

### CREATIVITY\_TECHNOLOGIES\_MATERIALS



High-performance electrical connections

Partner for top performance



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Connection of street lighting LED Luminaires (Rome, Italy). Series TH405.



# In-line Circular joint connectors



TEETUBE



# **Quick, Re-accessible and Compact**

Using the fewest number of components, we ensure that the product is installed in an easy way and in the least possible time. Totally resin and gel-free, our TEETUBE<sup>®</sup> solutions are re-accessible even after long operating periods. Availing ourselves of an innovative design and maximum precision in thermoplastic injection, we realize solutions which are considerably compact, with a high number of poles.



23 mm



# **Gasket co-molding**

The quality of our materials, innovative proprietary technologies and an accurate analysis of the operative conditions of application allow us to realize and test solutions for electrical connections under the most extreme conditions. Therefore we have decided to supply the market with a revolutionary solution aimed to eliminate the resin sealing of boxes and connectors:

to mold the entire connector in only one solution.

#### **High-quality** materials

UL94 V0/V2 (f1) materials are suitable for underground installation and guarantee reliability over time. **Products tested** up to 10 years.

#### **UV** radiation resistant

UV radiation resistance test according to EN60079-0. Light ageing method (ISO 4892-2). Duration 1000 hours. Electrical insulation test up to 3.75kV.

#### **Anti-leakage** qaskets

Perfect chemical-mechanical adherence of gaskets which guarantee robustness and reliability in water tightness. No more installation faults.



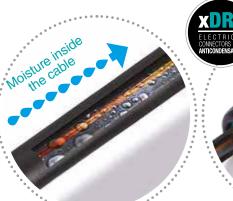
# Resistance to permanent immersion (IP68)





# No more condensation: completely insulated and sealed

Under particular environmental conditions, the accumulation of moisture inside the cable can cause the malfunctioning of electrical devices. The ventilation of the device is not often possible, especially when there is water, debris or in very small spaces. In this case the electrical connection is fundamental to ensure the reliability of the system.





#### **Reliability guaranteed under extreme conditions**

The special anti-moisture barrier prevents the damp inside the cable from entering the connection and proceeding towards the device installed. TEETUBE<sup>®</sup> connectors are ideal for LED applications with the presence of water and debris (e.g. flooded junction boxes).

LED lighting, architectural, walkable, water submersion, fountains and swimming pools, trade fair stands, lighting displays, big areas.

# **Useful for** total protection

TEETUBE® connectors can be used in the most various situations, for example in the connection of power and heating cables, as a protection of electronic circuits, in data and optical fiber connections, in motors and pumps.

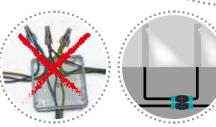


#### Simplified installation:

Pre-wired solutions. It is not necessary to open the box and realize complex wiring.



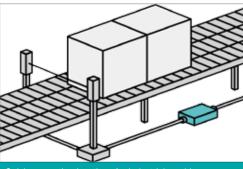
Submersible pumps and engines. Connectors and junctions IP68, resistant to moisture.





Wiring in shipbuilding and cooling containers.





Quick connection junctions for industrial machines.



# Quick plug&socket connectors

High-performance cable, wall mount and special connectors (IP68).



#### **Robust and safe**

The quick bayonet coupling junction ferrule with **safety lock-unlock system** guarantees higher resistance to vibrations and mechanical stresses (guarantee of electrical continuity). The disconnection is possible

only by the use of a tool to

prevent accidental displacement.

#### Powerful and compact

The TEEPLUG<sup>®</sup> family is characterized by quick plug&socket connection solutions up to 25A 400V. Their compact dimensions are a strong point as an alternative to big industrial sockets with their electrical characteristics being the same.

#### **Total protection** To ensure better seal,

two gaskets have been co-molded on the diameter and on the bottom of the connector to prevent water and dusts from penetrating it. The gaskets are anti-leakage.

**IP68** 

#### Maximum resistance to tensile stress

Under adverse installation conditions (e.g. heavy embossed cables, strong impacts, vibrations, etc.), a special cable block-system ensures perfect resistance to stresses (e.g. tensile stress).





# Maximum efficiency in installation and maintenance

The plug&socket connectors and quick junction boxes constitute a reliable modular interconnection system which is necessary to guarantee flexibility and quickness in the configuration of a more and more advanced plant. Reduction of cost of the product installed.









Lighting of the F1 circuit in Singapore with TH405 connectors.

Public lighting, urban furniture, smart city, CCTVs, data centers, electric signs, car charging stations, etc.

Our materials do not contain sulfur which has a negative effect on the LED lifespan.





mm

55



23 mm

Gasket co-molding

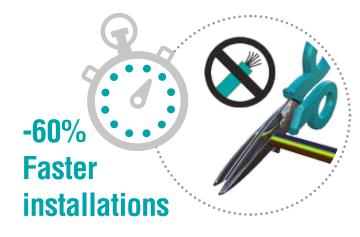
# **Dimensions that make the difference**

Compact screw wire connectors meet the most demanding needs of connections in small spaces.

#### Ultra flat connector.

It is the only 4mm thick connector IP67 on the international market. It has been specifically designed and produced to be used in floor heating plants.



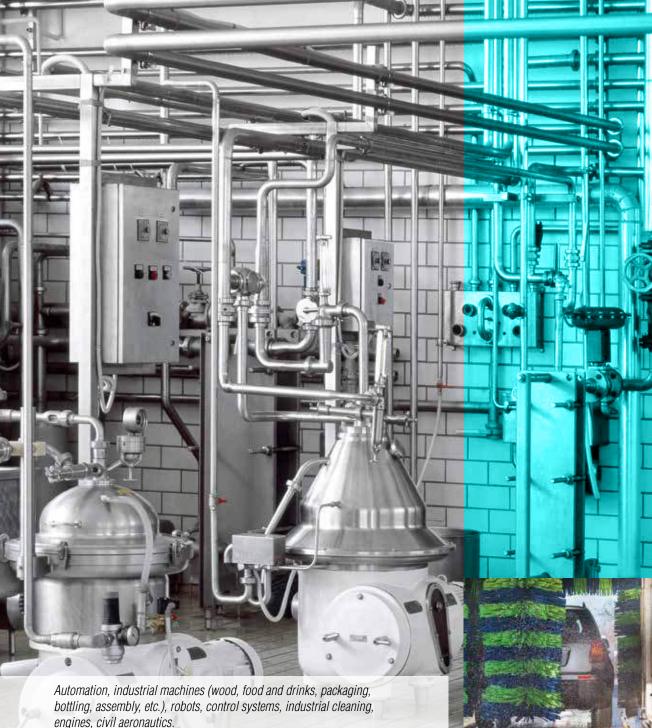


EN61984 certified piercing screw connector for flexible cables from 0.5 to 1.5 mm<sup>2</sup> (17.5A)

# **Quick screw** wire and piercing connectors

The wire does not need to be peeled. It is enough to cut the wire and insert it into the wiring terminal. The golden colour screw identifies the insulation piercing connectors. We have available also connectors with standard screw terminal, metal and spring terminal.





# **Reliable under extreme conditions**

We rely on materials and productive technologies of excellence. We perform stress tests on our products, in addition to the ones provided for by law, to obtain an extremely high level of resistance to moisture, water, dusts and aggressive chemicals. UL94 V2/V0 Yellow Card materials: their exceptional mechanical, temperature and temperature gradients resistance increases the advantages of use further in many sectors.





# Junction boxes and current distributors

Junction boxes with terminal blocks and plug&socket connectors for quick and flexible installations (IP68).



## Attention to minute details

The co-molding gasket guarantees fail-safe installations. The connection hinge between the top and the bottom, obtained directly from the molding of the product, simplifies the installation activities. Cable glands with milled claws built in the box allow the installation of small-section cables.







# **Protected** and compact for maximum versatility

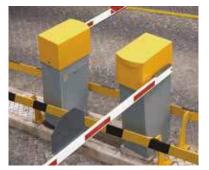
Junction boxes approved up to IP68 guarantee water and dust proof connections without the use of resin or gel.

The boxes are re-accessible thanks to their compact dimensions, they are particularly suitable for connections in small spaces or containing electronic and electromechanical components.













Residential and industrial electrical installation, junction boxes, gates and doors automation, CCTVs, heating/air- conditioning.



# The highest performance in small space



Resistance to external agents (EN60529). In addition: ageing test in air with ozone concentration (ISO1431-1).



Resistance in saline environment -Corrosion test (EN60068-2-11:2000).



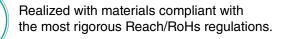
Resistance to impact (NEMKO - EN62262:2002). IK08 and IP68 tests satisfactory even after conditioning in hydrochloric acid (HCI) for 168 hours at 70°C (pH 4,5 and 3,5). Available versions with IK10.



Resistance to vibrations (DEKRA - EN 60068-2-6; RINA RULES 2011 Pt C, Ch 3, Sec 6).



Resistance to flame. Use of materials reinforced with fiberglass UL94 V0/V2 (f1). Glow-wire 850°C/960°C.



Upon request: low-smoke materials, EMC materials, resistant to ammonium versions. Search for materials and internal laboratory tests upon customer's specification.

Water treatment, monitoring, submersible pumps, energy distribution, petrol stations, mines, processing plant, irrigation, agriculture and cultivation, greenhouse.









# Higher flexibility in the configuration of complex plants

3 and 4 ways electrical current distributors (pre-wired boxes with plug&socket connectors) designed to speed up the connection and disconnection of electrical networks and devices of various kind. The access to the terminal block inside the box is not required: it takes advantage of the simplicity and flexibility of a plug&socket connection.



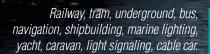












Cable tying solutions

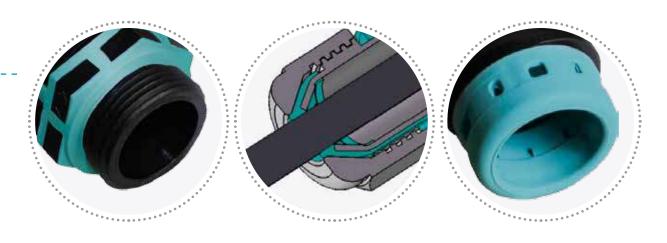


# Innovative cable glands in co-molding

GLAND

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High-protection cable glands (IP68) for quick cable tying.



# **Rigorously reliable**

#### **Attention to details**

The protective rubber is co-molded also where the cable gland is in contact with any supports. This gives it further reliability and safety, avoiding the use of OR on the thread of the cable gland.

max

55N

The internal circular rubber crown ensure perfect tightness on the cable. A cable grommet is not needed anymore. Water tightness is guaranteed even in case of excessive nut tightening.

Approved according to **EN50262**. Cable tensile test **max.55N** passed. -50m (5bar/1h) IP68





# More quickness

The use of the TEEGLAND<sup>®</sup> cable gland allows a considerable saving on installation time. The fastening of the cable and the installation of the cable gland on the panel take only 2-steps and less than 8 seconds.

& Sec<sub>c</sub>

# Fewer assembly faults

The co-molding of the rubber on the techno polymer ensures perfect installation compared to standard cable glands, where the detachment or the wrong position of the gaskets can impair its functioning. The rubber adheres chemically and mechanically to the plastic body and guarantees valid protection from external agents (IP68).



111

 $(\mathbf{1})$ 

2

Engines and pumps, heating, air-conditioning, ventilation, industrial refrigerators, SPA, hydro-massage, vending. Connection solutions



# Compact circular connectors

Individually usable or with TEETUBE® circular joint connectors.

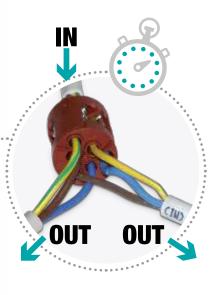


#### Modular and compact

Circular connectors, more compact than standard terminal blocks with the same number of poles.

#### Useful and versatile

The 4-way terminal block with a hinge makes cable wiring easier in particular situations such as automatic screwing in an industrial process.

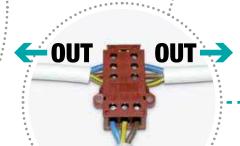


Connection solutions



# Compact linear connectors

Individually usable or with TEEBOX<sup>®</sup> junction boxes.



IN

#### Reduction of process costs

**IP54** 

New connector TH112(IP54). Quick and safe wiring for manufacturers of machinery through the addition of crimps. Cable cutting without peeling for technicians. Reduction of cost of the product installed, quickness and safety thanks to an innovative insulation piercing system.

#### **Quick wiring**

Thanks to a simple internal polarity connection system, there will be no need to twist the three strands of wire anymore. It will be enough to seat them individually in their apposite position in the terminal block to guarantee the correct connection of the poles. The plant will work in complete safety with a considerable advantage in terms of simplicity and quickness of installation. IP68

TH390

IP68

TH392 2 .... 4 poles

IP68

0.5 - 1.5 mm<sup>2</sup>

7.0 - 12.0 mm

2 .... 3 poles

0.5 - 1.5 mm<sup>2</sup>

7.0 - 13.5 mm

# **High-performance electrical connections TEEfamily® IP68**

### **In-line** connectors

Number poles<sup>(1)</sup> Wire cross-section Outer cable diameter<sup>(2)</sup> IP protection degree

### Junction connectors

#### 3 ways

Number poles<sup>(1)</sup> Wire cross-section Outer cable diameter<sup>(2)</sup> IP protection degree

#### 4 ways

Number poles<sup>(1)</sup> Wire cross-section Outer cable diameter<sup>(2)</sup> IP protection degree

<b>Fi</b> >	ced conne	ectors (re	-accessible)
	COST -	C) I	Bast
TH391	TH390	TH400	TH110
2 4 poles	2 3 poles	2 6 poles	2 3 poles
0.5 - 4.0 mm <sup>2</sup>	0.5 - 4.0 mm <sup>2</sup>	0.5 - 6.0 mm <sup>2</sup>	0.5 - 2.5 mm <sup>2</sup>

7.0 - 12.0 mm 70 - 13.5 mm 70 - 170 mm IP68 IP68

TH399

IP68

2 .... 6 poles

0.5 - 4.0 mm<sup>2</sup>

TH402

IP68

2 .... 6 poles

0.5 - 4.0 mm<sup>2</sup>

7.0 - 17.0 mm



TH110 2 .... 3 poles 0.5 - 2.5 mm<sup>2</sup> 5.0 - 9.0 mm IP44



TH200 2 .... 3 poles 10.5 - 1.5 mm<sup>2</sup> 7.0 - 17.0 mm 7.5 - 9.5 mm IP67







**Plug&Play connectors** 

TEE PLUG



TH387	TH384	TH404
2 5 poles	2 3 poles	2 6 poles
0.5 - 2.5 mm <sup>2</sup>	0.5 - 2.5 mm <sup>2</sup>	0.5 - 2.5 mm <sup>2</sup>
7.0 - 12.0 mm	7.0 - 12.0 mm	7.0 - 14.0 mm
IP68	IP66/IP68	IP65

TH405 2 .... 6 poles

0.5 - 2.5 mm<sup>2</sup> 0.5 - 2.5 mm<sup>2</sup> 7.0 - 14.0 mm 7.0 - 14.0 mm IP68

TH631	тнз70 🥄
2 6 poles	2 poles
0.5 - 2.5 mm <sup>2</sup>	2.5 - 6.0 mm
7.0 - 14.0 mm	6.0 - 8.0 mm
IP65	IP68





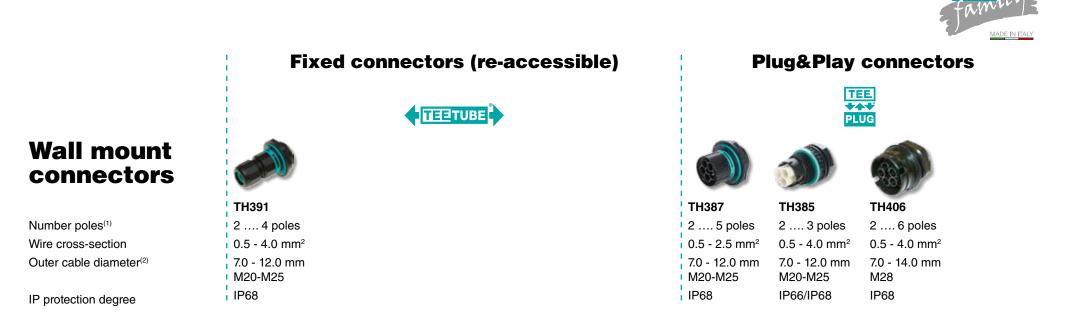
TH211

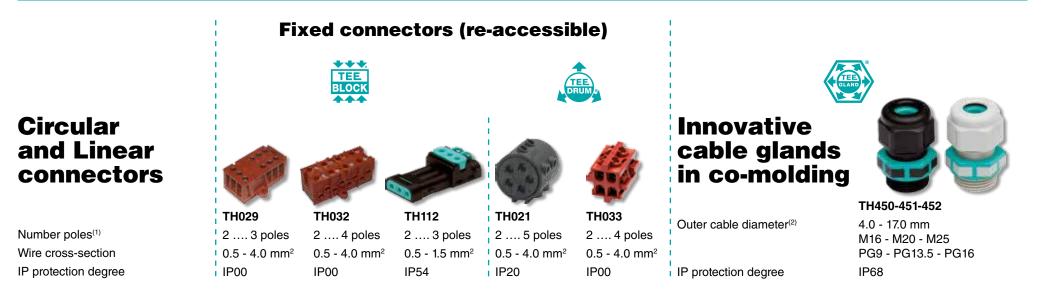
IP65

2 .... 4 poles

0.5 - 4.0 mm<sup>2</sup>

7.0 - 17.0 mm





(1) Screw connections. Visit www.techno.it to learn more about crimp, piercing and spring connections. (2) Accessories for smaller cables are available upon customer request. 19

### mini-TEETUBE®: mini in-line circular joint connectors (IP68)



TH391	External dimensions (mm)	N. Poles min - max	Wire cross section min - max (mm²)	Outer cable diameter min - max (mm)	Code	Cable Type (not exhaustive)	Technical data	IP Grade	Series	Pieces/box
most	ø23 x 68	2 - 3 - 4	0.5 - 4.0	7.0 - 12.0	THB.391.A4A	max. 4G1.5 FG70R	32A - 450V	IP68 (30m/2h)	TH391	200
	ø23 x 85	2 - 3 - 4	0.5 - 4.0	7.0 - 12.0	THB.391.R4A <sup>(1)</sup>	4G1.5 - 3G2.5 - 2G4 H07RN-F	17.5A - 450V	IP68 (30m/2h)	TH391	100
TU200	ø32 x 82	2 - 3	0.5 - 4.0	7.0 - 13.5	THB.390.A1A	max. 3G4 FG70R max. 3G4 H07RN-F	32A - 450V	IP68 (50m/1h)	TH390	200
TH390	(1) yDBV product w	vith the anti conden	eation barrier (can ba	ao (1)						

(1) xDRY product with the anti-condensation barrier (see page 4)

### **TEETUBE®: in-line circular joint connectors (IP68)**

D)	External dimensions (mm)	N. Poles min - max	Wire cross section min - max (mm²)	Outer cable diameter min - max (mm)	Code	Cable Type (not exhaustive)	Technical data	IP Grade	Series	Pieces/box
	~20 x 120	0 0	05 40	7.0 - 13.5	THB.400.C1A <sup>(1)</sup>	max. 3G4 FG70R	224 4501	ID69 (E0m/1b)	TH 400	200
	ø32 x 130	2 - 3	0.5 - 4.0	8.0 - 17.0	THB.400.D1N	max. 3G4 H07RN-F	32A - 450V	IP68 (50m/1h)	TH400	200
	ø32 x 130	2 - 3 - 4	0.5 - 4.0	7.0 - 13.5	THB.400.D1G <sup>(2)</sup>	max. 4G4 FG70R max. 4G4 H07RN-F	204 4501	IP68 (50m/1h)	TH400	200
	Ø32 X 130	2-3-4	0.5 - 4.0	8.0 - 17.0	THB.400.D1B		32A - 450V	1900 (3011/111)	10400	200
				7.0 - 13.5	THB.400.D4A <sup>(2)</sup>	max. 4G6 FG70R max. 4G6 H07RN-F	41A - 750V	IP68 (50m/1h)		
	ø32 x 130	2 - 3 - 4	2.5 - 6.0	12.0 - 16.0	THB.400.D4C				TH400	200
				16.0 - 20.0	THB.400.D4E					
	~00 v 100	2 - 3 - 4 - 5	05 40	7.0 - 13.5	THB.400.D1H <sup>(2)</sup>	max. 5G2,5 FG70R	204 4501	IDC0 (E0m/1h)	TU 400	000
	ø32 x 130	2 - 3 - 4 - 5	0.5 - 4.0	8.0 - 17.0	THB.400.D1A	max. 5G4 H07RN-F	32A - 450V	IP68 (50m/1h)	TH400	200
	ø32 x 130	2 - 3 - 4 - 5 - 6	05 40	7.0 - 13.5	THB.400.D1L <sup>(2)</sup>		224 4501/	IDG9 (E0m/1h)	TH 400	200
	Ø32 X 130	2-3-4-5-0	0.5 - 4.0	8.0 - 17.0	THB.400.D1D		320 - 4501/	IP68 (50m/1h)	TH400	200

(1) External dimensions: ø26.5 mm x 115 mm (2) External dimensions: ø32 mm x 115 mm

## mini-TEETUBE®: mini circular junction connectors - 3/4 ways "H" (IP68)



External dimensions (mm)	N. Poles min - max	Wire cross section min - max (mm²)	Outer cable diameter min - max (mm)	Code	Cable Type (not exhaustive)	Technical data	IP Grade	Series	Pieces/box
28 x 54 x 80	2 - 3 - 4	0.5 - 1.5	main 7.0 - 12.0	THB.392.A4A		17.5A - 450V	IP68 (30m/2h)	TH392	50
20 X 34 X 00	2-3-4	0.5 - 1.5	branch 7.0 - 12.0	THB.392.A4B <sup>(2)</sup>	max. 4G1.5 FG70R	17.5A - 450V	1600 (3011/211)	111392	50
28 x 54 x 80	2 - 3 - 4	0.5 - 1.5	main 7.0 - 12.0	THB.392.R4A <sup>(1)</sup>	max. 4G1.5 H07RN-F	17.5A - 450V	IP68 (30m/2h)	TH392	50
20 X 34 X 00	2-3-4	0.5 - 1.5	branch 7.0 - 12.0	THB.392.R4B <sup>(1) (2)</sup>		17.3A - 450V	1800 (3011/211)	10392	50

(1) xDRY product with the anti-condensation barrier (see page 4)

(2) Version of 3 ways supplied with closure cap

## **TEETUBE**<sup>®</sup>: circular junction connectors - 3 ways "T" (IP68)



	External dimensions (mm)	N. Poles min - max	Wire cross section min - max (mm <sup>2</sup> )	Outer cable diameter min - max (mm)	Code	Cable Type (not exhaustive)	Technical data	IP Grade	Series	Pieces/box
TH390 "T"	ø32 x 92 x 73	2 - 3	0.5 - 1.5	main  7.0 - 13.5 branch 7.0 - 13.5	THB.390.C1A	max. 3G1.5 FG70R max. 3G1.5 H07RN-F	32A - 450V	IP68 (20m/1h)	TH390	200
100	ø32 x 92 x 121	2 - 3	0.5 - 4.0	main 7.0 - 13.5 branch 7.0 - 13.5	THB.402.C2E	max. 3G4 FG70R	32A - 450V	IP68 (20m/1h)	TH402	200
		2-0		main 7.0 - 13.5 branch 8.0 - 17.0	THB.402.D2E	max. 3G4 H07RN-F	32A - 430V	11 00 (2011/111)	111402	200
TUADO	ø32 x 92 x 121	2 - 3 - 4	0.5 - 1.5	main 7.0 - 13.5 branch 7.0 - 13.5	THB.402.C1D	max. 4G1.5 FG70R max. 4G1.5 H07RN-F	32A - 450V	IP68 (20m/1h)	TH402	200
TH402		2 - 3 - 4	0.5 - 1.5	main 7.0 - 13.5 branch 8.0 - 17.0	THB.402.D1D				111402	200
	ø32 x 92 x 121	2 - 3 - 4	1.5 - 4.0	main 7.0 - 13.5 branch 7.0 - 13.5	THB.402.D4A	max. 4G2.5 FG70R	32A - 450V	IP68 (20m/1h)	TH402	200
	Ø32 X 92 X 121	2 - 3 - 4	1.5 - 4.0	main 7.0 - 13.5 branch 12.0 -16.0	THB.402.D4C	max. 4G2.5 H07RN-F	32A - 430V	1600 (2011/111)	111402	200
	~20 × 00 × 101	0 0 4 5	0.5 - 1.5	main 7.0 - 13.5 branch 7.0 - 13.5	THB.402.C1F	max. 5G1.5 FG/UR max. 5G1.5 H07BN-F	224 4501/	1069 (20m/1h)	TH 400	200
	ø32 x 92 x 121	2 - 3 - 4 - 5		main 7.0 - 13.5 branch 8.0 - 17.0	THB.402.D1F		32A - 450V	/ IP68 (20m/1h)	TH402	200

## **TEETUBE**<sup>®</sup>: circular junction connectors - 3 ways "Y" (IP68)

0155	External dimensions (mm)	N. Poles min - max	Wire cross section min - max (mm²)	Outer cable diameter min - max (mm)	Code	Cable Type (not exhaustive)	Technical data	IP Grade	Series	Pieces/box
TH399 (mini)	ø32 x 63 x 125	2 - 3	0.5 - 1.5	main 7.0 - 13.5 branch 7.0 - 13.5	THB.399.E3A	max. 3G1.5 FG70R max. 3G1.5 H07RN-F	32A - 450V	IP68 (20m/1h)	TH399	200
	ø32 x 63 x 180	2 - 3	05 40	main 7.0 - 13.5 branch 7.0 - 13.5	THB.399.A9B	max. 3G4 FG70R max. 3G4 H07RN-F	224 4501/	1069 (20m/1h)	TH399	100
D CD	902 × 00 × 100	2-3	0.5 - 4.0	main 8.0 - 17.0 branch 8.0 - 17.0	THB.399.D9B		32A - 450V	IP68 (20m/1h)	10399	100
TH399	ø32 x 63 x 180	2 - 3 - 4	0.5 - 1.5	main 7.0 - 13.5 branch 7.0 - 13.5	THB.399.A4A	max. 4G1.5 FG70R max. 4G1.5 H07RN-F	32A - 450V	IP68 (20m/1h)	TH399	100
				main 8.0 - 17.0 branch 8.0 - 17.0	THB.399.D4A					100
	~00 × 00 × 100	0 0 4	15 40	main 7.0 - 13.5 branch 7.0 - 13.5	THB.399.A4E	max. 4G4 FG70R	204 4501/	IDC0 (00m/1h)	TUDOO	100
	ø32 x 63 x 180	2 - 3 - 4	1.5 - 4.0	main 12.0 - 16.0 branch 12.0 - 16.0	THB.399.D4E	max. 4G4 H07RN-F	32A - 450V	IP68 (20m/1h)	TH399	100
ø	~20 x 62 x 100	0 0 <i>1</i> F	0.5 - 1.5	main 7.0 - 13.5 branch 7.0 - 13.5	THB.399.A5A	max. 5G1.5 FG70R	224 4501/	ID69 (20m/1b)	TH200	100
	ø32 x 63 x 180	2 - 3 - 4 - 5		main 8.0 - 17.0 branch 8.0 - 17.0	THB.399.D5A	max 5G1 5 H07BN-F		V IP68 (20m/1h)	TH399	100

### mini-TEETUBE®: mini wall mount circular joint connectors (IP68)

Wire

N. Poles



Pieces/box

Series



External

#### TH391 (M25 nut)



	dimensions (mm)	min - max	cross section min - max (mm²)	cable diameter min - max (mm)			(not exhaustive)	data			
)	ø23 x 34	2 - 3 - 4	0.5 - 4.0	7.0 - 12.0	THB.391.B4A <sup>(2)</sup>	M20		32A - 450V	IP68 (30m/2h)	TH391	200
	ø23 x 34	2 - 3 - 4	0.5 - 4.0	7.0 - 12.0	THB.391.L4A	M25	max. 4G1.5 FG70R 4G1.5 - 3G2.5 -	32A - 450V	IP68 (30m/2h)	TH391	200
	ø23 x 52	2 - 3 - 4	0.5 - 4.0	7.0 - 12.0	THB.391.D4A <sup>(2)(3)</sup>	M20	2G4 H07RN-F	17.5A - 450V	IP68 (30m/2h)	TH391	100
	ø23 x 52	2 - 3 - 4	0.5 - 4.0	7.0 - 12.0	THB.391.T4A <sup>(3)</sup>	M25		17.5A - 450V	IP68 (30m/2h)	TH391	100

Thread

Cable Type

Technical

IP Grade

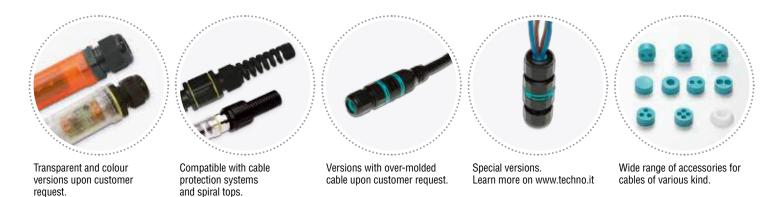
Code (1)

TH391 (M20 nut)

(1) Supplied with the fixing nut (2) Only for plastic panels or low voltage applications (3) xDRY product with the anti-condensation barrier (see page 4)

Outer





## **TEEBOX®: In-out junction box with terminal block (IP44)**





N. Poles Outer Code IP Grade External Wire Cable Type Technical Series Pieces/box dimensions cable diameter (not exhaustive) min - max cross section data min - max min - max  $(mm^2)$ 2 0.5 - 2.5 IP44 TH110 600 75 x 39 x 13.5 5.0 - 9.0 THB.110.C2A<sup>(1)</sup> 24A - 450V max. 2G2.5 - 3G2.5 H05SS-F, H05VV-F, H05RR-F 75 x 39 x 13.5 3 0.5 - 2.5 5.0 - 9.0 24A - 450V IP44 TH110 600 THB.110.C3A

(1) Approved for use with class 2 devices

#### TH110 (3poles)

## TEEBOX®: Junction boxes with terminal block - 3 ways "T" (IP65/IP67) ( E 🐝 💿 🕬 👘

	External dimensions (mm)	N. Poles min - max	Wire cross section min - max (mm²)	Outer cable diameter min - max (mm)	Code <sup>(1)</sup>	Cable Type (not exhaustive)	Technical data	IP Grade	Series	Pieces/box
TH200	70 x 82 x 20	2 - 3	0.5 - 1.5	main 7.5 - 9.5 branch 7.5 - 9.5	THB.200.E3F	max. 3G1.5 H07RN-F	16A - 250V	IP67	TH200	200
and the second se	137 x 118 x 36	2 - 3	0.5 - 4.0	main 7.0 - 13.5 branch 7.0 - 13.5	THB.211.D3A	max. 3G4 FG70R max. 3G4 H07RN-F	24A - 450V	IP65	TH211	50
State 2	137 x 118 x 36	2 - 3	0.5 - 4.0	main 8.0 - 17.0 branch 8.0 - 17.0	THB.211.A3A	max. 3G4 FG70R max. 3G4 H07RN-F	24A - 450V	IP65	TH211	50
	137 x 118 x 36	2 - 3 - 4	0.5 - 4.0	main 8.0 - 17.0 branch 8.0 - 17.0	THB.211.A4A	max. 4G4 FG70R max. 4G4 H07RN-F	16A - 450V	IP65	TH211	50

**TH211** 

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(1) Supplied with the terminal block Note: versions with more poles available upon request. Learn more on www.techno.it

## TEEBOX®: Junction boxes with terminal block - 3/4 ways "H" (IP68)



and the second	External dimensions (mm)	N. Poles min - max	Wire cross section min - max (mm²)	Outer cable diameter min - max (mm)	Code (1)	Cable Type (not exhaustive)	Technical data	IP Grade	Series	Pieces/box
TH209	108 x 65 x 28	2 - 3	0.5 - 4.0	main 7.0 - 14.0 branch 7.0 - 14.0	THB.209.A3A <sup>(2)</sup>	max. 3G4 FG70R max. 3G4 H07RN-F	24A - 450V	IP68 (5m/3h)	TH209	100
	108 x 65 x 28	2 - 3 - 4	0.5 - 2.5	main 7.0 - 14.0 branch 7.0 - 14.0	THB.209.A4A	max. 4G2.5 FG70R max. 4G2.5 H07RN-F	24A - 450V	IP68 (5m/3h)	TH209	100
Star 19	108 x 65 x 28	5	0.5 - 1.5	main 7.0 - 14.0 branch 7.0 - 14.0	THB.209.A5A	max. 5G1.5 FG70R max. 5G1.5 H07RN-F	16A - 450V	IP68 (5m/3h)	TH209	100
TH219	108 x 65 x 28	8	0.5 - 1.5	main 7.0 - 14.0 branch 7.0 - 14.0	THB.209.A8A	max. 8G1 H07RN-F	16A - 450V	IP68 (5m/3h)	TH209	100
11215	108 x 65 x 28	-	-	main 7.0 - 14.0 branch 7.0 - 14.0	THA.219.A1A <sup>(3)</sup>	-	16A - 450V	IP68 (5m/3h)	TH209	100

(1) Supplied with the terminal block (2) Version of 3 ways supplied with closure cap (3) Empty box to be filled with the resin (resin not included)

# **TEEBOX®:** Pre-wired junction boxes with plug&socket connectors 3 ways "T" (IP65)





	External dimensions (mm) <sup>(2)</sup>	N. Poles min - max	Wire cross section min - max (mm²)	Outer cable diameter min - max (mm)	Code <sup>(1)</sup>	Cable Type (not exhaustive)	Technical data	IP Grade	Series	Pieces/box
	235 x 159 x 43	2 - 3	0.5 - 2.5	main 7.0 - 14.0 branch 7.0 - 14.0	THH.631.B3A	max. 3G2.5 FG70R max. 3G2.5 H07RN-F	25A - 400V	IP65	TH631	50
7	235 x 159 x 43	2 - 3 - 4 - 5	0.5 - 1.5	main 7.0 - 14.0 branch 7.0 - 14.0	THH.631.B5A	max. 5G1.5 FG70R max. 5G1.5 H07RN-F	17.5A - 400V	IP65	TH631	50
7	(d) Cummlind with m			المحيدة المحام والمحمد والمحيد والم						

(1) Supplied with plug&socket connectors (2) Dimensions are intended when the connectors are inserted

**TH631** 

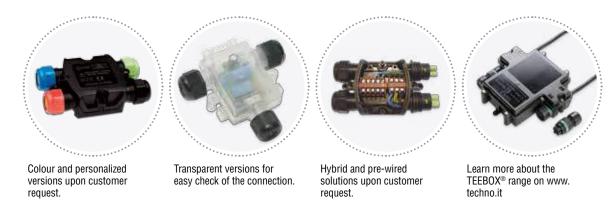
**TH62**3

# **TEEBOX®:** Pre-wired junction boxes with plug&socket connectors 4 ways "H" (IP68)



	External dimensions (mm) <sup>(2)</sup>	N. Poles min - max	Wire cross section min - max (mm <sup>2</sup> )	Outer cable diameter min - max (mm)	Code (1)	Cable Type (not exhaustive)	Technical data	IP Grade	Series	Pieces/box
TH623	200 x 65 x 28	2 - 3	0.5 - 1.5	main 7.0 - 9.5 branch 7.0 - 9.5	THH.623.B3A	max. 3G1.5 FG70R max. 3G1.5 H07RN-F	17.5A - 400V	IP40	TH623	50
← ←	200 x 65 x 28	2 - 3	0.5 - 2.5	main 7.0 - 12.0 branch 7.0 - 12.0	THH.623.L3A	max. 3G2.5 FG70R max. 3G2.5 H07RN-F	17.5A - 400V	IP68 (5m/3h)	TH623	50

(1) Supplied with plug&socket connectors (2) Dimensions are intended when the connectors are inserted



### mini-TEEPLUG<sup>®</sup>: mini plug&socket connectors (IP66/IP68)





	External dimensions (mm) <sup>(1)</sup>	N. Poles min - max	Wire cross section min - max (mm²)	Outer cable diameter min - max (mm)	Code	Connector type	Cable Type (not exhaustive)	Technical data	IP Grade	Series	Pieces/ box
	ø27 x 95	2 - 3	0.5 - 2.5	7.0 - 12.0	THB.384.A1A	plug	max. 3G2.5 FG70R	17.5A -	IP66/IP68	TH384	200
	ØZT X 35	2 - 0	0.0 - 2.0	7.0 - 12.0	THB.384.B1A	socket	max. 3G2.5 H07RN-F	400V	(50m/24h)	11004	200
à	ø23 x 85	2 - 3 - 4	0.5 - 2.5	7.0 - 12.0	THB.387.A4A	plug	max. 3G2.5/4G1.5 FG70R	17.5A -	IP68	TH387	200
J	Ø23 X 03	2-3-4	0.0 - 2.0	7.0 - 12.0	THB.387.B4A	socket	max. 3G2.5/4G1.5 H07RN-F	450V	(30m/3h)	11307	200
	ø23 x 85	2 - 3 - 4 - 5	0.25 - 1.5	7.0 - 12.0	THB.387.A5A	plug	max. 5G1.5 FG70R	17.5A -	IP68	TH387	200
	Ø23 X 03	2-3-4-5	0.25 - 1.5	7.0 - 12.0	THB.387.B5A	socket	max. 5G1.5 H07RN-F	450V	(30m/3h)	11301	200

**TH384** 

(1) Dimensions are intended when the connectors are inserted (2) UL approvals only for the TH384 series – 3 poles (learn more on www.techno.it)

(3) Approved for use with class 2 devices (only for 2 poles versions)

### TEEPLUG<sup>®</sup>: plug&socket connectors with safety lock-unlock system (IP68)



	External dimensions (mm) <sup>(1)</sup>	N. Poles min - max	Wire cross section min - max (mm²)	Outer cable diameter min - max (mm)	Code	Connector type	Cable Type (not exhaustive)	Technical data	IP Grade	Series	Pieces/ box
	a 36 5 x 130	ø36.5 x 130 2 - 3	0.5 - 2.5	7.0 - 14.0	THB.405.A2B <sup>(4)</sup>	plug	max. 3G2.5 FG70R	25A - 400V	IP68 (10m/1h)	TH405	200
405	000.0 X 100	2 - 3	0.0 - 2.0	7.0 - 14.0	THB.405.B2B <sup>(4)</sup>	socket	max. 3G2.5 H07RN-F	2JA - 400V			200
	ø36.5 x 130	2 - 3 - 4 - 5	0.5 - 1.5	7.0 - 14.0	THB.405.A2A	plug	max. 5G1.5 FG70R	17.5A -	IP68	TH405	200
	Ø30.5 X 130	2 - 3 - 4 - 5	0.5 - 1.5	7.0 - 14.0	THB.405.B2A	socket	max. 5G1.5 H07RN-F	400V	(10m/1h)	10400	200
	ø36.5 x 130	0 0 4 5 6	05 15	70 140	THB.405.A2E	plug	max. 6G1.5 FG70R	17.5A -	IP68		200
	030.3 X 130	2 - 3 - 4 - 5 - 6	0.5 - 1.5	7.0 - 14.0	THB.405.B2E	socket	max. 6G1.5 H07RN-F	400V	(10m/1h)	TH405	200

(1) Dimensions are intended when the connectors are inserted (2) UL approvals only for 3 and 5 poles (learn more on www.techno.it)

(3) Approved for use with class 2 devices (only for 2 poles versions) (4) Tested up to 32 Amp with 3G4 cable

### **TEEPLUG®: plug&socket connectors (IP65)**



(1) Dimensions are intended when the connectors are inserted (2) Approved for use with class 2 devices (only for TH404 series 2 poles)

### mini-TEEPLUG®: mini wall mount plug&socket connectors (IP66/IP68)



<b>M</b>	External dimensions (mm) <sup>(1)</sup>	N. Poles min - max	Wire cross section min - max (mm <sup>2</sup> )	Code <sup>(2)(3)</sup>	Thread	Technical data	IP Grade	Series	Pieces/box
	ø27 x 72	2 - 3	0.5 - 4.0	THB.385.A3D	M20	17.5A - 400V	IP66/IP68 (50m/24h)	TH385	200
	ø23 x 55	2 - 3 - 4	0.5 - 2.5	THB.387.L4A	M20 <sup>(5)</sup>	17.5A - 450V	IP68 (30m/3h)	TH387	200
H387	ø23 x 55	2 - 3 - 4 -5	0.25 - 1.5	THB.387.L5A	M20 <sup>(5)</sup>	17.5A - 450V	IP68 (30m/3h)	TH387	200
	ø27 x 72	2 - 3	0.5 - 4.0	THB.385.A1A	M25	17.5A - 400V	IP66/IP68 (50m/24h)	TH385	200
34	ø23 x 55	2 - 3 - 4	0.5 - 2.5	THB.387.E4A	M25	17.5A - 450V	IP68 (30m/3h)	TH387	200
E	ø23 x 55	2 - 3 - 4 - 5	0.25 - 1.5	THB.387.E5A	M25	17.5A - 450V	IP68 (30m/3h)	TH387	200

(1) Dimensions are intended when the connectors are inserted(3) Supplied with the fixing nut(5) Only for plastic panels or low voltage applications

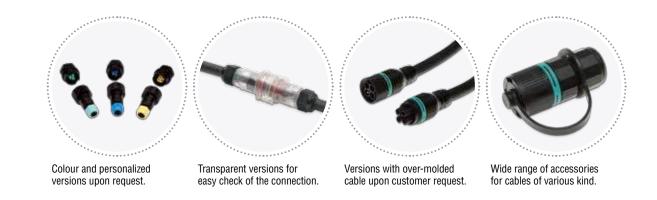
(2) Plug versions. For related socket versions see codes of the TH384 and TH387 series

(4) UL approvals only for THB.385.A1A (learn more on www.techno.it)

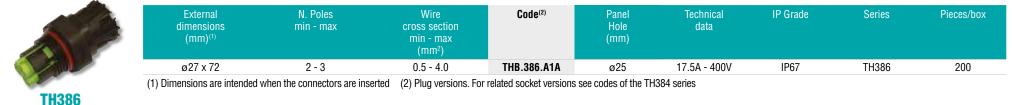
(6) Approved for use with class 2 devices: only for TH385 2 poles and TH387 2 poles (max. 250V)

With fixing nut

**TH385** 



#### mini-TEEPLUG®: mini wall mount quick-fix plug&socket connectors (IP67) C E 🕸 🚳 🕬 🕬 RoHS



Quick-fix system

### mini-TEEPLUG<sup>®</sup>: mini wall mount plug&socket connectors 90° angled (IP66/IP68)



	External dimensions (mm) <sup>(1)</sup>	N. Poles min - max	Wire cross section min - max (mm²)	Code <sup>(2)(3)</sup>	Thread	Technical data	IP Grade	Series	Pieces/box
	ø27 x 35 x 100	2 - 3	0.5 - 4.0	THB.385.A3F	M20	17.5A - 400V	IP66/IP68 (50m/24h)	TH385	200
TH385	(1) Dimensions are intende	d when the connectors ar	e inserted		(2) Plug versions.	For related socket vers	sions see codes of th	e TH384 series	
With fixing nut	(3) Supplied with the fixing	nut			(4) Approved for (	use with class 2 device	s (only for 2 poles ve	rsions)	

## **TEEPLUG®: mount plug&socket connectors (IP68)**



<b>A</b>	External dimensions (mm) <sup>(1)</sup>	N. Poles min - max	Wire cross section min - max (mm²)	Code <sup>(2)(3)</sup>	Thread	Technical data	IP Grade	Series	Pieces/box
	ø36.5 x 70	2 - 3	0.5 – 4.0	THB.406.A1B	M28	25A - 400V	IP68 (10m/1h)	TH406	200
	ø36.5 x 70	2 - 3 - 4 - 5	0.5 – 4.0	THB.406.A1A	M28	17.5A - 400V	IP68 (10m/1h)	TH406	200
<b>TH406</b>	ø36.5 x 70	2 - 3 - 4 - 5 - 6	0.5 - 4.0	THB.406.A1E	M28	17.5A - 400V	IP68 (10m/1h)	TH406	200
With fixing nut	(1) Dimensions are intend	ded when the connectors are	inserted		(2) Plug versions	. For related socket ve	rsions see codes of the	e TH405 serie	

(1) Dimensions are intended when the connectors are inserted

(3) Supplied with the fixing nut

(5) Approved for use with class 2 devices (only for 2 poles versions)

(2) Plug versions. For related socket versions see codes of the TH405 serie

(4) UL approvals only for 3 and 5 poles (learn more on www.techno.it)

#### mini-TEEPLUG<sup>®</sup>: mini plug&socket connectors with insulation piercing system (IP68) For single-pole main cables



External dimensions (mm) <sup>(1)</sup>	N. Poles min - max	Main cable cross section min - max (mm²)	Main cable diameter min - max (mm)	Code	Technical data	IP Grade	Series	Pieces/box
32 x 44 x 130	2	2.5 - 4.0	6.0 - 7.0	THB.370.A2A <sup>(2)</sup>	17.5A - 400V	IP68	TH370	200
32 x 44 x 130	2	4.0 - 6.0	7.0 - 8.0	THB.370.B2A <sup>(2)</sup>	17.5A - 400V	IP68	TH370	200

(1) Dimensions are intended when the connectors are inserted (2) Socket versions. For the related plug version order the code THB.384.P2A

### mini-TEEPLUG<sup>®</sup>: mini plug&socket ultra flat connector (IP67)



	External dimensions (mm) <sup>(1)</sup>	N. Poles min - max	Main cable cross section min - max (mm²)	Code <sup>(2)</sup>	Technical data	IP Grade	Series	Pieces/box
TH420	22 x 84 x 4	2	0.75	THH.420.A2A	6A - 230V	IP67	TH420	200

(1) Dimensions are intended when the connectors are inserted (2) Plug and socket are supplied together

Note: plug and socket connectors are supplied with over-molded cable (H03V2V2-F, 2x0.75mm2). Cable length is 450 mm for both sides.



## **TEEDRUM®:** mini compact circular connectors (IP20)



True ( a a)	External dimensions (mm)	N. Poles min - max	Wire cross section min - max (mm²)	Code	Technical data	IP Grade	Series	Pieces/box
and the second s	ø22 x 26	2 - 3	0.5 - 4.0	THB.021.A1A	32A - 450V	IP20	TH021	400
TH021	23 x 22 x 24	2 - 3 - 4	0.5 - 4.0	THB.033.A4A	32A - 450V	IP00	TH033	400
SDICE EST.	ø26 x 26	2 - 3 - 4 - 5	0.5 - 4.0	THB.021.B1A	32A - 450V	IP20	TH021	400
A								

#### **TH033**

**THO26** 

**TH029** 

**TH027** 

### **TEEBLOCK®:** mini compact linear connectors (IPOO)



External dimensions (mm)	N. Poles min - max	Wire cross section min - max (mm²)	Code	Technical data	IP Grade	Series	Pieces/box
21 x 20.6 x 16.4	2 - 3	0.5 - 4.0	THB.026.B1A	32A - 450V	IP00	TH026	400
30.6 x 20.6 x 15.8	2 - 3	0.5 - 4.0	THB.029.A1A <sup>(1)</sup>	32A - 450V	IP00	TH029	400
29 x 44 x 16	2 - 3	1.5 - 6.0	THC.027.A1A	41A - 450V	IP00	TH027	400
50.7 x 20.8 x 21	2 - 3 - 4	0.5 - 4.0	THB.032.A4B(1)	32A - 450V	IP00	TH032	400
32 x 21 x 16.4	2 - 3 - 4 - 5	0.5 - 4.0	THB.026.A1A	32A - 450V	IP00	TH026	400

(1) Current distributor with double connection (see page 17) Note: TEEBLOCK® connectors are approved for use with stranded and solid cables

### **TEEBLOCK®:** mini compact in-out terminal block with crimp/screw connection (IP54)



1 Alexandre	External dimensions (mm)	N. Poles min - max	Wire cross section min - max (mm <sup>2</sup> )	Code	Technical data	IP Grade	Series	Pieces/box
	21 x 46.3 x 12.6	2 - 3	0.5 - 1.5	THP.112.A3A	17.5A - 450V	IP54	TH112	400
	Note: visit www.techno.it to le	arn more on crimp contac						100

## **TEEGLAND®:** innovative cable glands in co-molding (IP68)





IP Grade S	Series Pieces/box
68 (50m/1h)	TH450 500
68 (50m/1h)	500
68 (50m/1h) T	TH451 500
68 (50m/1h) T	TH451 500
68 (50m/1h) T	TH451 500
68 (50m/1h) T	TH451 500
68 (50m/1h) т	TH450 500
68 (50m/1h)	500
68 (50m/1h) T	TH451 500
68 (50m/1h) T	TH451 500
68 (50m/1h) T	TH452 500
68 (50m/1h) T	TH452 500
68 (50m/1h) T	TH452 500
	000
· · · ·	Series Pieces/box
IP Grade S	Series Pieces/box
IP Grade S	Series Pieces/box
IP Grade S 58 (50m/1h) T 58 (50m/1h)	Series Pieces/box
IP Grade   S     38 (50m/1h)   T     58 (50m/1h)   T     58 (50m/1h)   T	Series Pieces/box TH450 500 500
IP Grade S 58 (50m/1h) T 58 (50m/1h) T 58 (50m/1h) T 58 (50m/1h) T	Series   Pieces/box     TH450   500     TH451   500
IP Grade   S     58 (50m/1h)   T	Series   Pieces/box     TH450   500     TH451   500     TH451   500     TH451   500
IP Grade   S     58 (50m/1h)   T	Series   Pieces/box     TH450   500     TH451   500
IP Grade   S     58 (50m/1h)   T	Series   Pieces/box     TH450   500     TH451   500
IP Grade   S     58 (50m/1h)   T	Series   Pieces/box     TH450   500     TH451   500
IP Grade   S     58 (50m/1h)   T	Series   Pieces/box     TH450   500     TH451   500     TH450   500
IP Grade   S     38 (50m/1h)   T     58 (50m/1h)   T	Pieces/box     TH450   500     TH451   500     TH450   500     TH451   500
IP Grade   S     58 (50m/1h)   T     58 (50m/1h)   T	Pieces/box     TH450   500     TH451   500     TH450   500     TH451   500     TH451   500     TH451   500
	88 (50m/1h) 1   88 (50m/1h) 1

Code

Code

(1) The fixing nut is not included. To be ordered separately (black colour)



Colour versions available upon request.

# **Project references:**

electrical connections under the most extreme conditions





Connection of LED industrial lighting for automotive industry (Germany). Series TH405/TH406 (silicon free).



Connection of street lighting LED Luminaires (Rome, Italy). Series TH405.



Connection of luminaires for Supertree Grove, Garden by the Bay (Singapore). Series TH400.



Connection of facade lighting devices at Birmingham library (UK). Series TH405/TH631.



Connection of LED luminaires (Penang, Malaysia). **Series TH387.** 



Connection of street lighting devices at F1 Grand Prix (Singapore). Series TH405.



*Connection of submersible pumps (France). Series TH400.* 



Connection of lighting points on a sailing boat (New Zealand). Series TH387.



Connection of LED luminaires in cold rooms on a FPSO vessel (Singapore). Series TH387.



Connection of LED luminaires in a car washing plant (New Zealand). Series TH387.



Wall mount connection on a control panel of a bottled water plant (Australia). Series TH387.



Connection of liquid level sensors (Shanghai, China). Series TH451.



Connection of generators for a server room UPS (New Zealand). Series TH405.



Connection of motors (Germany). Series TH450.



Connection of heating cables (France). Series TH211.

### **International client experience**

#### The industrial and creative process.

From its *client experience* Techno has developed the innovative, complete and customized solution for electrical connections.

### FUNCTIONAL\_CREATIVITY + FOREFRONT\_TECHNOLOGIES + INNOVATIVE\_MATERIALS = MORE RELIABLE AND AFFORDABLE SOLUTIONS

The continuous analysis of the application conditions and operational modalities in the factory and site over the last 10 years have enabled Techno to develop specific solutions which have become off-the-shelf products. This results in higher quality together with cheaper installation, maximum reliability and easy maintenance.

Techno continues to offer customizable products and, at the same time, it has strengthened its designing and productive structure to developed ad hoc customized solutions. With an Italian design and all the positive characteristics of "made in Italy" products.

