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TECHNOLOGY & INNOVATION

INSTALLATION SHEET

TH405

CONNECTOR
PLUG AND SOCKET IP66/IP68

MADE IN ITALY

TECHNICAL INFORMATION (visit www.techno.it)

CODES	THB.405.Axx - THB.405.Bxx THR.405.Sxx - THB.405.Cxx THB.405.Dxx	THB.405.A8A.x - THB.405.B8A THB.405.C8A - THB.405.D8A
Number of poles	2-3-5-6 poles	8 poles
Type of terminals	Screw	Screw
Current	25A (2p-3p) / 17.5A (5p-6p) IEC 20A (3p-5p) UL	10A AC/DC
Voltage	400V AC	400V AC (60V DC)
Impulse withstand voltage	4kV (2p-3p) / 6kV (5p-6p)	2.5kV
Protection degree (IP6x)	IP66[2]/IP68	IP66[2]/IP68
Raw materials of body	PA66 UL94 V2	PA66 UL94 V2
Raw materials of connector	PA66 GF UL94 V0	PA66 GF UL94 V0
Raw materials of sealing	TPE	TPE
Operating temperature min. – max.	-40°C / +125°C	-40°C / +125°C
Cable diameter min. – max.[1]	7.0 mm – 13.5 mm	7.0 mm – 13.5 mm
Conductor cross-section (stranded/solid) min. – max.	0.5 mm^2 – 4.0 mm^2	0.25 mm^2 – 1.0 mm^2
Cable sheath stripping length (mm)	35 mm	35 mm
Conductor stripping length (mm)	6 mm	6 mm
Reference regulations	EN61984	EN61984

[1] Use relative accessories for smaller cables or single conductors.
[2] Techno Lab approved.

SAFETY NOTES

- Disconnect the power supply before starting installation.
- To prevent dust and damp/water from impairing proper functioning of the product, it is advisable to use protective caps when the connectors are not connected (for further information visit our website *www.techno.it*).

WARNING

The connector is equipped with energized parts! The connector is manufactured in compliance with the electrical and safety regulations. It is the responsibility of the fitter and the installer to respect the requirements in terms of safety of the system and make sure that they take all the safety measures to protect themselves from the energized parts.

NOTE

Before assembly and installation, please read the installation instructions carefully! The proper functioning of the product is guaranteed only if these installation instructions are read and followed carefully.

Scan the QR code with your mobile phone and watch the installation video.

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INSTALLATION ILLUSTRATIONS

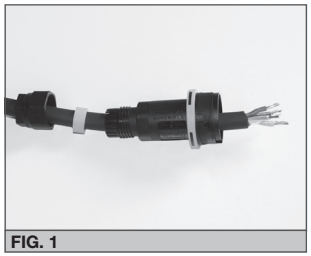
FIG. 1

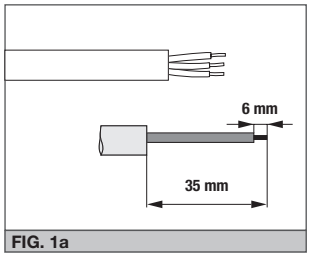

FIG. 1a

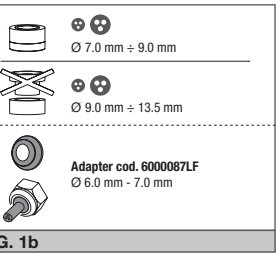

FIG. 1b

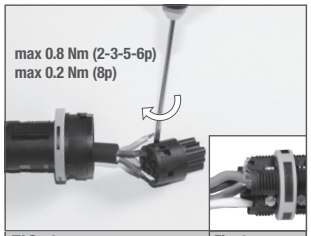

FIG. 2

Fig. 2a

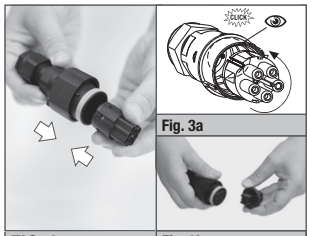
FIG. 3

Fig. 3a

Fig. 3b

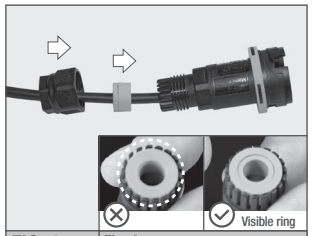
FIG. 4

Fig. 4a

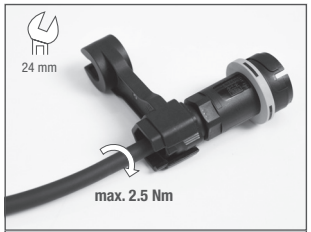

FIG. 5

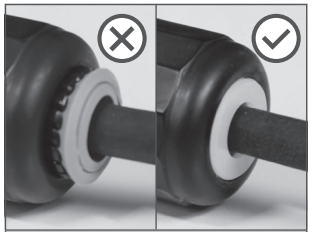
FIG. 5a

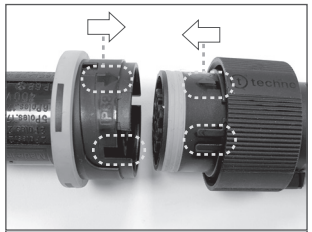
FIG. 6

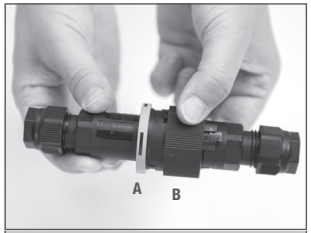

FIG. 6a

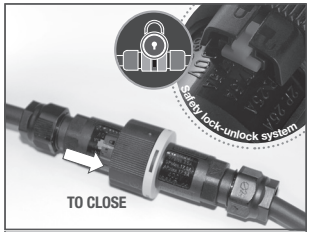

FIG. 7

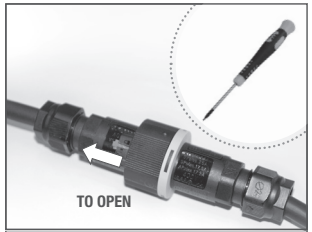

FIG. 7a

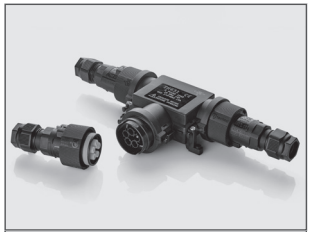
FIG. 8


FIG. 9

FIG. 9a

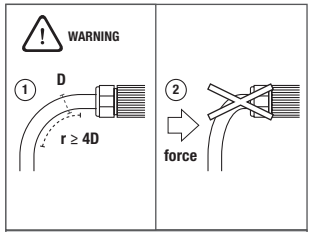

FIG. 10

INSTALLATION INSTRUCTIONS

FIG. 1
- Remove the outer jacket from the cable and the insulation from the wires **(Fig. 1a)**.
- Insert the cable trough the nut, the grommet and the cable gland.
- Check the size of the cable to be wired and make sure it is the right grommet inside the cable gland **(Fig. 1b)**.

FIG. 2
- Insert each wire one by one into the terminals of the connector.
  Make sure the wires/copper cores are properly inserted into the terminals, so they are in contact (**Fig. 2a** – *example of incorrect installation*).
- Tighten the screws of the wires clockwise (max 0.8 Nm 2-3-5-6 poles / max 0.2 Nm 8 poles).

FIG. 3
- Insert the connector insert in the housing until it stops. Make sure the housing's protrusion matches with the connector insert's cavity **(Fig. 3a)**.
- Screw the connector insert until you hear its give an audible click and you feel the insert reaching the end position.
- Use the fixing tool to screw the insert **(Fig. 3b)**.

FIG. 4
- Insert the grommet into the cable gland.
- In the case of rubber grommet made of two pieces, make sure the grommet is properly installed: you must see the ring as shown in the picture **(Fig. 4a)**.
- Join the cable gland.

FIG. 5
- Tighten the nut clockwise using the spanner (p/n 6000337BC - max. 2.5 Nm).
  The spanner will slip over when you have reached the optimal torque.
- Nut tightening is also possible with a common tool (24 mm - max. 2.5 Nm).
- Wire the other connector (Socket or Plug) same as shown from **(Fig. 1)** to **(Fig. 4)**.

FIG. 5a
- Make sure the grommet is in the correct position after tightening the nut **(Fig. 5)**.
- For cables with a smaller diameter, use the appropriate accessories **(Fig. 9)**
  (visit www.techno.it).

FIG. 6
- Make sure the correct orientation of the plug and socket connector as indicated by the arrows of the connectors **(Fig. 6)**.
- For mating align the two half connectors and mate them together by hand until they stop (male and female connectors incorporate keying features).
- Bring the locking ring of connector housing A close to housing B **(Fig. 6a)**.
- Turn the locking ring clockwise until it stop.

FIG. 7
- Push by hand the safe lock slider till it stops (closed padlock symbol): the slider is seated in correct position. A tool may be required to push the safe lock slider.
- The connector system is fully mated only when the safe lock slider is in the lock position.
- This operation ensures that the locking ring is locked to avoid the risk of accidental removal or unscrewing.

FIG. 7a
- To unlock the connector system, gently pull the safe lock slider out till it is in the unlock position (open padlock symbol). A tool is required to pull the safe lock slider.
- To un-mate connectors, unscrew the locking ring until it stops and pull the connector housings apart.

FIG. 8
- With the aim of providing quick junction connecting solutions, Techno offers a range of plug and socket current distributors (TH631) compatible with TH405 connectors.
- The TH631 (IP65) current distributors are a quicker solution then conventional junction boxes and cable glands (for more information visit www.techno.it).

FIG. 9
- Connectors require the use of adapters for individual conductors or cables with a diameter lower than that indicated in the technical data.
- Grommets are available in TPE or Silicone material.
- To prevent dust and damp/water from impairing proper functioning of the product, it is advisable to use protective caps when the connectors are not connected **(Fig. 9a)**.
- For further information visit www.techno.it.

FIG. 10
- If the product is installed in tight spaces where it is necessary to bend the cable, pay attention to the minimum bending radius (1) that must be ≥4D (D= cable diameter).
- Make sure that the cable is not subject to external forces that tends to flex it.
  This phenomenon can affect the correct functioning of the product and above all jeopardize the resistance to dust and water infiltration.

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