

MEASUREMENT



TRANSMISSION



EVALUATION



# SHORT FORM CATALOG 2026/2027

Further information



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## EVALUATION

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Incremental encoders  
Optical



			Ø Dimensions in mm [inch]	Resolution max. in ppr	Push-pull	RS422	SinCos	Open Collector	Ø Hollow shaft max. [mm]	Type of connection	Approvals
	<b>2400</b> (shaft) <b>2420</b> (hollow shaft)	miniature	24 [0.94]	1.024	•	–	–	–	6	cable	cUL <sub>US</sub>
	<b>Sendix Base KIS40</b> (shaft) <b>Sendix Base KIH40</b> (hollow shaft)	compact	40 [1.57]	2.560	•	•	–	•	8	cable	cUL <sub>US</sub>
	<b>3610</b> (shaft) <b>3620</b> (hollow shaft)	compact	36 [1.43]	2.500	•	•	–	–	8	cable M12	cUL <sub>US</sub>
	<b>Sendix 5000</b> (shaft) <b>Sendix 5020</b> (hollow shaft)		58 [2.28]	5.000	•	•	–	•	15.87	cable M12, M23 MIL Sub-D	cUL <sub>US</sub> Ex <sub>2/22</sub>
	<b>Sendix K58I</b> (shaft / hollow shaft)		58 [2.28]	5.000	•	•	–	–	25.4	cable M12, M23 MIL	cUL <sub>US</sub> Ex <sub>2/22</sub>
	<b>Sendix K58I Performance</b> (shaft / hollow shaft)	programmable, high resolution, high temperature	58 [2.28]	36.000	•	•	–	–	25.4	cable M12, M23 MIL	cUL <sub>US</sub> Ex <sub>2/22</sub>
	<b>Sendix Base KIS50</b> (shaft) <b>Sendix Base KIH50</b> (hollow shaft)		58 [2.28]	5.000	•	•	–	•	15	cable M12 M23	CE
	<b>5804</b> (shaft) <b>5824</b> (hollow shaft)	sine wave output + reference signal	58 [2.28]	5.000	–	–	•	–	12	cable M23	cUL <sub>US</sub>
	<b>Sendix 5814</b> (shaft) <b>Sendix 5834</b> (hollow shaft)	sine wave output, highly interpolable	58 [2.28]	1.024 and 2.048	–	–	•	–	15	cable M12	cUL <sub>US</sub>
	<b>Sendix 5834</b> (tapered shaft)	Motor-Line	58 [2.28]	1.024 and 2.048	–	–	•	–	10 tapered shaft	cable, PCB connector	cUL <sub>US</sub>
	<b>Sendix 5006</b> (shaft) <b>Sendix 5026</b> (hollow shaft)	stainless-steel	58 [2.28]	5.000	•	•	–	–	15	cable M12	cUL <sub>US</sub>

Incremental encoders  
Optical



			Ø Dimensions in mm [inch]	Resolution max. in ppr	Push-pull	RS422	SinCos	Open Collector	Ø Hollow shaft max. [mm]	Type of connection	Approvals
	<b>Sendix 5814FS2</b> (shaft) <b>Sendix 5834FS2</b> (hollow shaft)	sine wave output, SIL2 / PLd	58 [2.28]	1.024 and 2.048	-	-	•	-	14	cable M12 M23	
	<b>Sendix 5814FS3</b> (shaft) <b>Sendix 5834FS3</b> (hollow shaft)	sine wave output, SIL3 / PLe	58 [2.28]	1.024 and 2.048	-	-	•	-	14	cable M12 M23	
	<b>7000</b> (shaft) <b>7020</b> (hollow shaft)	ATEX / IECEx zone 1/21	70 [2.76]	5.000	•	•	-	-	14	cable	
	<b>7100</b> (shaft) <b>7120</b> (hollow shaft)	ATEX / IECEx mining M2	70 [2.76]	5.000	•	•	-	-	14	cable	
	<b>Sendix K80I</b> (large hollow shaft)		80 [3.15]	5.000	•	•	•	-	42	cable M12 M23 MIL	
	<b>Sendix K80I</b> (large hollow shaft)	programmable, high resolution	80 [3.15]	36.000	•	•	-	-	42	cable M12 M23 MIL	
	<b>Sendix H120</b> (large hollow shaft)	Heavy Duty	100 [3.94]	5.000	•	•	-	-	28	cable <sup>1)</sup> M12 M23	-

Incremental encoders  
Magnetic







			Ø Dimensions in mm [inch]	Resolution max. in ppr	Push-pull	RS422	SinCos	Open Collector	Ø Hollow shaft max. [mm]	Type of connection	Approvals
	<b>2430</b> (shaft) <b>2440</b> (hollow shaft)	miniature	24 [0.94]	256	-	•	-	-	6	cable	-

1) With terminal box

Absolute encoders  
Magnetic  
SSI/BiSS














			Ø Dimensions in mm [inch]	Resolution max. in ppr	SSI	BiSS INTERFACE	Additional incremental track	Type of connection	Approvals
	singleturn <b>2450</b> (shaft) <b>2470</b> (hollow shaft)	miniature	24 [0.94]	12 ST	•	-	-	cable	-
	singleturn <b>Sendix M3653A</b> (shaft) <b>Sendix M3673A</b> (hollow shaft)	compact	36 [1.43]	14 ST	•	-	-	cable M12	cUL <sub>US</sub>
	electronic multiturn <b>Sendix M3663</b> (shaft) <b>Sendix M3683</b> (hollow shaft)	compact	36 [1.43]	14 ST + 24 MT					
	singleturn <b>Sendix M3653AR</b> (shaft)	compact, robust	36 [1.43]	14 ST	•	-	-	cable M12	cUL <sub>US</sub>
	electronic multiturn <b>Sendix M3663R</b> (shaft)	compact, robust	36 [1.43]	14 ST + 24 MT					
	singleturn <b>Sendix M5853A</b> (shaft)		58 [2.28]	14 ST	•	-	-	cable M12	cUL <sub>US</sub>
	electronic multiturn <b>Sendix M5863</b> (shaft)		58 [2.28]	14 ST + 24 MT					

Absolute encoders  
Optical  
SSI/BiSS







			Ø Dimensions in mm [inch]	Resolution max. in ppr	SSI	BiSS INTERFACE	Additional incremental track	Type of connection	Approvals
	singleturn <b>Sendix F3653</b> (shaft) <b>Sendix F3673</b> (hollow shaft)	compact	36 [1.43]	17 ST	•	•	Sin Cos RS422	cable M12	
	electronic multiturn <b>Sendix F3663</b> (shaft) <b>Sendix F3683</b> (hollow shaft)	compact	36 [1.43]	17 ST + 24 MT					
	singleturn <b>Sendix 5853</b> (shaft) <b>Sendix 5873</b> (hollow shaft)		58 [2.28]	21 ST	•	•	Sin Cos RS422	cable M12 M23	
	mechanical multiturn <b>Sendix 5863</b> (shaft) <b>Sendix 5883</b> (hollow shaft)		58 [2.28]	19 ST + 12 MT					
	singleturn <b>Sendix 5853FS2</b> (shaft) <b>Sendix 5873FS2</b> (hollow shaft)	SIL2 / PLd	58 [2.28]	17 ST	•	•	Sin Cos	cable M23	 SIL2 PLd
	mechanical multiturn <b>Sendix 5863FS2</b> (shaft) <b>Sendix 5883FS2</b> (hollow shaft)	SIL2 / PLd	58 [2.28]	17 ST + 12 MT					
	singleturn <b>Sendix 5853FS3</b> (shaft) <b>Sendix 5873FS3</b> (hollow shaft)	SIL3 / PLe	58 [2.28]	17 ST	•	•	Sin Cos	cable M23	 SIL3 PLe
	mechanical multiturn <b>Sendix 5863FS3</b> (shaft) <b>Sendix 5883FS3</b> (hollow shaft)	SIL3 / PLe	58 [2.28]	17 ST + 12 MT					
	singleturn <b>Sendix 5873</b> (tapered shaft)	Motor-Line	58 [2.28]	21 ST	•	•	SinCos RS422	cable PCB connector	
	electronic multiturn <b>Sendix F5883M</b> (hollow shaft)	Motor-Line	58 [2.28]	17 ST + 24 MT	•	–	SinCos RS422	cable	
	electronic multiturn <b>Sendix F5863</b> (shaft) <b>Sendix F5883</b> (hollow shaft)		58 [2.28]	17 ST + 24 MT	•	•	SinCos RS422	cable M12 M23	







Absolute encoders  
Optical  
SSI/BiSS

				Ø Dimensions in mm [inch]	Resolution max. in ppr			Type of connection	Approvals
	singleturn <b>Sendix 7053</b> (shaft) <b>Sendix 7073</b> (hollow shaft)	ATEX/IECEEx zone 1/21		70 [2.76]	17 ST	•	•	cable	 
	mechanical multiturn <b>Sendix 7063</b> (shaft) <b>Sendix 7083</b> (hollow shaft)	ATEX/IECEEx zone 1/21		70 [2.76]	17 ST + 12 MT				
	singleturn <b>Sendix 7153</b> (shaft) <b>Sendix 7173</b> (hollow shaft)	ATEX/IECEEx mining M2		70 [2.76]	17 ST	•	•	cable	 
	mechanical multiturn <b>Sendix 7163</b> (shaft) <b>Sendix 7183</b> (hollow shaft)	ATEX/IECEEx mining M2		70 [2.76]	17 ST + 12 MT				

Absolute encoders  
Optical  
Parallel interface

				Ø Dimensions in mm [inch]	Resolution max. in ppr	Type of connection	Approvals
	singleturn <b>5852</b> (shaft) <b>5872</b> (hollow shaft)	highspeed, with parallel interface		58 [2.28]	14 ST	cable M23	

Absolute encoders  
Large hollow shaft










				Ø Dimensions in mm [inch]	Resolution max. [bit ST+MT]			Analog output 	Additional incremental track	Type of connection
	multiturn <b>AX</b>	large hollow shaft		–	17 + 24	• <sup>1)</sup>	• <sup>1)</sup>	• <sup>1)</sup>	• <sup>1)</sup>	• <sup>1)</sup>

1) Depending on the encoder used.

Absolute encoders  
Magnetic

Analog  
output






			∅ Dimensions in mm [inch]	Resolution max. [bit]	Analog interfaces	Type of connection	Approvals
	singleturn <b>Sendix M3651A</b> (shaft) <b>Sendix M3671A</b> (hollow shaft)	compact	36 [1.43]	12 ST	4 ... 20 mA 0 ... 10 V 0 ... 5 V	cable M12	 
	multiturn <b>Sendix M3661</b> (shaft) <b>Sendix M3681</b> (hollow shaft)	compact	36 [1.43]	12 ST + 16 MT			
	singleturn <b>Sendix M3651AR</b> (shaft)	compact, robust, IP69k	36 [1.43]	12 ST	4 ... 20 mA 0 ... 10 V 0 ... 5 V	cable M12	 
	multiturn <b>Sendix M3661R</b> (shaft)	compact, robust, IP69k	36 [1.43]	12 ST + 16 MT			
	singleturn <b>Sendix M5851A</b> (shaft)		58 [2.28]	12 ST	4 ... 20 mA 0 ... 10 V 0 ... 5 V	cable M12	 
	multiturn <b>Sendix M5861</b> (shaft)		58 [2.28]	12 ST + 16 MT			

Absolute encoders  
Magnetic

IO-Link



			∅ Dimensions in mm [inch]	Resolution max. [bit]	Type of connection	Approvals
	singleturn <b>Sendix M3658A</b> (shaft) <b>Sendix M3678A</b> (hollow shaft)	compact	36 [1.43]	14 ST	M12	
	electronic multiturn <b>Sendix M3668</b> (shaft) <b>Sendix M3688</b> (hollow shaft)	compact	36 [1.43]	14 ST + 18 MT		
	electronic multiturn <b>Sendix M3668R</b> (shaft)	compact, robust	36 [1.43]	14 ST + 18 MT	M12	
	singleturn <b>Sendix M5858A</b> (shaft)		58 [2.28]	14 ST	M12	
	electronic multiturn <b>Sendix M5868</b> (shaft)		58 [2.28]	14 ST + 18 MT		










Absolute encoders  
Optical  
Industrial Ethernet



		Ø Dimensions in mm [inch]	Resolution max. [bit]	Cyber Security	EtherCAT <sup>®</sup> Conformance tested	Safety over EtherCAT <sup>®</sup>	PROFINET <sup>®</sup>	modbus	EtherNet/IP <sup>™</sup>	Type of connection	Approvals
	singleturn <b>Sendix 5858</b> (shaft) <b>Sendix 5878</b> (hollow shaft)	58 [2.28]	16 ST	-	•	-	•	-	-	M12	cUL <sup>®</sup> US
	mechanical multiturn <b>Sendix 5868</b> (shaft) <b>Sendix 5888</b> (hollow shaft)	58 [2.28]	16 ST + 12 MT	-	-	-	-	-	-	M12	cUL <sup>®</sup> US
	electronic singleturn <b>Sendix F5858</b> (shaft) <b>Sendix F5878</b> (hollow shaft)	58 [2.28]	19 ST	-	-	-	•	-	•	M12	cUL <sup>®</sup> US
	electronic multiturn <b>Sendix F5868</b> (shaft) <b>Sendix F5888</b> (hollow shaft)	58 [2.28]	19 ST + 24 MT	-	-	-	-	-	-	M12	cUL <sup>®</sup> US
	electronic singleturn <b>Sendix F5858</b> (shaft) <b>Sendix F5878</b> (hollow shaft)	58 [2.28]	19 ST		•	-	-	-	-	M12	cUL <sup>®</sup> US
	electronic multiturn <b>Sendix F5868</b> (shaft) <b>Sendix F5888</b> (hollow shaft)	58 [2.28]	19 ST + 24 MT		•	-	-	-	-	M12	cUL <sup>®</sup> US
	singleturn <b>Sendix S5858FS2</b> (shaft) <b>Sendix S5878FS2</b> (hollow shaft)	58 [2.28]	15 (safe) 24 (non safe) ST		•	•	-	-	-	M12	cUL <sup>®</sup> US SIL2 PLd
	electronic multiturn <b>Sendix S5868FS2</b> (shaft) <b>Sendix S5888FS2</b> (hollow shaft)	58 [2.28]	15 (safe) 24 (non safe) ST + 12 MT		•	•	-	-	-	M12	cUL <sup>®</sup> US SIL3 PLe
	singleturn <b>Sendix S5858FS3</b> (shaft) <b>Sendix S5878FS3</b> (hollow shaft)	58 [2.28]	15 (safe) 24 (non safe) ST		•	•	-	-	-	M12	cUL <sup>®</sup> US SIL3 PLe
	electronic multiturn <b>Sendix S5868FS3</b> (shaft) <b>Sendix S5888FS3</b> (hollow shaft)	58 [2.28]	15 (safe) 24 (non safe) ST + 12 MT		•	•	-	-	-	M12	cUL <sup>®</sup> US SIL3 PLe
	singleturn <b>Sendix S5858FS3</b> (shaft) <b>Sendix S5878FS3</b> (hollow shaft)	58 [2.28]	15 (safe) 24 (non safe) ST	-	-	-	•	•	-	M12	cUL <sup>®</sup> US SIL3 PLe
	electronic multiturn <b>Sendix S5868FS3</b> (shaft) <b>Sendix S5888FS3</b> (hollow shaft)	58 [2.28]	15 (safe) 24 (non safe) ST + 12 MT	-	-	-	•	•	-	M12	cUL <sup>®</sup> US SIL3 PLe

Absolute encoders  
Magnetic  
Fieldbus



			Ø Dimensions in mm [inch]	Resolution max. [bit]	CANopen	SAE J1939	Type of connection	Approvals
	singleturn <b>Sendix M3658A</b> (shaft) <b>Sendix M3678A</b> (hollow shaft)	compact	36 [1.43]	14 ST	•	•	cable M12	 
	electronic multiturn <b>Sendix M3668</b> (shaft) <b>Sendix M3688</b> (hollow shaft)	compact	36 [1.43]	14 ST + 29 MT				
	singleturn <b>Sendix M3658AR</b> (shaft)	compact, robust	36 [1.43]	14 ST	•	•	cable M12	 
	electronic multiturn <b>Sendix M3668R</b> (shaft)	compact, robust	36 [1.43]	14 ST + 29 MT				
	singleturn <b>Sendix M5858A</b> (shaft)		58 [2.28]	14 ST	•	•	cable M12	 
	electronic multiturn <b>Sendix M5868</b> (shaft)		58 [2.28]	14 ST + 29 MT				

Absolute encoders  
Optical  
Fieldbus



			Ø Dimensions in mm [inch]	Resolution max. [bit]	CANopen	CANopen LIFT	PROFINET IO-Link	Modbus	Type of connection	Approvals
	singleturn <b>Sendix F3658</b> (shaft) <b>Sendix F3678</b> (hollow shaft)	compact	36 [1.43]	16 ST	•	-	-	-	cable	cULus
	electronic multiturn <b>Sendix F3668</b> (shaft) <b>Sendix F3688</b> (hollow shaft)	compact	36 [1.43]	16 ST + 16 MT						
	singleturn <b>Sendix 5858</b> (shaft) <b>Sendix 5878</b> (hollow shaft)		58 [2.28]	16 ST	•	• (MT)	•	-	cable M23 M12 Sub-D (MT)	cULus
	mechanical multiturn <b>Sendix 5868</b> (shaft) <b>Sendix 5888</b> (hollow shaft)		58 [2.28]	16 ST + 12 MT						
	electronic multiturn <b>Sendix F5868</b> (shaft) <b>Sendix F5888</b> (hollow shaft)		58 [2.28]	16 ST + 16 MT	•	-	-	•	cable M12	cULus
	electronic multiturn <b>Sendix F5888M</b> (hollow shaft)	Motor-Line	58 [2.28]	19 ST + 24 MT	•	-	-	-	cable	cULus
	singleturn <b>Sendix 7058</b> (shaft) <b>Sendix 7078</b> (hollow shaft)	ATEX/IECEEx zone 1/21	70 [2.76]	16 ST	•	-	•	-	cable	Ex IECEEx
	mechanical multiturn <b>Sendix 7068</b> (shaft) <b>Sendix 7088</b> (hollow shaft)	ATEX/IECEEx zone 1/21	70 [2.76]	16 ST + 12 MT						
	singleturn <b>Sendix 7158</b> (shaft) <b>Sendix 7178</b> (hollow shaft)	ATEX/IECEEx mining M2	70 [2.76]	16 ST	•	-	•	-	cable	Ex IECEEx
	mechanical multiturn <b>Sendix 7168</b> (shaft) <b>Sendix 7188</b> (hollow shaft)	ATEX/IECEEx mining M2	70 [2.76]	16 ST + 12 MT						

Motor Feedback Systems  
Optical/magnetic  
Motor-Line



Ø Dimensions  
in mm [inch]

Resolution max. [bit]

RS485  
S(Cos 1)



Type of connection



singleturn  
**Sendix S3674**  
(hub shaft/tapered shaft)

IP40  
-40 ... +120°C

36

24 ST

•

•

PCB connector,  
radial

multiturn  
**Sendix S3684**  
(hub shaft/tapered shaft)

IP40  
-40 ... +120°C



36

24 ST  
+ 12 MT

1) Hiperface® kompatibel.  
Hiperface® is a registered trademark of Sick Stegmann GmbH.



Bearingless encoders  
Magnetic  
Incremental



			Distance sensor head/magnetic ring max. in mm	Pole distance magnetic ring in mm	Hollow shaft max. in mm	Resolution max. in ppr	Accuracy max.	Push-Pull HTL	RS422 TTL	Type of connection
	<b>RIM200</b> (hollow shaft)		1	2	180	999.999	±0.3°	•	•	cable
	<b>RIM500</b> (hollow shaft)		2	5	180	999.999	±0.3°	•	•	cable
	<b>RIM2000</b> (hollow shaft)	programmable in the field	1	2	180	999.999	±0.3°	•	•	cable
	<b>RIM5000</b> (hollow shaft)	programmable in the field	2	5	180	999.999	±0.3°	•	•	cable

Integrated encoders




			Resolution max. [ppr]	SSI	BiSS INTERFACE	Push-Pull HTL	RS422 TTL
	<b>Inductive sensors</b>	Inductive detection via coils on printed circuit board. For robust signal detection in environments with dirt, oil, or tight installation conditions.	up to 24 bit	•	•	•	•
	<b>Magnetic sensors End-of-Shaft RAM35R</b>	Detection of magnetic fields from a diametrical magnet at the end of the drive shaft. Cost-effective solution for compact series motors with free shaft end.	up to 24 bit	•	•	•	•
	<b>Magnetic sensors Magnetic ring</b> as kit with sensor head inside a housing: see RIMxxxx	Detection of magnetic fields from a magnetic ring applied to the shaft. Wide range for different shaft diameters.	999.999 programmable	–	–	•	•

## Radar sensors




	Opening angle	Measuring range max. [m]	Measuring rate [Hz]	Linearity max. [mm]	Measuring rate [Hz]	Interfaces				Distance measurement, Positioning	Object detection, Collision avoidance	Level measurement	Distance change measurement
						4 ... 20 mA analog	Switching outputs	RS485	PROFINET				

### Radar sensors in compact design

new		Model	Opening angle	Measuring range max. [m]	Measuring rate [Hz]	Linearity max. [mm]	Measuring rate [Hz]	Interfaces				Distance measurement, Positioning	Object detection, Collision avoidance	Level measurement	Distance change measurement
								4 ... 20 mA analog	Switching outputs	RS485	PROFINET				
		<b>RAD51C</b>	±8° (16°)	0.15 ... 20 0.3 ... 30	100	±10	±2	•	3	•	–	•	•	•	–
		<b>RAD51D</b>	±3° (6°)	0.15 ... 20 0.3 ... 40	100	±5	±1	•	3	•	–	•	•	•	–

### Radar sensors for demanding measurement tasks with maximum precision

new		Model	Opening angle	Measuring range max. [m]	Measuring rate [Hz]	Linearity max. [mm]	Measuring rate [Hz]	Interfaces				Distance measurement, Positioning	Object detection, Collision avoidance	Level measurement	Distance change measurement
								4 ... 20 mA analog	Switching outputs	RS485	PROFINET				
		<b>RAD78D</b>	±1.5° (3°)	0.1 ... 6	500	±0.3	±0.03	•	3	•	•	•	•	–	–
						±0.7	±0.07								
						±1	±0.1								
		<b>RAD78L</b>	±1.5° (3°)	0.1 ... 6	500	±0.3	±0.03	•	3	•	•	–	–	•	–
						±0.7	±0.07								
						±1	±0.1								
		<b>RAD78P</b>	±1.5° (3°)	0.1 ... 6 0.3 ... 40	500	±0.1% from the measurement section	±0.1% from the measurement section	–	–	–	•	–	–	–	•








## Draw-wire encoders



		Measuring length max. in m	Dimensions mechanics in mm [inch] Depth depending on sensor type	Linearity max. [±% of measuring range]	Traverse speed max. in m/s	Wire diameter in mm [inch]	Combinable with Sendix encoder	Interchangeable installation	Absolute digital	Absolute analog	Incremental	Redundant sensors	Integrated inclinometer	Type of connection	
<b>Performance Line</b>															
	<b>A50</b>	1.25	50 x 50 [1.97 x 1.97]	±0.02	10	0.5	•	•	•	•	•	–	–	cable M12	
	<b>B80</b>	3	80 x 80 [3.15 x 3.15]	±0.02	10	0.5	•	•	•	•	•	–	–	cable M12 M23	
	<b>C120</b>	6	120 x 120 [4.72 x 4.72]	±0.02	10	0.5	•	•	•	•	•	–	–	cable M12 M23	
	<b>D135</b>	42.5	135 x 135 [5.32 x 5.32]	±0.02	10	0.5	•	•	•	•	•	–	–	cable M12 M23	
<b>Robust Line</b>															
	<b>C60</b>	4	60 x 60 [2.36 x 2.36]	±0.1	3	1	–	–	•	•	•	•	–	cable M12	
	<b>D120</b>	10	120 x 120 [4.72 x 4.72]	±0.1	3	1.5	–	–	•	•	•	•	•	M12	
<b>Compact Line</b>															
	<b>A30</b>	0.6	30 x 30 [1.18 x 1.18]	±0.35	0.8	0.36	–	–	–	•	–	–	–	cable	
	<b>A40/A41</b>	2	41 x 41 [1.61 x 1.61]	±0.25	1	0.45	•	–	•	•	•	–	–	cable M12 M23	
	<b>B75</b>	3	75 x 75 [2.95 x 2.95]	±0.2	0.8	0.6	•	•	•	•	•	•	–	cable M12 M23	
	<b>C105</b>	6	105 x 85 [4.13 x 3.35]	±0.2	3	0.6	•	•	•	•	•	•	–	cable M12	
<b>Base Line</b>															
	<b>C100</b>	5	100 x 100 [3.94 x 3.94]	±0.5	1	0.9	–	–	•	•	–	•	•	M12	
	<b>D125</b>	10	125 x 125 [4.92 x 4.92]	±0.5	1	0.9	–	–	•	•	–	•	•	M12	





## Measuring wheel systems



			Spring force max. [N]	Spring travel max. [mm]	Recommended incremental encoders	Recommended absolute encoders	Circumference measuring wheel					Surfaces measuring wheel						
							100 mm	200 mm	6"	300 mm	12"	500 mm	Knurled	Smooth	Knubbed	Corrugated	O-ring	Double O-ring
<b>Compact Line</b>																		
	<b>MWE11</b>	smallest size	10	10	2400	-	•	-	-	-	-	-	•	•	-	-	-	-
	<b>MWE21</b>	adjustable preload	25	50	KIS40 3610	M366x F366x	-	•	•	-	-	-	•	•	-	-	•	-
	<b>MWE21.7</b>	with flange adapter, adjustable preload	25	50	KIS50	-	-	•	-	•	•	-	•	•	-	-	•	-
	<b>MWE31</b>	internal springs	15	10	KIS40 3610	M366x F366x	-	•	•	-	-	-	•	•	-	-	•	-
<b>Performance Line</b>																		
	<b>MWE41</b>	internal springs	25	10	KIS50 5000 5805	M586x F586x 586x	-	•	-	•	•	•	•	•	•	•	•	•
	<b>MWE61</b>	highest contact force	40	80	KIS50 5000 5805	M586x F586x 586x	-	•	-	•	•	•	•	•	•	•	•	•
	<b>MWE62</b>	double measuring wheel system	40	80	KIS50	-	-	•	-	•	•	•	•	•	•	•	•	•


Measuring wheel systems  
System components  
Spring arms, spring  
bracket



			Spring force max. [N]	Spring travel max. [mm]	For encoder Clamping flange / shaft	Circumference Measuring wheel
<b>Compact Line</b>						
	<b>MWE20</b> Spring arm	adjustable contact force, flexible mounting options	25	50	ø 36 or 40 mm / ø 6 mm	200 mm 6"
	<b>MWE30</b> Spring bracket	Compact design, internal springs	15	10	ø 36 or 40 mm / ø 6 mm	200 mm
<b>Performance Line</b>						
	<b>MWE40</b> Spring bracket	Compact design, internal springs	25	10	ø 58 mm / ø 10 mm	300 mm 12"
	<b>MWE60</b> Spring arm	highest contact force, adjustable	40	80	ø 58 mm / ø 10 mm	200, 300, 500 mm 12"








Measuring wheel systems  
System components  
Flange adapter for  
spring arm MWE20




			Spring force max. [N] (for use with MWE20)	Spring travel max. [mm] (for use with MWE20)	For encoder Clamping flange / shaft	Circumference Measuring wheel (recommended)
		for the use of encoders of size 50 mm or 58 mm with the MWE20 spring arm	25	50	ø 50 mm or 58 mm / ø 10 mm	200 mm 300 mm 12"

Measuring wheel systems  
System components  
Measuring wheels

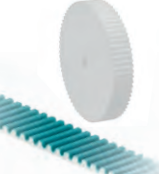


	Circumference / $\phi$ / width [mm]	Suitable for																
		200 <sup>±0.2</sup> / $\phi$ 63.7 / 5.5	200 <sup>±0.2</sup> / $\phi$ 63.7 / 12	300 <sup>±0.2</sup> / $\phi$ 95.5 / 12	500 <sup>±1.0</sup> / $\phi$ 159.2 / 25	6" (152.4 <sup>±0.2</sup> ) / $\phi$ 48.38 / 5.5	6" (152.4 <sup>±0.2</sup> ) / $\phi$ 48.38 / 12	12" (304.8 <sup>±0.2</sup> ) / $\phi$ 97.02 / 12	Cardboard	Wood	Textile	Paper	Plastic (PVC, PE, ...)	Painted surfaces	Carpet, cables, nonwoven	Rubber, soft plastic	Wire, greased metals, steel profiles, leather	Greased metals, glass, floor coverings
 Diamond knurl (aluminum)		•	•	•	•	•	•	•	•	•	•	-	-	-	-	•	-	-
 Plastic (polyurethane) smooth		•	•	•	•	•	-	•	•	•	•	•	•	-	-	-	•	-
 Single O-ring (NBR70)		•	•	•	-	•	-	•	•	•	•	•	•	-	-	-	-	-
 Double O-ring (NBR70)		-	•	•	-	-	-	•	•	•	•	•	•	-	-	-	-	-
 Tufted rubber (polyurethane)		-	•	•	•	-	-	•	•	•	•	•	-	•	-	-	-	-
 Plastic (polyurethane) corrugated		-	•	•	•	-	-	•	•	•	•	•	•	-	-	-	-	•
 <span style="color: orange; font-weight: bold; font-size: small;">new</span> Plastic smooth (FDA-compliant) for the food industry		•	•	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-



**Pinion with rack**

- 100 % slip-free
- For encoder shaft 6 mm [0.24"] and 10 mm [0.39"]
- Rack 1 m [3.94"], stackable
- Pitch circumference = 50 mm [1.97"]


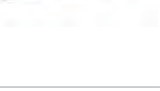






**Belt pulley with Toothed belt**

- 100 % slip-free
- For encoder size  $\phi$  58 mm [2.28"]
- Toothed belt up to 100 m [32.8']
- Pitch circumference = 360 mm [14.14"]



## Magnetic length measuring systems Incremental



		Distance sensor head/ magnetic band max. in mm	Pole distance magnetic band in mm	Resolution max. in $\mu\text{m}$	Speed max. in m/s	Accuracy in $\mu\text{m}$ for measuring length 1 m	Measuring length max. in m	Push-Pull HTL	RS422 TTL	Type of connection
	<b>Limes LI20/B1</b> sensor head/magnetic band	1	2	10	25	35	70	•	•	cable
	<b>Limes LI50/B2</b> sensor head/magnetic band	2	5	5	16	35	70	•	•	cable
	<b>Limes LIM200/B1</b> sensor head/magnetic band	1	2	0.1	30	35	70	•	•	cable
	<b>Limes LIM500/B2</b> sensor head/magnetic band	2	5	0.1	30	35	70	•	•	cable
	<b>Limes LIM2000/B1</b> sensor head/magnetic band	programmable in the field	1	2	0.1	30	70	•	•	cable
	<b>Limes LIM5000/B2</b> sensor head/magnetic band	programmable in the field	2	5	0.1	30	70	•	•	cable



## Magnetic Length measuring systems Absolute



		Distance sensor head/ magnetic band max. in mm	Pole distance magnetic band in mm	Resolution max. in $\mu\text{m}$	Speed max. in m/s	Accuracy in $\mu\text{m}$ for measuring length 1 m	Measuring length max. in m	Incremental S in Cos	Absolut SSI/BISS	Absolut fieldbus	Type of connection
	<b>Limes LA10/BA1</b> sensor head/magnetic band	2	1	1	10	30	8	•	•	•	M12
	<b>Limes LA50/BA5</b> sensor head/magnetic band	1.5	5	10	4	170	20	—	•	•	cable



Shaft copying systems  
Sensors



			Measuring length max. in m	Traverse speed max. in m/s	SIL3	EN 81	ASME	Absolute	Resolution max. in mm	CANopen Lift (DS417)	CAN	SSI	RS485	Approvals
<b>Ants Base</b>														
	<b>Ants LEB02</b>	absolute position detection	392	8	-	•	-	•	1	•	-	•	•	-
<b>Ants Safe</b>														
	<b>Ants LES02</b>	safe position detection	392	12	•	•	-	•	0.5	-	•	-	-	SIL3 EN 81
	<b>Ants LES02D</b>	safe, redundant position detection Dual CAN	392	12	•	•	•	•	0.5	-	•	-	-	SIL3 EN 81 ASME A17
	<b>Ants LES03</b>	Safe position and speed detection, can be combined with PSU03 and SGT03	392	12	•	•	-	•	0.5	-	•	-	-	SIL3 EN 81

Shaft copying systems  
Evaluation units  
Compatible with LES03



			Safety chain	Safety gear management	Door bridging	UCM	Pre-wired with backup batteries and a power supply inside a housing	CANopen Lift (DS417)	SSI	RS485	Approvals
	<b>PSU03-Light</b>	Realization of elevator and safety functions	•	-	•	•	-	•	•	•	SIL3 EN 81
	<b>PSU03</b>	Realization of elevator and safety functions with intelligent safety gear management	•	•	•	•	-	•	•	•	SIL3 EN 81
	<b>SGT03</b>	Electronic overspeed governor with intelligent safety gear management	•	•	-	-	-	•	•	•	SIL3 EN 81
	<b>MODBOX.PSU03</b>	System solution for modernization projects for the realization of elevator and safety functions with safety gear management	•	•	•	•	•	•	•	•	SIL3 EN 81
	<b>MODBOX.SGT03</b>	System solution for modernization projects as an electronic overspeed governor with intelligent safety gear management	•	•	-	-	•	•	•	•	SIL3 EN 81




## Inclinometers For static applications



			Measuring angle max., 1-axis	Measuring angle max., 2-axis	Accuracy max.	Resolution max.	Analog output	PNP/NPN	IO-Link	CANopen	SAE J1939	Modbus	Dimensions in mm [inch]	Type of connection	Approvals
 	<b>IN41</b>	plastic housing, parameterization via Easy Teach	360°	±85°	±0.1°	12 bit	•	-	-	-	-	-	44.5 x 22.5 x 20	cable M12	-
	<b>IN48</b>	plastic housing	360°	±85°	±0.15°	0.01°	-	-	-	•	•	•	44.5 x 22.5 x 20	cable M12	-
	<b>IN61</b>	plastic housing, parameterization via Easy Teach or FDT/IODD	360°	±85°	±0.2°	16 bit	•	-	(•) <sup>1)</sup>	-	-	-	71.6 x 62.6 x 20	M12	cUL <sub>US</sub>
	<b>IN62</b>	plastic housing, parameterization via FDT/IODD	360°	±85°	±0.2°	16 bit	-	2	(•) <sup>1)</sup>	-	-	-	71.6 x 62.6 x 20	M12	cUL <sub>US</sub>
	<b>IN68</b>	plastic housing, parameterization via FDT/IODD	360°	±85°	±0.2°	0.01°	-	-	•	•	-	-	71.6 x 62.6 x 20	M12	cUL <sub>US</sub>
	<b>IN81</b>	metal housing, parameterization via Easy Teach	360°	±85°	±0.2°	12 bit	•	-	-	-	-	-	80 x 60 x 23	M12	E1 cUL <sub>US</sub>
	<b>IN88</b>	metal housing	360°	±85°	±0.2°	0.01°	-	-	-	•	•	•	80 x 60 x 23	M12	E1 cUL <sub>US</sub>

## Inclinometers For dynamic applications





			Measuring angle max., 1-axis	Measuring angle max., 2-axis	Accuracy max.	Resolution max.	Analog output	PNP/NPN	IO-Link	CANopen	SAE J1939	Modbus	Dimensions in mm [inch]	Type of connection	Approvals
 	<b>IN51</b>	plastic housing, parameterization via Easy Teach	360°	±85°	±0.1°	12 bit	•	-	-	-	-	-	44.5 x 22.5 x 20	cable M12	-
	<b>IN58</b>	plastic housing	360°	±85°	±0.15°	0.01°	-	-	-	•	•	•	44.5 x 22.5 x 20	cable M12	-
	<b>IN71</b>	plastic housing, parameterization via Easy Teach or FDT/IODD	360°	±85°	±0.2°	16 bit	•	-	(•) <sup>1)</sup>	-	-	-	71.6 x 62.6 x 20	M12	cUL <sub>US</sub>
	<b>IN72</b>	plastic housing, parameterization via FDT/IODD	360°	±85°	±0.2°	16 bit	-	•	(•) <sup>1)</sup>	-	-	-	71.6 x 62.6 x 20	M12	cUL <sub>US</sub>
	<b>IN78</b>	plastic housing, parameterization via FDT/IODD	360°	±85°	±0.2°	0.01°	-	-	•	•	-	-	71.6 x 62.6 x 20	M12	cUL <sub>US</sub>

1) IO-Link communication for parameterization via FDT/IODD with corresponding software (e.g. PACTware).



Inclinometers  
For dynamic applications  
6DoF



	Measuring angle max., 2-axis	Accuracy max.	Resolution max.	Analog output	PNP/NPN	IO-Link	CANopen	SAE J1939	Modbus	Dimensions in mm [inch]	Type of connection	Approvals
  <p><b>IN58.6DoF</b> plastic housing, acceleration and rotation rate measurement for all three axes of the housing</p>	±85°	±0.15°	0.01°	-	-	-	•	•	•	44.5 x 22.5 x 20	cable M12	-

Vibration and  
temperature sensor  
Condition Monitoring



	Acceleration output				Speed output				PNP/NPN	IO-Link	Dimensions in mm [inch]	Type of connection	Approvals
	Measuring range RMS [g]	Resolution RMS [g]	Linearity deviation RMS [%]	Repeatability, RMS [%]	Measuring range RMS [mm/s]	Resolution RMS [mm/s]	Linearity deviation RMS [%]	Repeatability, RMS [%]					
  <p><b>CMSVT38</b> IO-Link interface, plastic housing, parameterization via Easy Teach or FDT/IODD</p>	±16	0.01	≤ ±3 at 78 Hz	≤ ±5 at 78 Hz	0 ... 320 at 78 Hz	0.01	≤ ±1 at 78 Hz	≤ ±5 at 78 Hz	•	•	71.6 x 62.6 x 20	cable M12	cULus

# Slip rings



		Power (load)	Signal/data (analog/digital)	Pneumatics	Hydraulics	N° of channels max.	∅ Hollow shaft max. in mm	Load max.	Speed max. in min <sup>-1</sup>
<b>Base Line</b>									
	<b>Dimension 60 mm</b> compact, slim, low-maintenance, standardized with a wide range of options for 24/7 operation	•	•	–	–	3 load 2 signal	25	240 V / 20 A	500
Fig. SR060E									
	<b>Dimension 60 mm, with UL approval</b> compact, slim, low-maintenance, standardized with a wide range of options for 24/7 operation	•	•	–	–	3 load 2 signal	25	240 V / 16 A	500
Fig. SR060U									
	<b>Dimension 85 mm, optional for Industrial Ethernet up to 100 Mbit/s</b> modular, wide range of variants, extreme service life, especially for 24/7 operation	•	•	•	•	max. 20	30	400 V / 20 A (25 A)	800
Fig. SR085IE									
<b>Industrial Line</b>									
	<b>Dimension 130 mm</b> Customizable modular design, supports all common Ethernet protocols up to 1 Gbit/s	•	•	•	•	on request	25	400 V / 35 A 750 V / 25 A	300
Fig. SR130									
	<b>Dimension 160 mm</b> customer-specific design with an individual interface layout, supports all common Ethernet protocols up to 1 Gbit/s	•	•	•	•	on request	on request	750 V / 50 A	150
Fig. SR160									
	<b>Dimension 200 mm</b> customer-specific design with an individual interface layout, supports all common Ethernet protocols up to 1 Gbit/s	•	•	•	•	on request	on request	750 V / 70 A	150
Fig. SR200									
	<b>Dimension 250 mm and larger</b> 100% customer-specific, transmission of maximum load currents, Condition Monitoring, integration of sensor systems	•	•	•	•	on request	on request	1000 V / 150 A	150
Fig. SR250H									
<b>Pancake slip rings</b>									
	<b>Pancake slip rings</b> customer-specific design, large hollow shaft, extremely flat design, Optional in a housing	•	•	–	–	on request	on request	60 VDC / 5 A	60
Fig. SR160P									

IO-Link master modules



Number of ports Class A  
IO-Link / SIO-Mode

Number of ports Class B  
IO-Link



USB connection

Type of connection  
Power supply

Type of connection  
Ethernet data transmission

Type of connection  
IO-Link communication

Dimensions [mm]

new



IOL4A4B

4

4

•

•

•

–

M12  
5-pin  
L coded

M12  
4-pin  
D coded

M12  
5-pin  
A coded

205 x 60 x 34.4

new



IOL4A

4

–

•

•

•

–

M8  
4-pin  
+ PE

M8  
4-pin  
+ shield

M12  
5-pin  
A coded

155 x 30 x 31.9

new



IOL1A

1

–

–

–

–

•

–

–

M12  
5-pin  
A coded

54 x 41 x 24

Signal converters



		Input signals	Output signals	Control inputs	Power supply in V DC	Encoder supply in V DC	Types of connection
	Level converter <b>PW 1D-1D</b>	incremental HTL / TTL / RS422	incremental HTL / TTL / RS422	–	5 ... 30	5 ... 30	screw terminals, Sub-D
	Signal splitter <b>SP 1SC-2SC2D</b>	SinCos	SinCos, incremental HTL / TTL / RS422	–	17 ... 30	5.2 5 ... 30	screw terminals, Sub-D
	Signal splitter <b>SP 2D-2D</b>	incremental HTL / TTL / RS422	incremental HTL / TTL / RS422	2	12 ... 30	5.2 10 ... 28	screw terminals
	Signal converter <b>SK 1A-1S1D2RS</b>	analog	incremental HTL / TTL / RS422, RS232 / RS485, SSI	4	12 ... 30	–	screw terminals, Sub-D, USB
	Signal converter <b>SK 1SC-1D</b>	SinCos	incremental HTL / TTL / RS422	–	18 ... 30	5.2	screw terminals, Sub-D
	Signal converter <b>SK 1S-1P</b>	SSI	parallel	–	18 ... 36 5 12	–	screw terminals, Sub-D
	Signal converter <b>SK 1S1D-1A2RS</b>	incremental HTL / TTL / RS422, SSI	analog, RS232 / RS485	1	18 ... 30	5.5	screw terminals, Sub-D
	Frequency divider <b>FT 1D-1D</b>	incremental HTL differential / HTL / TTL / RS422	incremental HTL differential / HTL / TTL / RS422	–	9 ... 30	5.5	screw terminals








Optical fiber modules (LWL)



		Interface	Transmission distance in m	Input frequency in kHz	Power supply in V DC	Power consumption in W
	Optical fiber module, incremental <b>LWL</b>	RS422 HTL	2.000	400	5 10 ... 30	2
	Optical fiber module, absolute <b>LWL.A</b>	SSI	2.000	1000	5 10 ... 30	1



Cables,  
unprepared,  
cut to length



		PVC cable	PUR cable	TPE cable			Cable diameter in mm	SSI INTERFACE	Analog output	SinCos	Push-Pull	HTL	RS422	TTL	Open Collector	NPN	Parallel Highspeed	PROFIBUS	CANopen	SAE J1939	Modbus	IO-Link	For ATEX zone 2/22
	2 core + shield	-	•	-		2 x 0.34	appr. 7.6	-	-	-	-	-	-	-	-	-	-	•	-	-	-	-	-
	5 core + shield	•	•	-		5 x 0.14 5 x 0.75	appr. 4.7 appr. 7.5	-	-	-	-	-	-	-	-	-	-	-	•	•	•	•	-
	6 core + shield	•	-	-		3 x 2 x 0.25	appr. 6.2	-	-	-	-	-	-	-	-	-	-	-	•	-	-	-	-
	8 core + shield	-	•	-		8 x 0.14 3 x 2 x 0.14 + 2 x 0.5	appr. 5.5 appr. 7.4	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10 core + shield	-	•	-		4 x 2 x 0.25 + 2 x 1	appr. 7.9	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 core + shield	•	•	•		10 x 0.14 [AWG25] + 2 x 0.5 [AWG20] 12 x 0.14 [AWG25] 6 x 2 x 0.14 [AWG25] 5 x 2 x 0.14 [AWG25] + 2 x 0.5 [AWG20] 6 x 2 x 0.14 [AWG25] 4 x 0.1 [AWG27] + 4 x 2 x 0.14 [AWG25]	appr. 6.9 appr. 6.7 appr. 7.5 appr. 8.5 appr. 7.3 appr. 5.8	•	•	•	-	-	-	-	-	-	-	-	-	-	-	-	•
	18 core + shield	•	-	-		18 x 0.14 [AWG25]	appr. 7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-


## Connectors, self-assembly



		N° of pins	Housing	Connection technology	Cable diameter Ø in mm	Straight connector	Right angle connector	Wall/panel lead-through	For fieldbus	For ATEX zone 2/22	For ATEX zone 1/21
	M12	4/5/8/12	Metal, plastic	Screw terminals	6 - 8	•	•	•	•	•	•
	M23	12/17	Metal	Solder pins	5.5 - 10.5	•	•	•	-	-	-
	MIL	7/10	Metal	Solder pins	5 - 8	•	-	-	-	-	-
	RJ45	8	Plastic	Crimp connection	4.5 - 8	•	-	-	•	-	-
	Sub-D	9	ABS metallized	Solder pins	3.5 - 8.6	-	•	-	-	-	-













## T-distributor



		Connector A	Connector B	Connector C	Housing
	M12 T-distributor shielded or unshielded	male contacts 5-pin A coded	female contacts 5-pin A coded	female contacts 5-pin A coded	Metal, plastic

















## Cordsets, pre-assembled



		PVC cable	PUR cable	TPE cable	Optical fiber	Straight connector	Right angle connector	 <b>SSI</b> <small>INTERFACE</small>	Analog output SinCos	Push-Pull RS422 HTL, TTL	Open Collector NPN	 <b>PROFIBUS</b>	 <b>CANopen</b> SAE J1939  <b>Modbus</b>	 <b>PROFINET</b> EtherCAT Conformance tested	EtherNet/IP	 <b>IO-Link</b>
 with M8 connector	-	•	-	-	•	•	•	-	•	-	-	-	-	•	-	
 with M12 connector	•	•	-	-	•	•	•	•	•	•	•	•	•	•	•	
 with M23 connector	•	•	•	-	•	-	-	•	•	•	-	-	-	-	-	
 with PCB connector	•	-	-	-	-	-	-	•	•	-	-	-	-	-	-	
 Simplex patch cable optical fiber	-	-	-	•	•	-	-	-	-	-	-	-	-	-	-	
 with RJ45 connector	-	•	-	-	•	-	-	-	-	-	-	-	-	•	-	

Counters  
electromechanical






			Pulse	Time / operating hours	kWh	Panel mounting	PCB mounting	Base mounting	DIN rail mounting	Reset	Number of digits	Dimensions in mm	Supply type	Approvals
<b>Micro counters</b>														
	<b>K46 / K47</b>	high shock resistance	•	–	–	•	•	–	–	–	6 / 7	30x20 panel mount	DC	
	<b>HK47</b>	high shock resistance	–	•	–	•	•	–	–	–	7	30x20 panel mount	DC	–
	<b>K66 / K67</b>	high shock resistance, magnetic field resistant	•	–	–	•	•	–	–	–	6 / 7	30x20 panel mount	DC	–
	<b>K04 / K05</b>	high shock resistance	•	–	–	•	•	–	–	–	4 / 5	26x15 panel mount	AC/DC	
	<b>K06 / K07 / AK07</b>	high shock resistance	•	–	–	•	•	•	–	–	6 / 7	32x15 panel mount	AC/DC	
	<b>HK07 / AHK07</b>	high shock and impact resistance	–	•	–	•	•	•	–	–	7	32x15 panel mount	DC	–
<b>Mini counters</b>														
	<b>W15</b>	also in DIN format 48 x 24 mm [1.89 x 0.94"]	•	–	–	•	–	–	–	manual	5	from 34x23	AC/DC	–
	<b>W16 / W17</b>	also in DIN format 48 x 24 mm [1.89 x 0.94"]	•	–	–	•	•	–	–	–	6 / 7	from 34x23	AC/DC	–
<b>Robust counters, long service life</b>														
	<b>Bk14</b>	extremely robust	•	–	–	•	–	–	–	manual	4	from 37x28	AC/DC	–
	<b>B16 / B18</b>	optional with lockable zero position	•	–	–	•	–	–	• <sup>1)</sup>	manual (only B16)	6 / 8	from 50x25	AC/DC	–
	<b>HB26</b>	plug-in version	–	•	–	•	–	–	• <sup>1)</sup>	manual	6	from 50x25	AC/DC	–
	<b>HB27</b>	plug-in version	–	•	–	•	–	–	• <sup>1)</sup>	–	7	from 50x25	AC/DC	–
	<b>Mk14 / Mk16</b>	integrated electrical zero adjustment	•	–	–	•	–	–	–	manual electrical	4 / 6	from 37x26	AC/DC	–

1) With mounting frame.

Counters  
electromechanical



			Pulse	Time	kWh	Panel mounting	PCB mounting	Base mounting	DIN rail mounting	Reset	Number of digits	Dimensions in mm	Supply type	Approvals
<b>Timers with DIN dimensions</b>														
	<b>HK17</b>	small dimensions	-	•	-	•	-	-	-	-	7/8	from 37x26	AC/DC	
	<b>H37</b>	DIN format 48 x 24 mm [1.89 x 0.94"]	-	•	-	•	-	-	• <sup>1)</sup>	-	7/8	from 48x24	AC/DC	
	<b>H57</b>	DIN format 48 x 24 mm [1.89 x 0.94"]	-	•	-	•	-	-	-	-	7/8	from 48x48	AC/DC	
<b>Timers for DIN rail mounting</b>														
	<b>AH57</b>	DIN format 48 x 48 mm [1.89 x 1.89"]	-	•	-	-	-	-	•	-	7/8	48.5x61.5	AC/DC	
	<b>SK07</b>	high shock resistance	•	-	-	-	-	•	•	-	7	30x65	AC/DC	
	<b>SHK07.1</b>	30 mm wide	-	•	-	-	-	-	•	-	7	30x65	AC/DC	-
	<b>SH17</b>	36 mm wide	-	•	-	-	-	-	•	-	7	36x90	AC/DC	-
	<b>SHC77</b>	combination hour meter and totalizer	•	•	-	-	-	-	•	-	2x7	48.5x61.5	AC/DC	
<b>Timers, round design</b>														
	<b>HR47</b>	opt. run indicator	-	•	-	•	-	-	-	-	7	ø 58	AC/DC	-
	<b>H57R</b>	very high impact resistance	-	•	-	•	-	-	-	-	7/8	ø 58	AC/DC	
	<b>HR76</b>	high shock resistance	-	•	-	•	-	-	-	-	6	from ø 58.7	AC/DC	
<b>Dual function counters</b>														
	<b>HC77</b>	combination hour meter and totalizer	•	•	-	•	-	-	-	-	2x7	from 48x48	AC/DC	
	<b>HW66M</b>	combination hour meter and energy meter	-	•	•	•	-	-	• <sup>1)</sup>	-	2x6	from 48x48	AC	<b>MID</b>
<b>Preset counter</b>														
	<b>BVa15</b>	adding with preset constantly visible	•	-	-	•	-	-	• <sup>1)2)</sup>	manuell	2 x 5	from 50 x 50	AC/DC	-

1) With mounting 6.0000.F200.0006.  
2) With DIN rail mount 6.0000.G300.0000.

Pulse counters  
pneumatic



Panel mounting	PCB mounting	Base mounting	DIN rail mounting	Reset	Number of digits	Signal	Count frequency max. in Hz
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Totalizer



PMk14 / PMk16 / PMk18

•	-	-	-	manual (PMk 14, PMk 16)	4/6/8	L signal = 1.5 ... 8 bar O signal ≤ 0.15 bar	17 / 50
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LCD counters – electronic



			Pulse	Time	Frequency	Tachometer	Position	Serial interface (SI) Fieldbus (FB)	Presets: o = optocoupler; r = relay; t = transistor	Number of digits	Power supply	Approvals
<b>LCD counters – 48 x 24 mm</b>												
	<b>Codix 130</b>	adding or subtracting	•	–	–	–	–	–	–	8	Batt.	
	<b>Codix 131</b>	count direction or difference counter	•	–	–	–	–	–	–	8	Batt.	
	<b>Codix 132</b>	count direction	•	–	–	–	–	–	–	8	Batt.	
	<b>Codix 133</b>	phase discriminator (quadrature) x1 and x2 evaluation	–	–	–	–	incremental	–	–	8	Batt.	
	<b>Codix 134</b>	99999 h 59 m or 99999.99 h	–	•	–	–	–	–	–	7	Batt.	
	<b>Codix 135</b>	9999 h 59 m 59 s or 9999999.9 s	–	•	–	–	–	–	–	8	Batt.	
	<b>Codix 136</b>	frequency display in Hz	–	–	•	•	–	–	–	8	Batt.	
	<b>Codix 140</b>	adding 0...9999999	•	–	–	–	–	–	–	7	DC	–
	<b>Codix 141</b>	99999.99 h	–	•	–	–	–	–	–	7	DC	–
	<b>Codix 142</b>	service counter 0 ... 9999999	•	–	–	–	–	–	1t	7	DC	–
	<b>Codix 143</b>	service counter 99999.99 h	–	•	–	–	–	–	1t	7	DC	–
	<b>Codix 144</b>	service counter -999999 ... 9999999	•	–	–	–	–	IO-Link	1t	7	DC	–
	<b>Codix 145</b>	service counter h, min, sec or hhh.mm.ss	–	•	–	–	–	IO-Link	1t	7	DC	–
<b>LCD counters – 48 x 48 mm</b>												
	<b>901</b>	1 preset – pulse, time	•	•	–	–	–	–	1r	2x6	Batt.	
	<b>Codix 907 / 908</b>	multicolor display (optional), decade keyboard count frequency 5 kHz	•	•	–	–	•	–	1r 2r	2x6	AC/DC	–
	<b>Codix 923 / 924</b>	multicolor display (optional), decade keyboard count frequency 65 kHz	•	•	•	•	•	–	up to 4r 6o	2x6	AC/DC	





















LCD counters  
electronic



			Pulse	Time	Frequency	Tachometer	Position	Serial interface (SI) Fieldbus (FB)	Presets: o = optocoupler; r = relay; t = transistor	Number of digits	Power supply	Approvals
<b>LCD touch counters – 96 x 48 mm</b>												
 	<b>570T</b>	SSI absolute encoder display, analog output, serial interface	–	–	•	•	SSI	SS FB	4o 2r	8 3 color	AC/DC	–
	<b>571T</b>	multifunctional (also reciprocal) analog output, serial interface	•	•	•	•	incremental	SS FB	4o 2r	8 3 color	AC/DC	–
<b>LCD modules – 32 x 18 mm PCB mounting</b>												
	<b>190</b>	adding	•	–	–	–	–	–	–	7	DC	–
	<b>192</b>	adding	•	–	–	–	–	–	–	6	DC	–
	<b>194</b>	max. time range 9999.99 h	–	•	–	–	–	–	–	6	DC	–
	<b>198</b>	max. time range 99999.9 h	–	•	–	–	–	–	–	6	DC	–

LED counters  
electronic



			Pulse	Time	Frequency	Tachometer	Position	Serial interface (SI) Fieldbus (FB)	Presets: o = optocoupler; r = relay; t = transistor	Number of digits	Power supply	Approvals
<b>LED counters – 48 x 24 mm</b>												
	<b>Codix 520</b>	adding	•	–	–	–	–	–	–	6	DC	
	<b>Codix 521</b>	6 count modes	•	–	–	–	incremental	–	1o	6	DC	
	<b>Codix 522</b>	1/sec oder 1/min	–	–	•	•	–	–	1o	6	DC	
	<b>Codix 523</b>	h, min, sec oder hh.mm.ss	–	•	–	–	–	–	1o	6	DC	
	<b>Codix 524</b>	multifunctional	•	•	•	•	incremental	–	1o	6	DC	
	<b>Codix 52C</b>	2 totalizers with with separate inputs and separate scaling	•	–	–	–	–	–	–	6	DC	
	<b>Codix 52T</b>	2 totalizers with separate scaling	•	–	–	–	–	–	–	6	DC	
	<b>Codix 52U</b>	with dual functions in 4 combinations	•	•	•	•	–	–	–	6	DC	
	<b>Codix 52P + Frequency</b>	6 count modes	•	–	•	•	incremental	–	–	6	DC	
<b>LED counters – 96 x 48 mm</b>												
	<b>Codix 540</b>	adding	•	–	–	–	–	–	–	6	AC/DC	
	<b>Codix 541</b>	6 count modes	•	–	–	–	incremental	–	1o	6	AC/DC	
	<b>Codix 542</b>	1/sec or 1/min	–	–	•	•	–	–	1o	6	AC/DC	
	<b>Codix 543</b>	h, min, sec oder hh.mm.ss	–	•	–	–	–	–	1o	6	AC/DC	
	<b>Codix 544</b>	multifunctional	•	•	•	•	incremental	–	1o	6	AC/DC	
	<b>Codix 52U</b>	with dual functions in 4 combinations	•	•	•	•	–	–	–	6	AC/DC	
	<b>Codix 52P + Frequency</b>	6 count modes	•	–	•	•	incremental	–	–	6	AC/DC	
	<b>Codix 560</b>	LED multifunction preset counters, 14 segment LED, automatic help texts, opt. serial interface	•	•	•	•	incremental	SS FB	2r	6	AC/DC	

Process displays  
Process controllers



Standard signal 0...20; 4...20 mA	Standard signal 0...10; 2...10V	Standard signal ± 10V	Serial interface (SI) Fieldbus (FB)	Input characteristic curve S = control points	Presets / limit values o = optocoupler; r = relay	Analog output	Number of digits	Dimensions front in mm	Depth in mm	Power supply	Approvals
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LED process display



Codix 534

Min / Max value detection with totalizer

•	•	–	–	linear	–	–	5	48 x 24	59	DC	
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LED process controller



Codix 565

standard input signal, Min / Max value detection 2 limit values with totalizer, tare, analog output

•	•	•	–	12 S	2 r	•	6	96 x 48	90.5	AC/DC	
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LCD touch process controller



573T IO-Link

2 inputs 4 limit values, analog output, serial interface

•	•	•	SI FB IO-Link	24 S	4 o 2 r	•	8	96 x 48	120	AC/DC	–
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Setpoint adjusters



Number of digits	Dimensions front in mm	Depth in mm	Power supply	Approvals
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LED setpoint adjuster









Codix 533

0...12 V output 0...24 mA output manual or time-based operation

4	48 x 24	59	DC	
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Temperature displays  
Temperature controllers



			Temperature Thermocouples	Temperature Resistance thermometers (RTDs)	mV/V sensors / strain gauge input	Input characteristic curve S = control points	Presets / limit values o = optocoupler; r = relay	Analog output	Number of digits	Dimensions front in mm	Depth in mm	Power supply	Approvals
<b>LED temperature displays</b>													
	<b>Codix 531</b>	Min / Max value detection	–	Pt100 Ni100	–	–	–	–	5	48 x 24	59	DC	
	<b>Codix 532</b>	Min / Max value detection	J; K; N	–	–	–	–	–	5	48 x 24	59	DC	
<b>LED temperature controller</b>													
	<b>Codix 564</b>	Min / Max value detection, 2 limit values, analog output	B; E; J; K; N; R; S; T	Pt100 0...500 Ω	±100 mV	12 S	2 r	•	6	96 x 48	90.5	AC/DC	









Strain-Gauge controllers



			mV/V sensors / strain gauge input	Input characteristic curve S = control points	Presets / limit values o = optocoupler; r = relay	Analog output	Number of digits	Dimensions front in mm	Depth in mm	Power supply	Approvals
<b>LED strain-gauge controller</b>											
	<b>Codix 566</b>	Min / Max value detection, 2 limit values with totalizer, tare, analog output	1.0 1.5 2.0 3.0 3.3mV/V	12 S	2 r	•	6	96 x 48	90.5	AC/DC	










Safety modules  
Safety-M compact



		Monitoring - number of axes	Encoder systems	Safe digital input lines	Signal splitter / USB programming interface	Relay output lines	Safe digitale output lines	Analog output lines	Encoder interface	Power supply in V DC	Module width in mm	Approvals
	Speed monitoring 1 axis / 1 encoder system <b>SMC1.1</b>	1	1	4/2	1	1	8/4	1 opt.	SinCos	24	50	
	Speed monitoring 1 axis / 2 encoder systems <b>SMC2.2</b>	1	2	4/2	1	1	8/4	1 opt.	HTL/TTL/ SinCos	24	50	
	Speed monitoring 1 axis / 1 encoder system <b>SMC1.3</b>	1	1	8/4	1	2	8/4	1 opt.	HTL/TTL	24	50	
	Speed monitoring 1 axis / 2 encoder systems <b>SMC2.4</b>	1	2	8/4	1	2	8/4	1 opt.	HTL/TTL	24	50	

## Signal lights and signal towers



		Diameter [mm]	Height [mm]	Light source	Light image	Without siren	With siren (sound volume)	IO-Link	Type of connection	Approvals
<b>Signal lights</b>										
		<b>SL35</b> Mounting via M22 thread	35	64	LED Multicolor	Permanent light	• (85 dB)	–	M12	
		<b>SL55</b> Mounting via M30 thread	55	82		Permanent light	• (85 dB)	–	M12	
<b>Signal towers</b>										
		<b>ST40</b> Single-hole or floor mounting	40	235 or 265	LED green, yellow, red	Permanent light, flashing	• (85 dB)	•	Push-in terminals	–



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