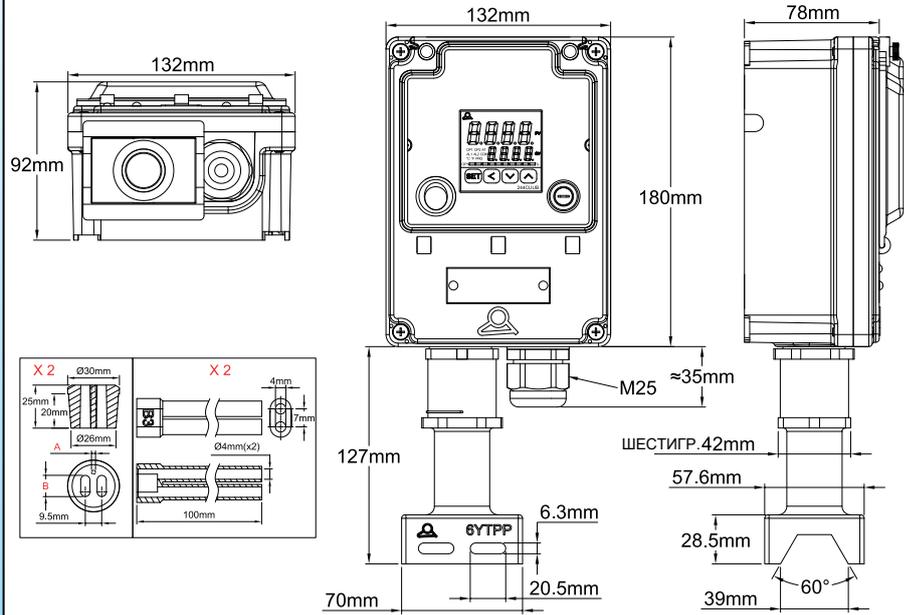


Electronic temperature controller with double digital display, multi-sensors, PID or ON-OFF action, for heat trace pipe temperature control, vertical foot mounting on pipe



Temperature ranges	Mounting	Adjustment	Sensor	Action type	Type
Multi-parameters	Vertical foot on pipe	Digital double display	Multi-parameters	Multi-parameters	Y8WJ-Z



Example of assembly on pipe

Applications

These waterproof control boxes designed for **vertical mounting on pipes** allow to control the surface temperature of pipes **on site**. The connection to the heating elements and the temperature sensor is made by a pipe mounting foot incorporating the seal.

The electronic controller used is designed to be **the most universal**. It is totally configurable. Its use requires reading and understanding of its instructions of use.

It includes an auto-tune function allowing automatic adjustment of PID parameters. The incorporation of a microprocessor using Fuzzy Logic technology makes it possible to reach a predetermined setpoint as quickly as possible, with a minimum of overheat during disturbances related to the ramp-up or the external load.

A 20A 250V solid state relay board is included in standard.

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The temperature sensor input is configurable, and in particular allows the use of Pt100 RTD

The use of a wired temperature measurement sensor, which can be disconnected, allows to overcome the problems of wall crossing of bulb thermostats, the capillary of which cannot be cut, and to proceed with installation of connection and control boxes after mounting the heating cables and the temperature sensor, installation of the pipe insulation and installation of the insulation protection sheath.

Main features

Enclosure: IP69K, reinforced PA66, with polycarbonate window access. Sealable cover and window.

Wall mounting: Four removable and rotatable legs.

Assembly: Pipe mounting by PPS foot with heating cables crossing watertight seal. Two passages are provided in the foot for tightening it on the pipe by two nylon ties or metal hose clamps.

Cable gland and foot: Mounted on a removable board, facilitating assembly. This board has an M25 cable gland for the power supply cable. The heating cables exit through the foot. (The PPS foot is shipped unassembled on the box)

Foot gasket: Is mounted inside the foot as standard, a silicone seal designed for two heating cables and one hole for temperature sensor cable dia. 2 to 3mm. (For more information about these seals, see the catalogue page on 6YTPP pipe mounting legs)

Accessories: Are included two flexible boots in silicone with two bus wire funnels, length 100mm, intended to shield the conductors of the self-regulating cables after cutting off the heating zone. (For more information about these boots, see the accessories pages 6YTNB in this catalogue).

Electrical connection: On internal terminal block with screw terminals

Cable gland: One M25 cable gland for the power supply cable.

Switching devices: Main illuminated switch and safety fuse

Controller: Double display, of process value and of set-point

Action: PID with automatic parameters adjustment by auto-tune function. It can also be set in ON-OFF action with adjustable differential

Sensor input: Configurable for Pt100, K thermocouple and other sensors

Power output: 20A 230V solid state relay.

Alarm: 3A 230V relay.

Display: 4 digits display configurable in °C or °F

Power supply: AC 220-230V 50-60Hz.

Accuracy: ±1°C (±2°F) or 0.3% end of scale ± one digit.

Self-testing: Over-scale, under-scale, and open sensor circuit.

Ambient temperature: -10 to 60°C, 20 to 85% relative humidity, non-condensing.

Part numbers, temperature sensor not included**

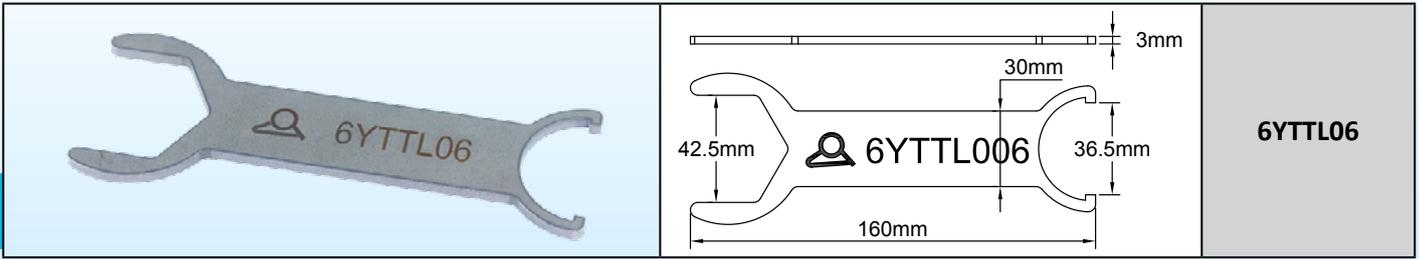
References	Holes in the leg seal*
Y8WJU021D0200AUZ	
Y8WJU021D0100AUZ	
Y8WJU021D0300AUZ	

* This seal is shipped with a plug allowing to use only one heating cable.

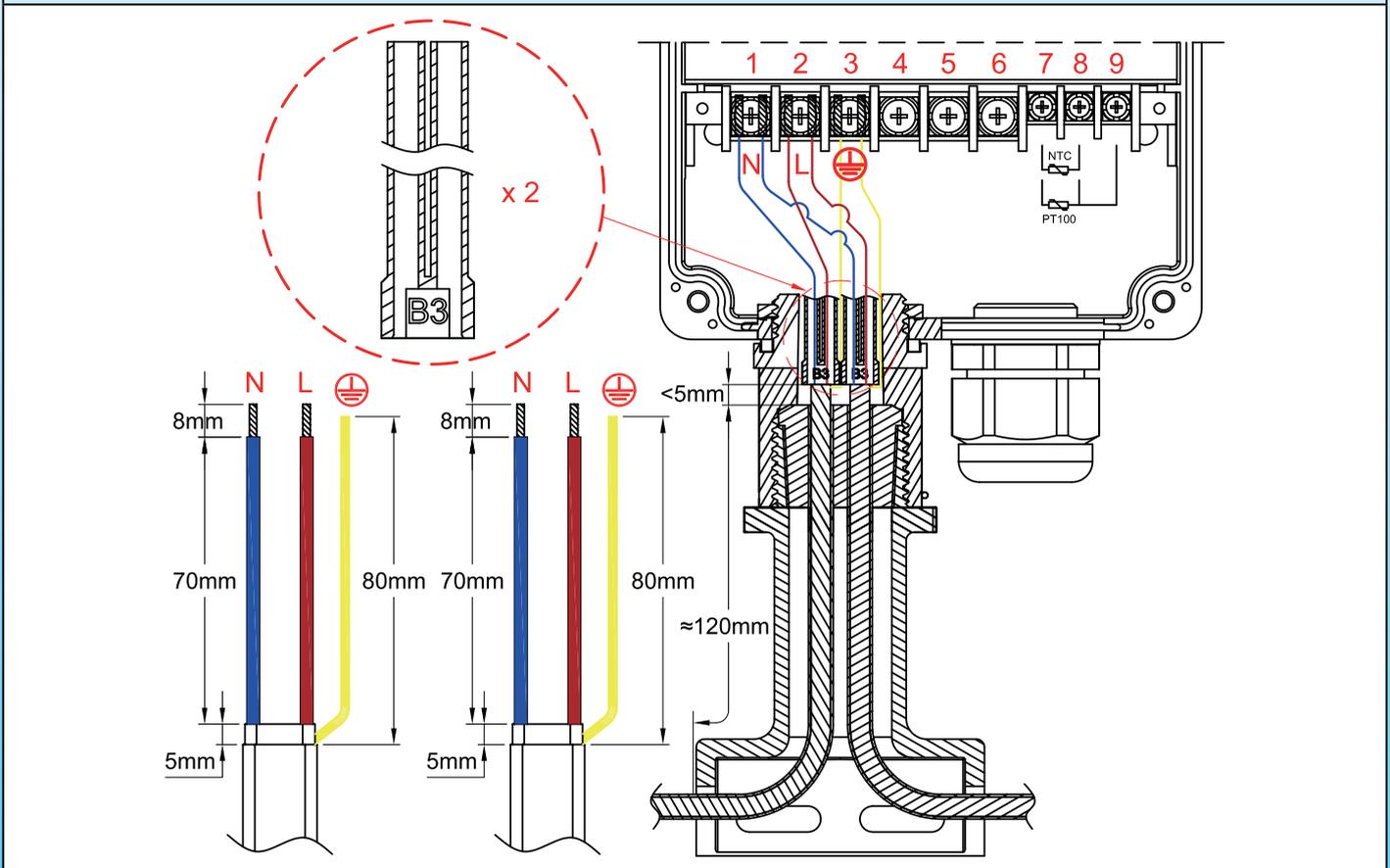
** For compatible temperature sensors, see the page on TSR5 products in this catalogue.



Wrench for leg assembly (To be ordered separately)



Stripping dimensions of the braided self-regulating cables



Self-regulating cables assembly steps

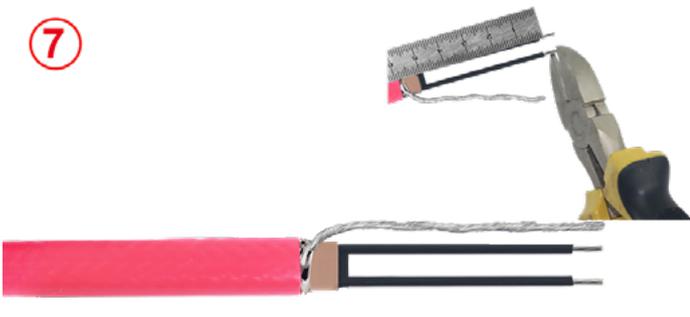
<p>①</p>	<p>②</p>
<p>1: Cut the cable, remove the external jacket on the requested length</p>	<p>2: Unweave the braid on all this length with a tool with round edges or a screw driver. (For more details about this step #2, read the technical introduction).</p>

* These exclusive tools are available in accessories section

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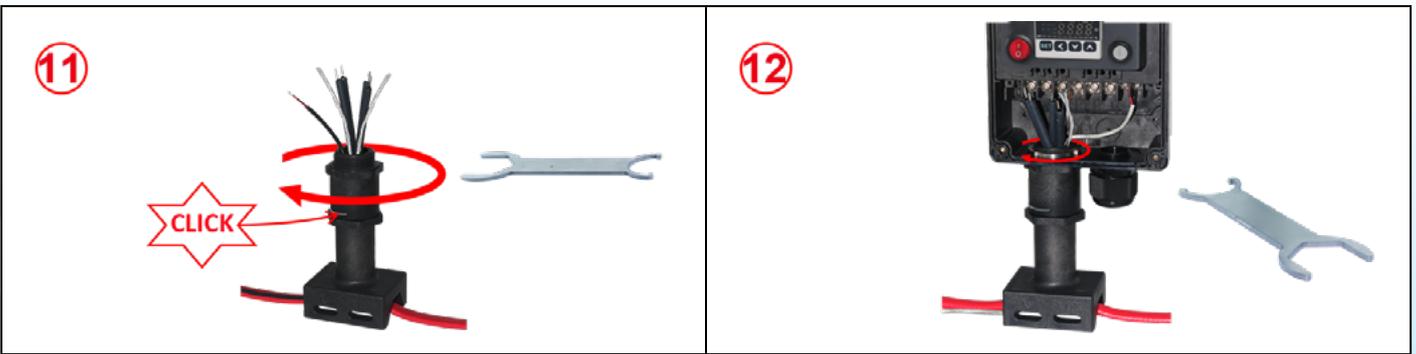


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<p>3: Twist the braid to make a round wire.</p>	<p>4: Remove the electric insulation sleeving on the requested length.</p>
	
<p>5: Cut and remove the heating section between the two bus wires on the requested length.</p>	<p>6: Strip off the semiconductor plastic remaining on the bus wire ends to the requested length.</p>
	
<p>7: Cut the stripped bus wires and the ground wire to the requested length.</p>	<p>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.</p>
	
<p>9: Fill the mouth of the silicone boot with silicone resin (RTV).</p>	<p>10: Slide the boot over the conductors of the heating cables, leaving the earth conductor outside.</p>

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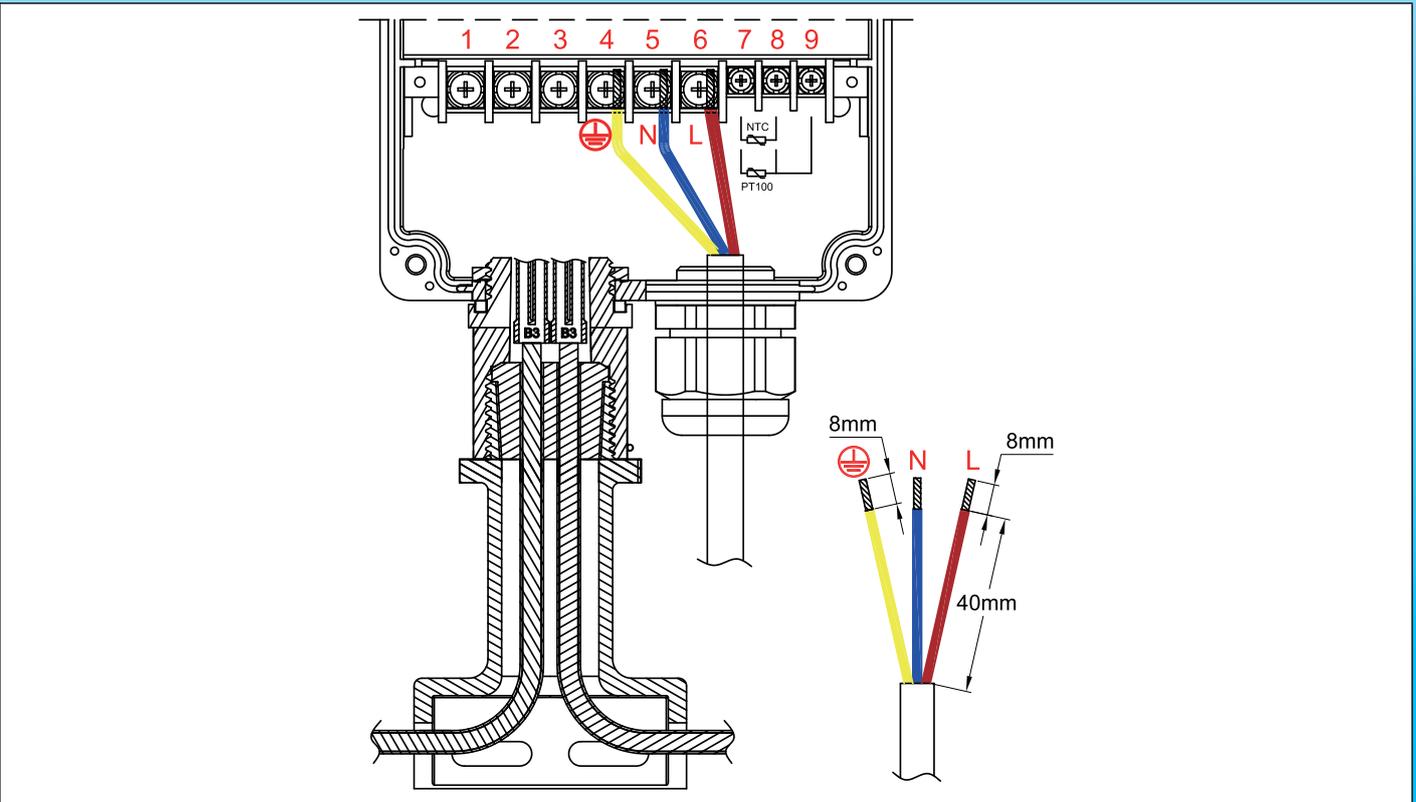
11: Compress the seal by screwing the upper part of the foot. When tightening is complete, a small spring comes to block the assembly (To disassemble, it is necessary to remove this small semi-circular spring)

12: Place the gasket in the upper recess of the foot, then the control unit 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.

Stripping dimensions and wiring of the power supply cable



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