

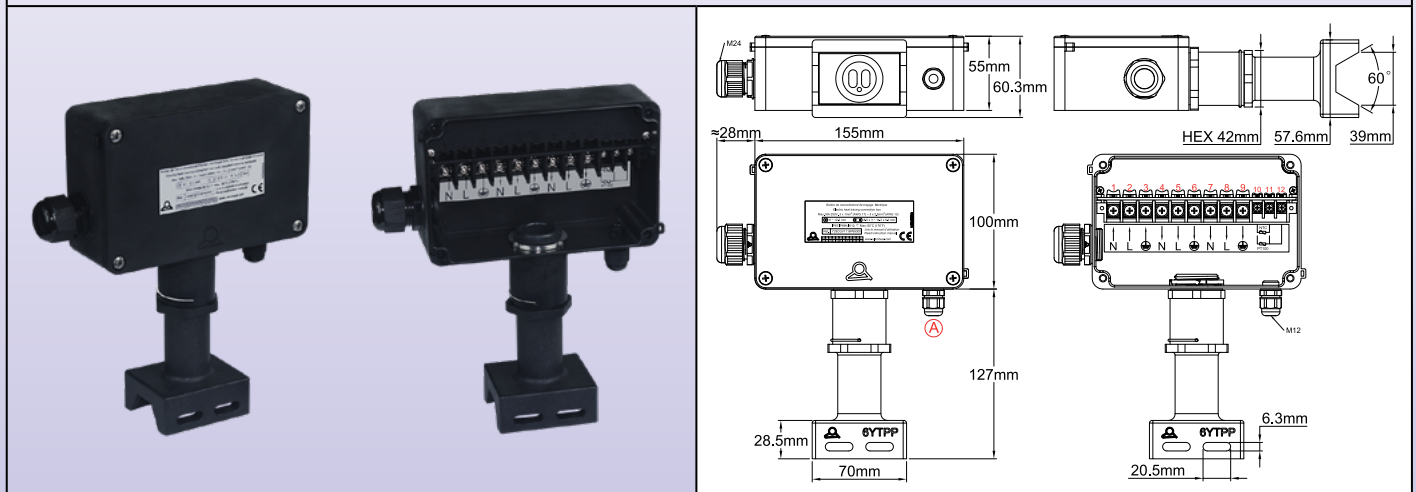
Connection box, with pipe mounting leg, for heat tracing cables, for **two traditional or self-regulating cables, one power supply cable and temperature sensor cable**



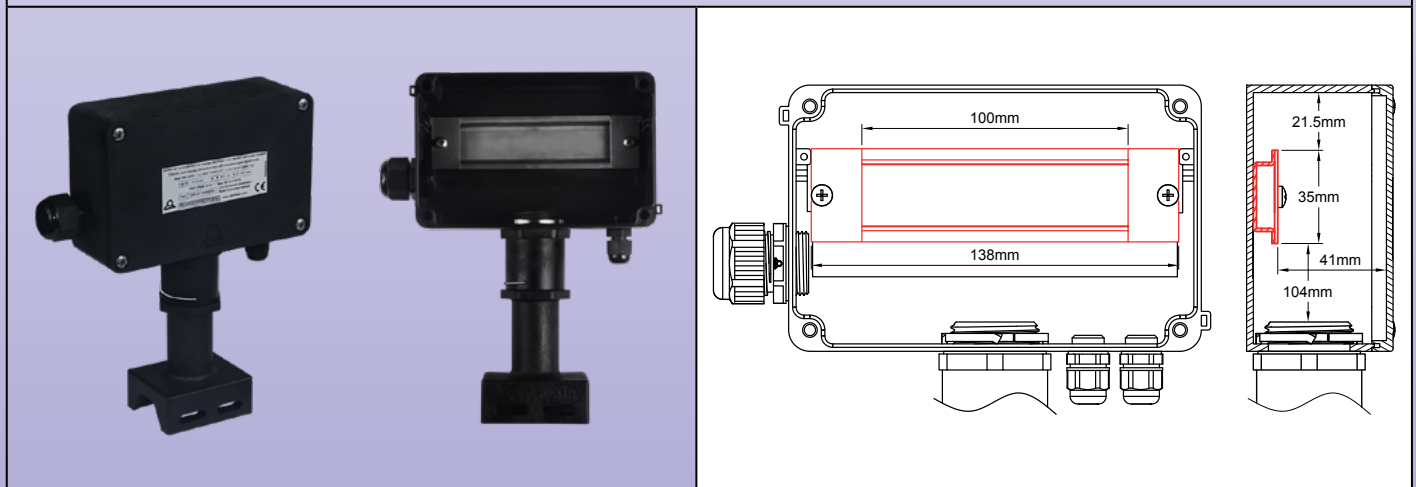
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4 parallel ways	Screw and square washer terminals	Wire gauge	Cables diameters		Type
		$9 \times 1 \sim 2.5\text{mm}^2$ $+ 3 \times 0.5 \sim 1.5\text{mm}^2$			Y29C & Y29D

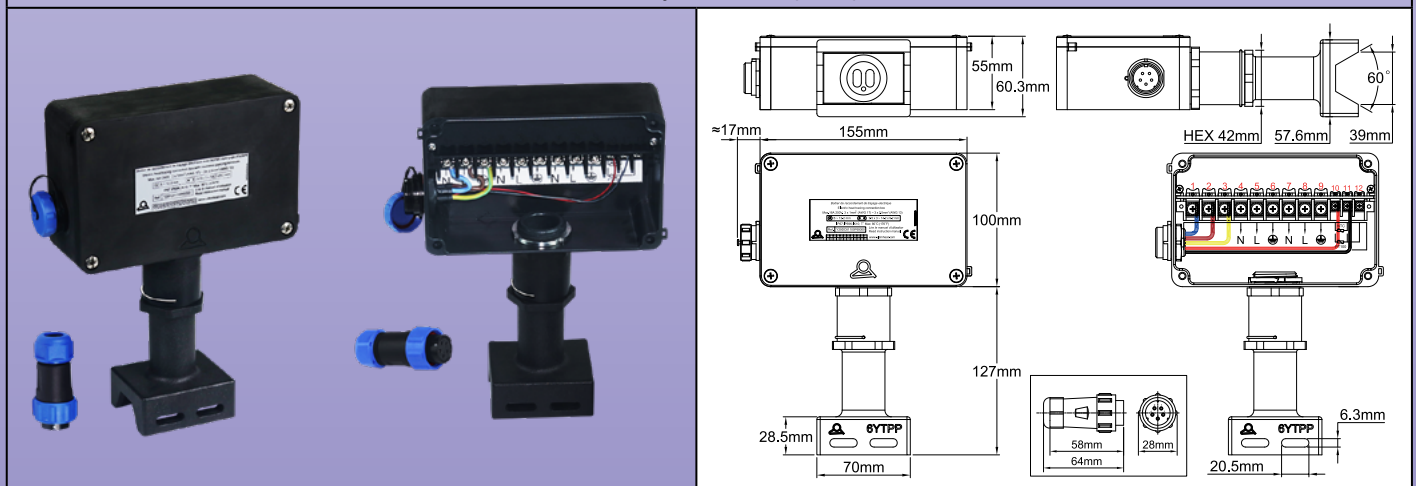
With M24 and M12 cable glands (Y29C) and built in connection block



With M24 and M12 cable glands (Y29C) and Din rail for customer's connection blocks



With 5 ways connector (Y29D)



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Example of connection with connector on an electronic temperature control box



Example of connection by cable gland on an electronic temperature control box



Example of connection with a wall mounting ambient temperature electronic thermostat type 6F62NC.



Example of mounting on the rear side of a mechanical bulb and capillary thermostat for measurement of pipe temperature



Example of mounting an antifreeze disc thermostat type 49JB on a 20mm diameter hole made on a lateral side.



Example of mounting temperature sensor type TSJ on a 20mm diameter hole made on a lateral side.

Applications

This box allows to connect **a power supply cable to 2 heating cables**. It also allows the conductors of the temperature sensor cable to be connected. **The mounting on a cylindrical foot allows a simple crossing of the thermal insulation of the piping and its protective sheath by a simple hole diameter 50mm.** The foot can thus be placed at the same time as the temperature sensor and the heating cables, and remains on standby during the installation of the insulation and the protective sheath. The connection box then can be mounted when these operations are completed, and the cables can be connected at this time. The terminal blocks are easily accessible and the **connection is simple, including for self-regulating flat cables with metallic protective braid.**

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Main features

Material: Polyamide 6 black, 160mm × 100mm × 60mm (Cable glands not included). Excellent UV resistance.

Waterproof grade: IP66, IP69K (Withstand hot pressure hot water washing).

Impact resistance: IK10 (highest), except cable glands and connector.

Mounting: It is made by a central foot in PPS resistant to temperature, being mounted on the pipe by two nylon cable ties or two metal hose clamps. The distance between the housing and the piping is 110 to 120mm (Varies depending on the diameter of the piping)

Terminal block: All terminals are fitted with screws with a vibration resistant square washer, allowing clamping on all types of conductors, flexible or rigid. **The connection jumpers between the terminals are prewired and invisible.**

- Allowable sections: 1mm² to 2.5mm² on the connection terminals of the power cables and the heating cables; 0.5mm² to 1.5mm² on the terminals for the temperature sensor.

- Maximum admissible current: 16A 250V

Power supply input:

3 possible solutions

-1 / By M24 cable glands, with NBR 70 Shore gasket (Silicone is possible on request).

Maximum cable diameter: 6; 8 or 12.2mm depending on the gasket installed. (Comes with a set of 3 gaskets covering the different ranges of diameters).

-2 / By 5-way waterproof connector (3 ways for power supply conductors and 2 ways for the temperature sensor)

-3 / By M25 cable gland (available on request).

Input of the temperature sensor cable, coming from the temperature control system:

2 possible solutions

- By the 5-way connector (see above).

- By M12 cable gland.

Heating cables outlet: By the central foot, with silicone seals

- Limit sizes of flat cables:

- from 8 × 5 to 9.5 × 6mm

- from 9.5 × 2.5 to 11 × 3.5mm

- from 11 × 4 to 13 × 6mm

(Comes with a set of 3 fittings covering the different dimensions).

For more information on the different seals used, see the catalogue page about the 6YTPP pipe mounting feet.

Temperature sensor conductor output:

- **Two possible solutions**

- 1 / By the central foot, which has a passage for cables from 2.8 to 3mm, usual size for NTC, PT100 and thermocouples.

- 2 / By an M12 cable gland

Inviolability: The box can receive one or two seals (Comes with 5 red seals)

Easy assembly: Assembly is done with the lid open, with wide access.

Compatibility: On its rear side, this box has M4 threaded inserts to mount mechanical thermostats of the Y0D8, Y0D9, Y0A8, Y0A9, Y0D9 series (see other pages of this catalogue), allowing a measurement of the ambient temperature or of the pipe surface temperature.

Standard variation: Replacement of the connection block by a Din rail for customer's connection blocks.

Options:

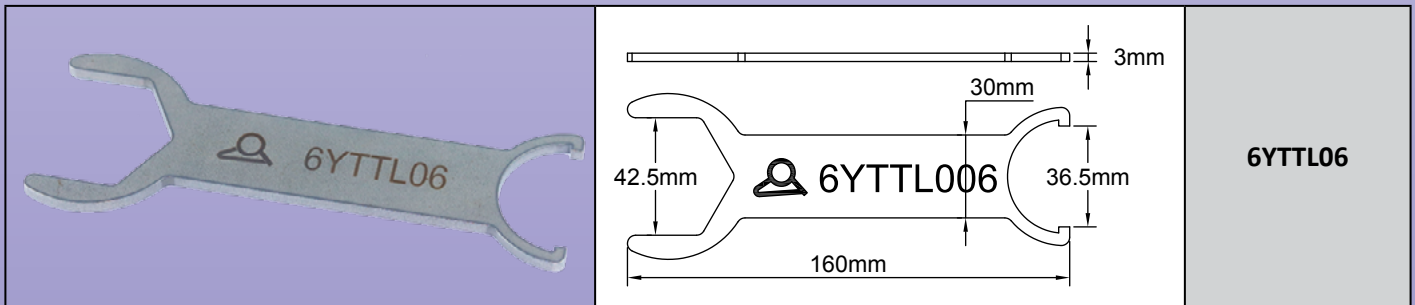
- Additional M20x1.5 thread for antifreeze disc thermostat or ambient temperature sensor incorporation.

- Empty box without terminal block and without Din Rail

- Box without drilling or cable gland or foot threads.

Consult us for parts numbers of simplified models with only one dimension of cable gland gasket for round wire and flat wires and customized label, (OEM versions).

Wrench for leg assembly (To be ordered separately)



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Main references (1" foot included)

References		M24 cable gland	M12 cable gland	5 ways connector	Leg seal with temperature sensor crossing*	Leg seal without temperature sensor crossing*
Built in connection block	Rail Din					
Y29CGYS300P6930	Y29CGYS300P6DN0	1	0	0	1	0
Y29CGYS316P6930	Y29CGYS316P6DN0	1	1	0	1	0
Y29EGYS326P6930	Y29EGYS326P6DN0	1	2	0	1	0
Y29DC6S300P6930	Y29DC6S300P6DN0	0	0	1	1	0
Y29DC6S316P6930	Y29DC6S316P6DN0	0	1	1	1	0
Y29CGYT300P6930	Y29CGYT300P6DN0	1	0	0	0	1
Y29CGYT316P6930	Y29CGYT316P6DN0	1	1	0	0	1
Y29EGYT326P6930	Y29EGYT326P6DN0	1	2	0	0	1
Y29DC6T300P6930	Y29DC6T300P6DN0	0	0	1	0	1
Y29DC6T316P6930	Y29DC6T316P6DN0	0	1	1	0	1

* Supplied with a set of 3 seals covering the main dimensions of oblong heating cables and a cable passage plug if you use a single heating cable

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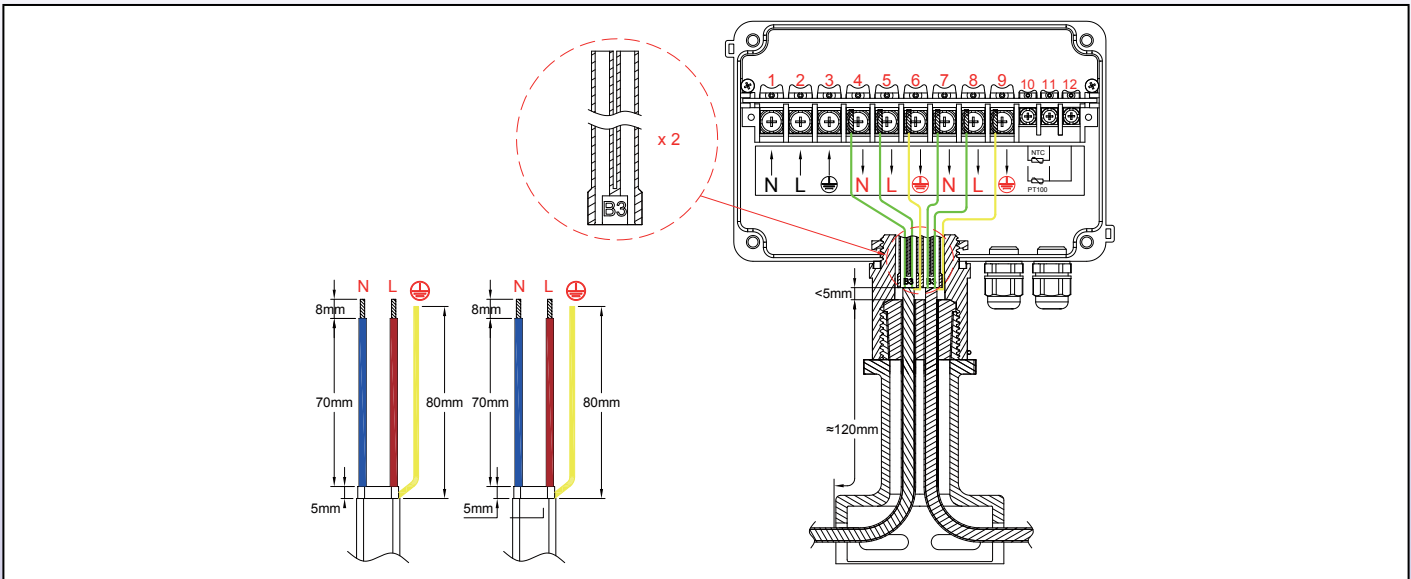
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Stripping dimensions of heating cables*.

(More detailed instructions are available in the technical introduction).

* : These dimensions may change on models with DIN rail and customer's connection block.



Self-regulating cables assembly steps

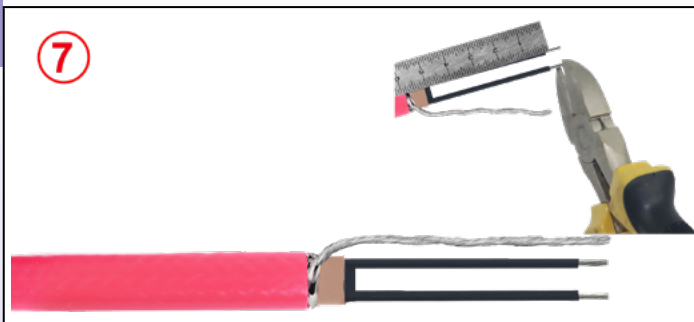
<p>1</p> <p>1 : Cut the cable, remove the external jacket on the requested length.</p>	<p>2</p> <p>2 : Unweave the braid on all this length with a tool with round edges or a screw driver .(For more details about this step #2, read the technical introduction).</p>
<p>3</p> <p>3 : Twist the braid to make a round wire.</p>	<p>4</p> <p>4 : Remove the electric insulation sleeve on the requested length.</p>
<p>5</p> <p>5 : Cut and remove the heating section between the two bus wires on the requested length.</p>	<p>6</p> <p>6 : Strip off the semiconductor plastic remaining on the bus wire ends to the requested length.</p>

* These exclusive tools are available in accessories section

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7 : Cut the stripped bus wires and the ground wire to the requested length.



8 : Place the foot on the heating cables and on the temperature sensor cable, bringing them out from above, then slide the gasket over the cables. The outer insulating sheath must protrude from the gasket.



9 : Pour RTV silicone inside the main hole of the silicone boot.



10 : Fill the mouth of the silicone boot with silicone resin (RTV). Slide the boot over the conductors of the heating cables, leaving the earth conductor outside. These boots can also be replaced by a heat-shrinkable tube.



11 : Compress the seal by screwing the upper part of the foot. When tightening is complete, a small spring comes to block the assembly (To disassemble, it is necessary to remove this small semi-circular spring).



12 : Place the gasket in the upper recess of the foot, then the box above. Orient the housing according to the desired position, then place and tighten the toothed nut until it locks.



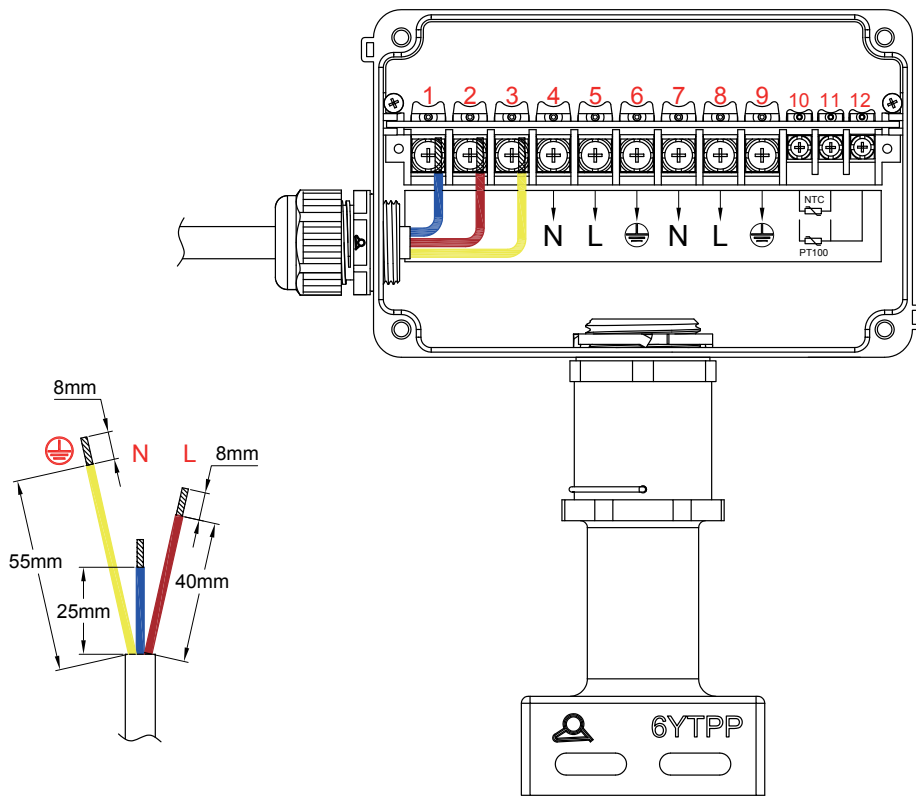
13 : Connect the conductors and the temperature sensor according to the wiring diagram. Connect the power supply cable. Close the control box.

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Stripping dimensions of power supply cable.

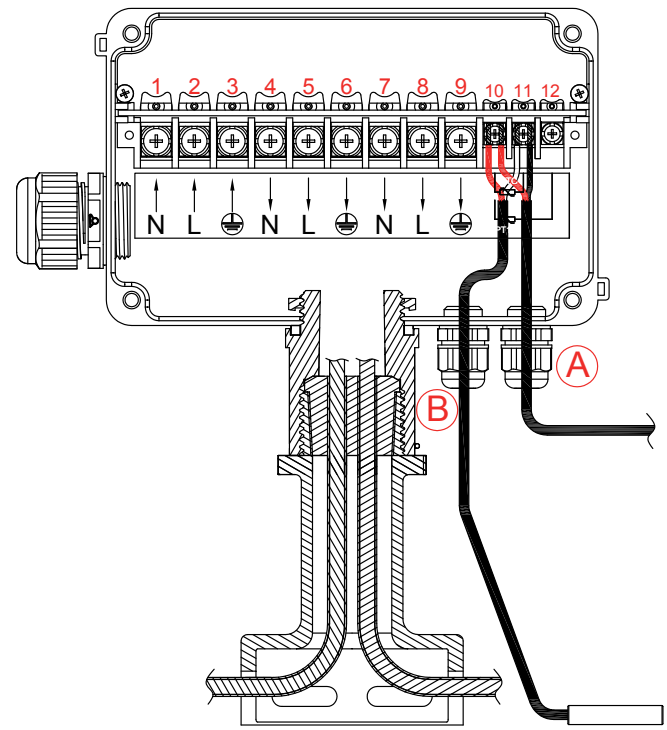
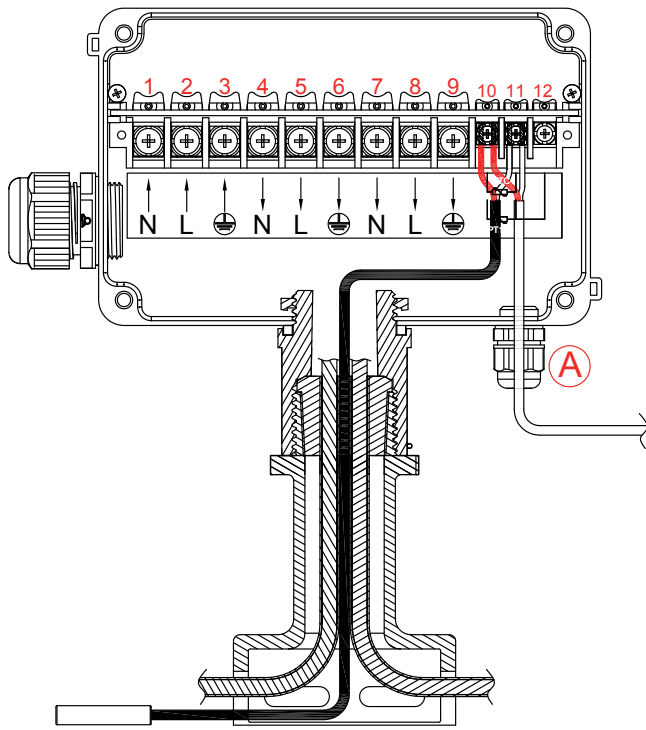
(These dimensions may change on models with DIN rail and customer's connection block)



Round cable assembly operations (Types with M24 cable gland)

<p>1 : Remove outer insulation on round cable as requested by drawing. Eventually, crimp cable shoes. Slide the cable gland nut on the cable. Select the compatible diameter gasket and slide it on the cable.</p>	<p>2 : Put the neutral and line wires inside the screw terminals and tighten them. Recommended torque 1.6 Nm.</p>
<p>3 : Slide the ground wire inside the ground terminal and tighten the screw. Recommended torque 1.6 Nm</p>	<p>4 : Slide the round cable gasket into the cable gland and tighten the nut. Maximum torque 6N.m.</p>

The 2 ways of temperature sensor cable wiring to the pipe



By the foot gasket :

The temperature sensor cable from the control system arrives through the M12 cable gland (A), and is connected to the terminal block. It then goes back to the piping through the foot gasket. A variant consists in having it arrive by the M24 cable gland or by the 5-way connector. The temperature sensor cable can be 2-conductor (NTC, Pt100 2-wire or thermocouple) and is then connected to terminals 10 and 11, or 3-wire (Pt100 3-wire) and is then connected to terminals 10, 11 and 12.

By independent M12 cable gland :

The temperature sensor cable from the control system arrives through the M12 cable gland (A), and is connected to the terminal block. It then goes back to the piping through a second M12 cable gland (B). A variant consists in making it arrive by the M24 cable gland or by the 5-way connector. The temperature sensor cable can be 2-conductor (NTC, Pt100 2-wire or thermocouple) and is then connected to terminals 10 and 11, or 3-wire (Pt100 3-wire) and is then connected to terminals 10, 11 and 12.