Only 1CO			
	GW96009	Auxiliary Contact with Fault / Position			
	GW96012	Shunt Trip Relay 110-125DC, 110-415AC			
	GW96016	Under Voltage Release 230V~ (-30%) ①	1M		
GW90896	CM Remote Control Module 230V~ ②	2M			
GW96961	Insulated Connection Terminal 25mm	-			

Note: ① Other voltages available on request
② Not suitable for MTHP

RCCBs (RCDs) Residual Current Circuit Breaker

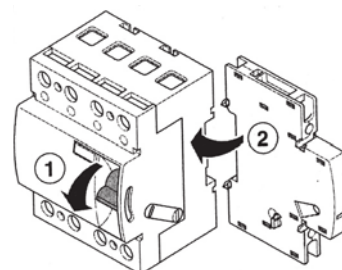
Complies with AS/NZS 61008:2004

Series: SD-RCCBs Type A (Sensitive to "AC" and "Pulsating DC" Faults)

PART NUMBER	DESCRIPTION	SENSITIVITY	WIDTH x 17.5	CURRENT RATING		TRADE PRICE	
				25A	40A		
 GW94817	GW94817	30mA	2M	25A			
	GW94827			40A			
	GW94837			63A			
	GW94877		RCCB 4P(3P+N)	4M	25A		
	GW94927				40A		
	GW94937				63A		
GW94816	RCCB 2P	10mA	2M	25A			
GW94866	RCCB 4P(3P+N)		4M				
 GW94938	GW94818	100mA	2M	40A			
	GW94828			63A			
	GW94838						
	GW94878		RCCB 4P(3P+N)	4M	25A		
	GW94928				40A		
	GW94938				63A		
 GW94938	GW94819	300mA	2M	25A			
	GW94829			40A			
	GW94839			63A			
	GW94879		RCCB 4P(3P+N)	4M	25A		
	GW94929				40A		
	GW94939				63A		

Accessories for SD-RCD (RCCB)





PART NUMBER	DESCRIPTION	WIDTH x 17.5	TRADE PRICE
GW96004	Fault Indicator Switch 1NO+1NC	0.5M	
GW96003	Auxiliary Contact Position 1NO+1NC		
GW96015	Shunt Trip Relay 230V~	1M	



Up to max 2 auxiliary devices can be fitted to each RCCB

MODULAR ISOLATORS




Complies with EN 60947-3

PART NUMBER	WIDTH x 17.5	CURRENT RATING	No OF POLES	TRADE PRICE
 GW96146	GW96146	63A	1 Pole	
	GW96156		2 Pole	
	GW96166		3 Pole	
	GW96176		4 Pole	
 GW96147	GW96147	80A	1 Pole	
	GW96157		2 Pole	
	GW96167		3 Pole	
 GW96148	GW96148	100A	1 Pole	
	GW96158		2 Pole	
	GW96168		3 Pole	
	GW96178		4 Pole	
 GW96178				

RCBOs (RCD/MCB) Residual Circuit Breaker + Overload

Complies with AS/NZS 61008:2004

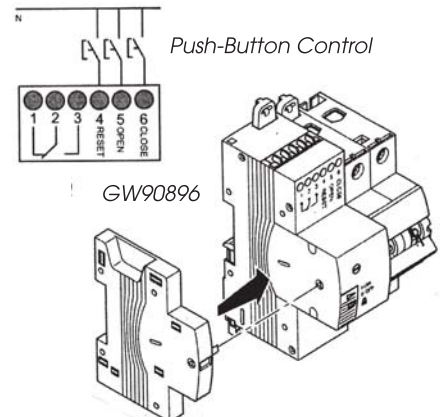
Series: MDC60-RCBOs C-Curve (Sensitive to "AC" and "Pulsating DC" Faults)

PART NUMBER	DESCRIPTION	SENSITIVITY	WIDTH x 17.5	CURRENT RATING	TRADE PRICE
 GW94310	MDC-60 RCBO 6kA 2Module 2P (1P+N)	30mA	2M	6A	
				10A	
				16A	
				20A	
				25A	
				32A	
 GW94347	MDC-60 RCBO 6kA 3Module 3P	30mA	3M	6A	
				10A	
				16A	
				20A	
				25A	
				32A	
 GW94369	MDC-60 RCBO 6kA 4Module 4P (3P+N)	30mA	4M	6A	
				10A	
				16A	
				20A	
				25A	
				32A	

Accessories for MDC60-RCBOs



PART NUMBER	DESCRIPTION	WIDTH x 17.5	TRADE PRICE
GW96041	MCB / RCBO Padlock	-	
GW96001	Auxiliary Contact Block 1NO+1NC	0.5M	
GW96006	Auxiliary Contact with Reset 1NO+1NC		
GW96009	Auxiliary Contact with Fault Indication		
GW96012	Shunt Trip Relay 230V~	1M	
GW96016	Under Voltage Release 230V~	1M	
GW90896	CM Remote Control Module 230V	2M	

The "CM-Restart" - Motor operated device enables the remote control of Circuit Breakers and RCBOs. The "CM-Restart" module enables the breaker to be opened or closed or reset after tripping.



Can be fitted with Series 90 auxiliary contacts for MTC/MT/MDC (Maximum 2 accessories)

ReStart Intelligent And Automated RCCB & RCBO Attachments

PART NUMBER	DESCRIPTION	SENSITIVITY	TRADE PRICE
 RD-PRO Series GW90966	RMPRO MDC Intelligent Module with Auto Reset	30mA	
		300mA	
 RD-PRO Series GW90966	RDPRO SD RCCB Intelligent Module with Auto Reset	30 / 100mA	
		300 / 500mA	

With ReStart PRO it is possible to monitor the insulation value after the breaker has tripped. The insulation value is measured at regular intervals. Once the insulation value returns to normal the breaker will automatically reset. Refer EIC for further information.

**16mm SQUARE PUSHBUTTONS AND LED PILOT LIGHTS -
INTERIM PRICE LIST**
**STANDARD PUSHBUTTON - Momentary Push
c/w Contact Block**

PT NUMBER	DESCRIPTION	CONTACT	PRICE
D16SQK11	Black Button	1 x C/O	
D16SQR11	Red Button	1 x C/O	
D16SQG11	Green Button	1 x C/O	
D16SQY11	Yellow Button	1 x C/O	
D16SQB11	Blue Button	1 x C/O	
D16SQW11	White Button	1 x C/O	

**MUSHROOM PUSHBUTTON - Momentary Push
c/w Contact Block**

D16MRM11	24mm Red Button	1 x C/O	
D16MRM11	24mm Black Button	1 x C/O	

**SQUARE PUSHBUTTON - Maintained Push (Note 2)
(Latching) c/w Contact Block**

D16SQTk11	Black Button	1 x C/O	
D16SQTR11	Red Button	1 x C/O	
D16SQTG11	Green Button	1 x C/O	
D16SQTY11	Yellow Button	1 x C/O	
D16SQTB11	Blue Button	1 x C/O	
D16SQTW11	White Button	1 x C/O	

**MUSHROOM PUSHBUTTON - Maintained Push
Twist-to-Release c/w Contact Block**

D16MRM11	24mm Red Button	1 x C/O	
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**ILLUMINATED PUSHBUTTON - Momentary Push
c/w Contact Block**

D16SQIR11 ^①	Red lens/button	1 x C/O	
D16SQIG11 ^①	Green lens/button	1 x C/O	
D16SQIY11 ^①	Yellow lens/button	1 x C/O	
D16SQIB11 ^①	Blue lens/button	1 x C/O	
D16SQIW11 ^①	White lens/button	1 x C/O	

**ILLUMINATED SQUARE PUSHBUTTON - Maintained
Push (Latching) c/w Contact Block (Note 2)**

D16SQITR11 ^①	Red lens/button	1 x C/O	
D16SQITG11 ^①	Green lens/button	1 x C/O	
D16SQITY11 ^①	Yellow lens/button	1 x C/O	
D16SQITB11 ^①	Blue lens/button	1 x C/O	
D16SQITW11 ^①	White lens/button	1 x C/O	

**ILLUMINATED MUSHROOM PUSHBUTTON -
Momentary Push c/w Contact Block**

PT NUMBER	DESCRIPTION	CONTACT	PRICE
D16DRM11 ^①	24mm Red Button	1 x C/O	
D16DGM11 ^①	24mm Green Button	1 x C/O	

SQUARE PILOT LED INDICATING LIGHTS

PT NUMBER	DESCRIPTION	PRICE
D16SQR ^①	Red 18mm Square	
D16SQG ^①	Green 18mm Square	
D16SQY ^①	Yellow 18mm Square	
D16SQB ^①	Blue 18mm Square	
D16SQW ^①	White 18mm Square	

SELECTOR SWITCHES - c/w Contact Block

D16SQS211	2 POS Maintained	1 x C/O	
D16SQS311	3 POS Maintained	2 x C/O	

**KEY SWITCHES - Maintained Positions
c/w Contact Block**

D16SQKS211	2 POS Key Remove Left	1 x C/O	
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ACCESSORIES

D16F6	Nut Tighten/Lamp Remove	
D16F7	Quick Connector Plug	

NOTES: ① Codes for standard voltages:-
12 = 12V AC/DC 24 = 24V AC/DC

Codes for other voltages (confirm pricing):-
11 = 110V AC/DC 23 = 230V AC only

② Maintained Pushbutton: Push-On / Push-Off

SPECIFICATION

ELECTRICAL RATING	VOLTAGE	AC-15	DC-14
	24V	2.0A	0.7A
	110V	1.0A	0.2A
ELECTRICAL LIFE	220V	0.5A	0.1A
	AC-15 = 100 x 10 ³ Times DC-13 = 50 x 10 ³ Times		
PROTECTION LEVEL	IP40 (IP65 with seal cap)		
OPERATIONAL TRAVEL	1.5 ~ 2.0mm		



18x24mm
Pictorial Section View



18x24mm
Rectangular



18x18mm
Square

18mm
Round



Currently we are stocking the 18x18mm square series. The rectangle and round styles are available on indent. We would welcome any feedback on the product.

Conditions of Sale

APPLICATION

These Conditions of Sale apply to the sale of all goods by Electrical Importing Company Limited (the Company), except to the extent that they may be altered in writing and signed by an authorised officer of the Company for one specific transaction.

PRICES

All prices are subject to alteration without notice. All standard products are sold at prices ruling at the time of despatch from the Company's premises. In particular, the Company may increase any price to take into account increases in the cost of materials, labour, freight, customs tariffs, excise or other tax, or in the rate of exchange, or by reason of any order of regulation of any Government or other competent authority. The customer is bound to accept such increases. Subject to the foregoing, quotations are valid for 90 days unless otherwise stated in writing.

DELIVERY

Any delivery date quoted by the Company is only an estimate given in good faith. The Company is not liable for any delays in delivery or for non-delivery from any cause. The customer shall be bound to accept delivery notwithstanding any delays unless the Company has agreed in writing, signed by an authorised officer, that time for delivery shall be of the essence in respect of a specific transaction.

FREIGHT

Goods will be packed and despatched from the Company's Auckland warehouse for delivery throughout New Zealand by any of the usual surface transport methods.

The cost of freight will be passed on to the purchaser for orders under the value of \$100 nett (exclusive of GST), delivered within the greater Auckland area, and for orders under the value of \$200 delivered outside the greater Auckland area, unless otherwise agreed upon.

The Company will try to fulfil any special freight request specified by the customer, but the cost of such a request will be paid by the customer in full. Payment of any freight forward consignment is the responsibility of the customer.

INSURANCE

During transit all goods will be insured under the Company's Marine Transit Policy, subject to the terms, conditions, limitations and exceptions at the time of despatch. Any purchase where the customer wishes to arrange insurance must be advised to the Company at the time of ordering. Under the Carriage of Goods Act 1979 the carrier shall accept responsibility for loss or damage up to the statutory limit per unit as defined in the Act. Any claim for loss or damage must be notified to the Company immediately and it is the customer's responsibility to ensure that carriers are not given clean receipts when loss or damage is suspected.

All claims notified to the Company will be passed on to the insurance company carrying the risk. The customer will be obliged to make full payment for the goods despatched notwithstanding loss or damage during transit.

TERMS OF PAYMENT AND PASSING OF PROPERTY

Payment for all goods shall be due and payable from the date the goods are despatched by the Company.

The customer will pay interest on any sum which remains unpaid after the 20th of the month following the despatch, at the rate of 1.5% per month unless waived by the Company. The customer will also be charged a collection fee where applicable. Property of the goods shall pass from the Company to the customer only when the Company has received payment in full. However, the Company shall be entitled to recover the price from the buyer at any time after due date and may repossess goods in respect of which payment is overdue and may enter the customer's premises for such purposes.

CANCELLATIONS AND RETURNS

The Company is not obliged to accept any cancellation or return of goods. The Company may at its discretion do so. In the case of returned goods, the Company will not consider them for acceptance unless they are received by the Company at its premises within 7 days from the date of despatch, in original condition, properly packaged and freight paid. The Company will be entitled to make a 10% charge in respect of all cancelled orders and returned goods on acceptance by the Company. In no circumstances will the Company accept a cancellation or return of goods specially imported to the customer's order, but the Company may at its discretion assist the customer in disposing of any such unwanted goods.

GST AND OTHER GOVERNMENT DUTIES

Unless otherwise specified, prices quoted do not include GST (Goods and Services Tax) or other Government duties, all of which are the customer's sole responsibility.

TERMS OF CONTRACT

These terms shall prevail and take precedence over the terms of the customer's purchase order in the event of any conflict. Subject to these conditions and the following warranty, all other conditions, warranties, descriptions, representation whatsoever whether express or implied by law, custom or otherwise, are hereby expressly excluded. The Company is not bound by any representations or statements not specifically included in the written contract and nor will any such statement or representation constitute a contract with the Company collateral to or including the main contract.

WARRANTY

All goods manufactured by the Company are guaranteed against faulty workmanship, materials or design for the period of 12 months from the date of despatch by the Company, except however any component not manufactured by the Company is subject to warranty from the supplier. In any such case, the Company will ensure that the customer receives the benefit of the supplier's warranty. All goods under warranty must be returned to the Company's factory (freight paid) and after rectification the same shall be despatched to the customer freight on.

This guarantee is limited to the replacement of faulty components only. The Company shall not be liable for any incidental or consequential loss, expense or damage suffered by the customer arising directly or indirectly out of faulty workmanship, materials or design. No warranty is given that the goods are fit for any particular purpose.

The Company is not liable under this warranty unless the goods have been paid for in full.