

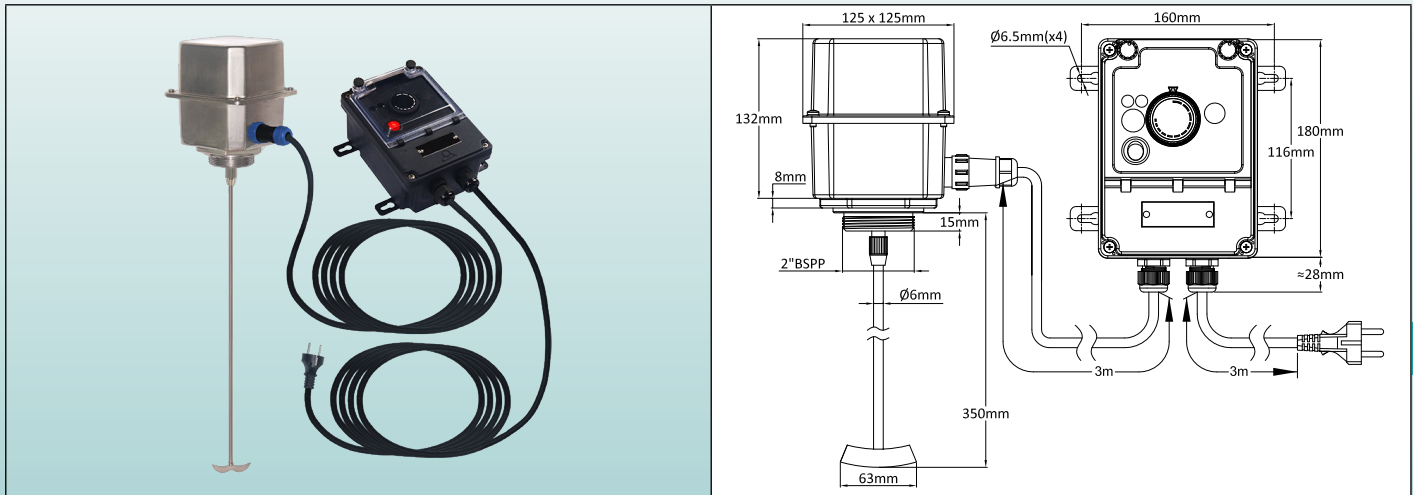
# Temperature controls and temperature homogenization





# Stirrer speed controller with IP65 enclosure and compact full stainless steel stirrer for drums and IBC

Power	Assembly	Immersed length	Type
60W, 12VDC	- On drums with 2" threaded filling hole - On IBC (need to drill hole on the plastic cap)	350mm	<b>Y8WTZ, 9H060</b>



## Main Features

Reheating by jacket heaters of barrels and bulk container type IBC is often slowed by the duration of temperature homogenization, when low-viscosity or low thermal conductivity fluids are used. Deviations of more than 20°C are very often found during heating between the different areas of these containers. The use of a stirrer makes it possible to shorten the reheating time by increasing the speed of the heat transfer at the walls and by equalizing the temperature. This stirrer is screwed onto the 2" threaded filling port of the 30-gallon (100-liter) and 55-gallon (220-liter) metal drums. In the case of bulk containers (IBC), whose filling orifice comprises a plastic cap of variable size according to the manufacturers (100 to 150mm), it is necessary to make a hole of 60 mm in this cap and to tighten the stirrer in this hole by a locknut.

Adjustment of its rotation speed is achieved by a low voltage DC supply. This power supply is located in a remote box, connected by a 3m cable equipped with a quick connector.

The rotation speed must be adapted to the viscosity of the fluid. We recommend using this stirrer only when the temperature of the heated fluid is 10 to 20°C below the chosen reheating temperature. The stirrer should not be run in frozen or too viscous products as this will trip the fusible overcurrent protection system.

Stirrers come in two versions: with and without built-in temperature sensor. The temperature sensor allows to check the temperature at the center of the heated product.

The shaft of the stirrer can be disassembled for replacement or to be shortened.

Picture	Drawing	Description
		<p>60 Watts 12V DC Stirrer with 125mm x 125mm stainless steel case, 2" fitting and 350mm shaft, <b>without temperature sensor.</b></p>
<p>Reference</p>		<p>9H0601252035001</p>

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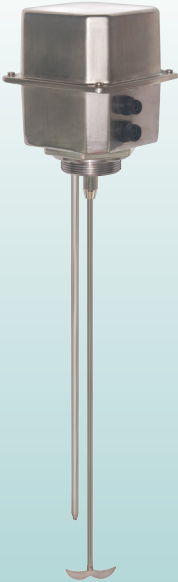
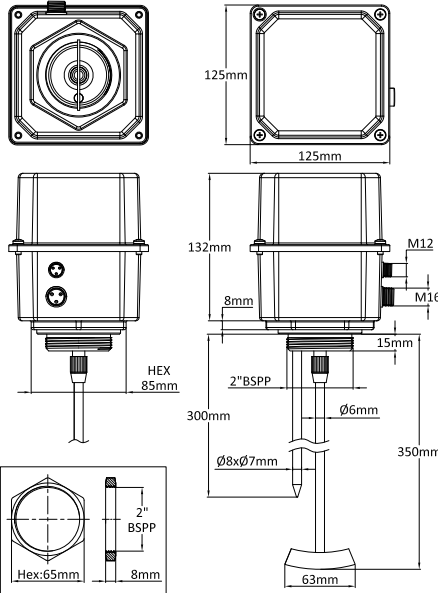

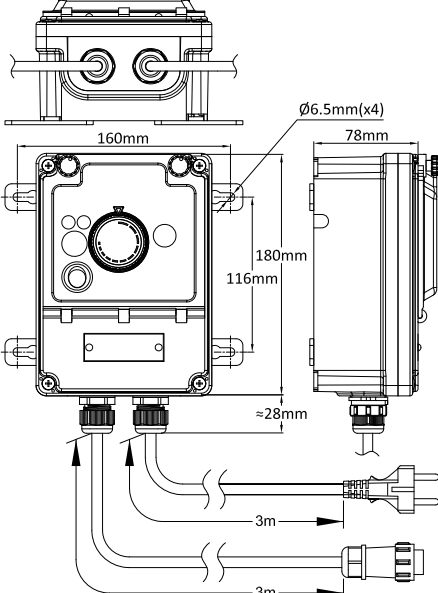


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Cat21-2-11-3

# Stirrer speed controller with IP65 enclosure and compact full stainless steel stirrer for drums and IBC

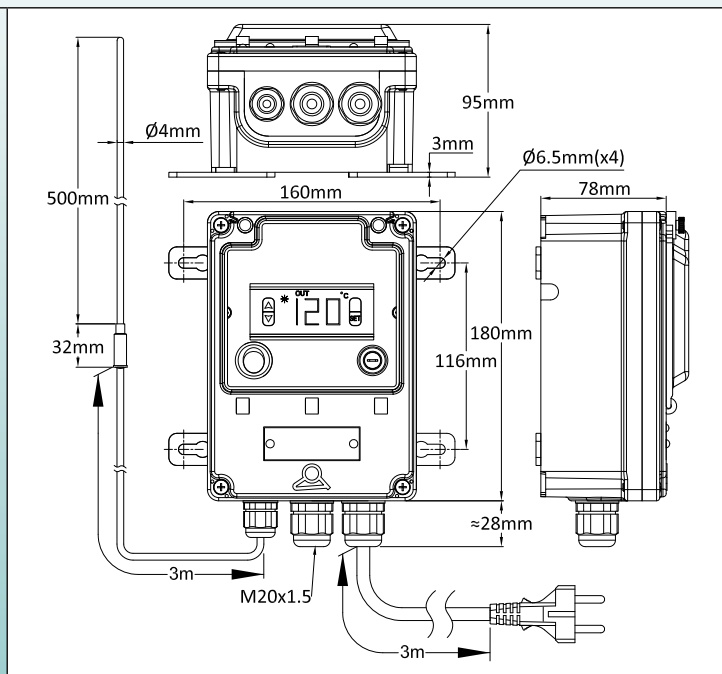
Picture	Drawing	Description
		<p>60 Watts 12V DC Stirrer with 125mm x 125mm stainless steel case, 2" fitting and 350mm shaft, <b>with temperature sensor.</b></p> <p>Reference with <b>NTC</b> sensor</p> <p style="text-align: center;">9H06012520350N2</p> <p>Reference with <b>Pt100</b> sensor</p> <p style="text-align: center;">9H06012520350P2</p>
		<p>Stirrer speed adjustment control with 3 meters power supply cord and 3 meters cord and connector for stirrer.</p> <p>Reference</p> <p style="text-align: center;">Y8WTZ017010000UN</p>

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# Digital display liquid temperature controller with **NTC** 500mm long temperature sensing probe for temperature measurement at the centre of containers

Measurement range	Assembly	Immersed length	Type
0-120°C	- On drums - On IBC	500mm	<b>Y8WH-E</b>



## Main features

The heating of the containers (drums or IBC's) by jacket heaters gives only the indication of the wall temperature which can be up to 20°C higher than the temperature in the center. To know the temperature in the center of the liquid, it is necessary to immerse a temperature probe. This device, with **on-off action and NTC sensor** allows you to measure this temperature in the center, and possibly use it to end the reheat process, or trigger an alarm.

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

**Wall mounting:** Four removable and rotatable legs.

**Electrical connection:** On internal connection block.

**Switching devices:** Main power illuminated switch and safety fuse.

**Controller:** With very simple end-user interface. Change of set point is made without password, with up and down keys.

**Action:** On-Off with adjustable differential.

**Sensor input:** NTC, R@25°C:10 Kohms (±1%), B@25/50°C: 3380 Kohms (±1%).

**Power output:** 16A 230V res. Relay, SPDT. Can be used to switch power or trigger alarm.

**Display:** 3 digits display in °C or °F of process temperature

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

**Accuracy:** ±1°C (±2°F) or 0.3% ES± 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.

**Temperature display range:** - 45 to +120°C (41 to 248°F)

**Resolution:** 0.1° within the -19.9° to 99.9° range, 1°C from 100 to 120°C.

## Main references

Model with 500 mm long NTC temperature sensor, with power supply cord, 3 meters long 3x1.5mm <sup>2</sup> , euro plug*	Without temperature sensor, for use with other model of NTC temperature sensor, with power supply cord, 3 meters long 3x1.5mm <sup>2</sup> , euro plug*
Y8WHQ0210100EAUQ	Y8WHQ0210100AUQ

\* UL plug: replace the last character Q by R

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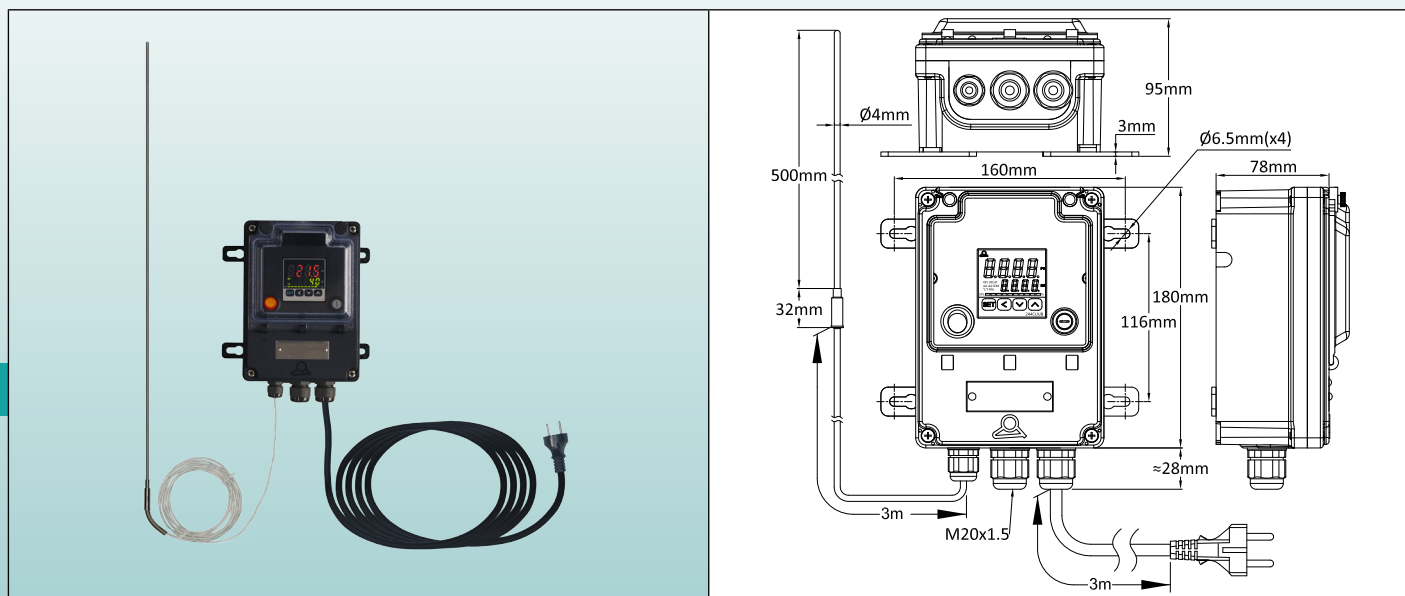
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Cat21-2-11-5

# Double digital display liquid temperature controller with a Pt100 500mm long temperature sensing probe for temperature measurement at the centre of containers

Measurement range	Assembly	Immersed length	Type
Configurable	- On drums - On IBC	500mm	<b>Y8WJ-F</b>



## Main features

The heating of the containers (drums or IBC's) by jacket heaters gives only the indication of the wall temperature which can be up to 20°C higher than the temperature in the center. To know the temperature in the center of the liquid, it is necessary to immerse a temperature probe. This device, with **PID action and Pt100 sensor** allows to measure this temperature in the center, and to use it **to control the heating process according to this temperature**, and also to trigger a high or low alarm.

**The use of this system to control the temperature requires a jacket heater equipped with a surface temperature limiter.**

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

**Wall mounting:** Four removable and rotatable legs.

**Electrical connection:** On internal connection block for the relay output. With 3 meters power supply cord, 3x1.5mm<sup>2</sup>, rubber insulated, euro plug (euro plug in option)

**Switching devices:** Main power 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.

**Sensor input:** Pt100

**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% ES± one digit.

**Self-testing:** open sensor circuit.

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

**Temperature display range:** Configurable

**Resolution:** 0.1°.

## Main references

Pt100 x 500mm probe, with 3 meters long power supply cord, 3x1.5mm <sup>2</sup> , euro plug	No temperature sensor, for other model of temperature sensor use, with power supply cord, 3 meters long 3x1.5mm <sup>2</sup> , euro plug	Pt100 x 500mm probe, with 3 meters long power supply cord, 3x1.5mm <sup>2</sup> , euro plug and 3 meters cord and connector for standard jacket heater
Y8WJW021D100GFUQ	Y8WJW021D1000FUQ	Y8WJW021D100GFUS
*UL plug: replace the last character Q by R	*UL plug: replace the last character Q by R	*Fiche UL : remplacez le dernier caractère S par T

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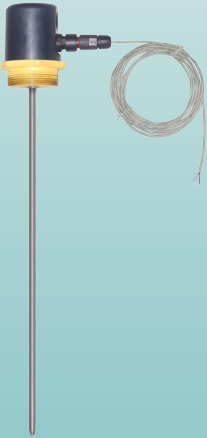
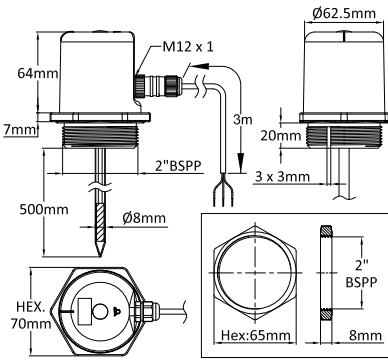
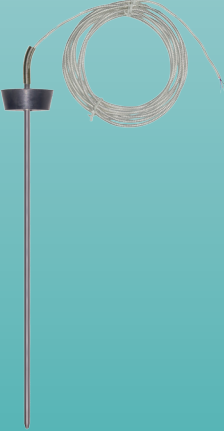
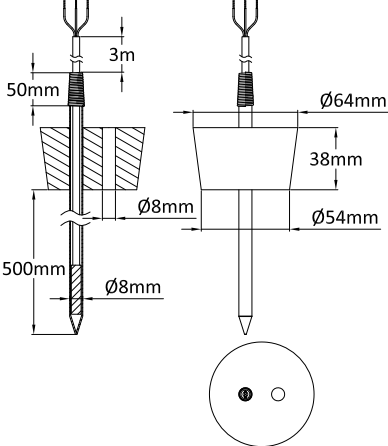


# 500mm long immersed probe temperature sensors, NTC or Pt100 for drums and IBC

Sensors type	Assembly	Immersed length	Type
NTC and Pt100	- On drums - On IBC	500mm	<b>TNR80 TSR80</b>

## Main features

These temperature sensors, which can be mounted on the 2» holes of the drums, have been developed to ensure a good positioning with the end of the sensor near the center of the drum, but also the air communication to the atmospheric pressure. These models can also be mounted on IBCs of 1000 liters or more, by making an appropriate diameter hole in the filling plastic cap. They exist with NTC sensor and Pt100 sensor and are compatible with the control devices described in the previous pages using the same type of sensors. Their immersed length is 500mm, but other lengths can be made on request.

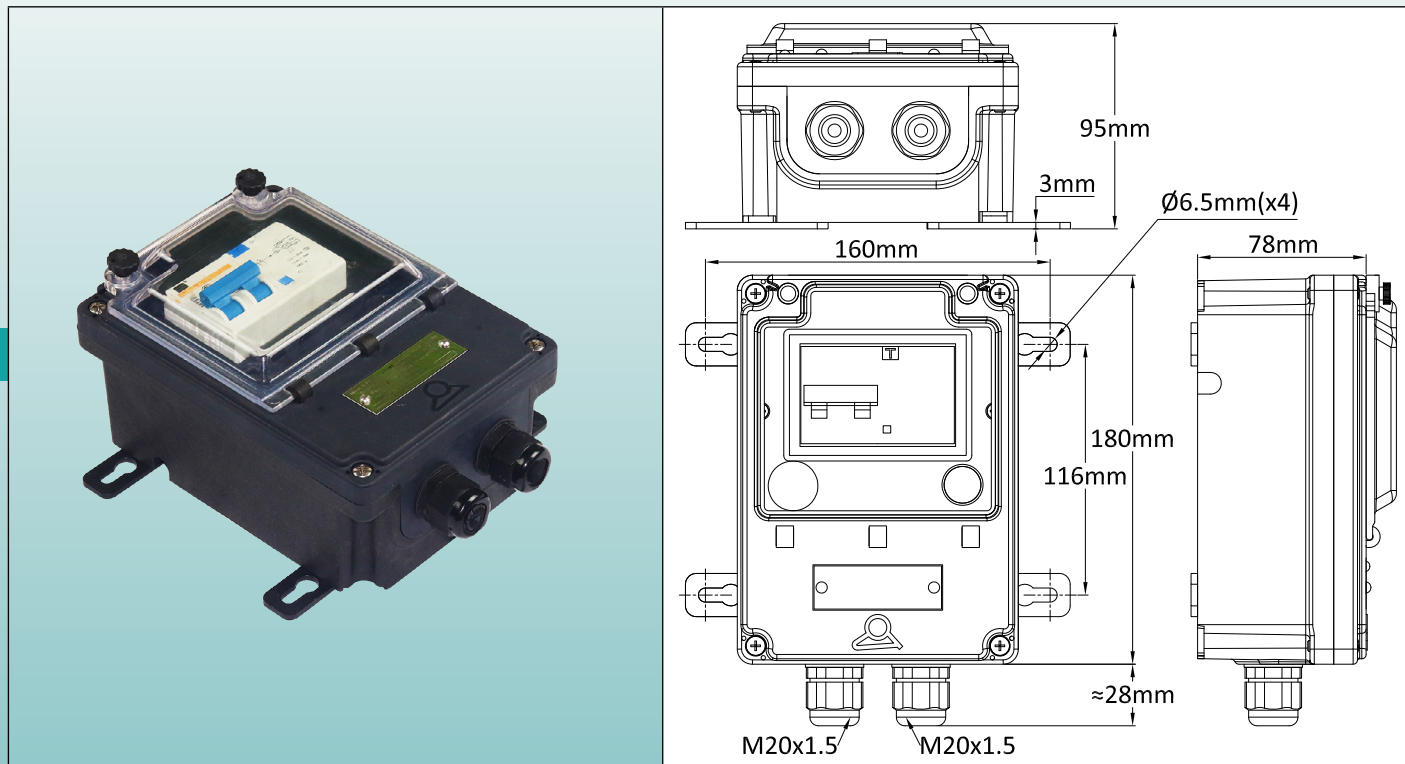
Picture	Drawing	Description
		<p>Waterproof PA66 connection box, 2» BSPP brass fitting with air intake, 3 meters cable. The connector on the connection box allows separate the cable temperature sensor to facilitate screwing. 2" brass nut included.</p> <p>500mm type with NTC sensor</p> <p>TNR80E00I300B1K6</p> <p>500 mm type with Pt100 sensor</p> <p>TSR80E00I300BBK6</p>
		<p>Single probe, with air intake, sliding in a silicone cap, can be used on glass, plastic or metal containers</p> <p>500mm type with NTC sensor</p> <p>TNR80E00I300S1K6</p> <p>500 mm type with Pt100 sensor</p> <p>TSR80E00I300SBK6</p>

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## 20mA, 20A ground fault and overcurrent breaker

Enclosure	Overcurrent sensitivity	Current leaks sensitivity	Type
IP69K	20A	20mA	<b>Y8WSY</b>



### Main features

The GFCI is a device that combines overcurrent and short circuit protection with current leakage protection. The purpose of overcurrent protection is to protect equipment, and protection against leakage is intended to protect people against the risk of electric shock. In Jacket and blanket heaters, every precaution is taken to avoid these risks. But there may be exceptional circumstances that may produce short circuits or leaks. This can be for example a very hot liquid overflow, the piercing of the cover or a power cord by a sharp metal object, or simply the disconnection of a conductor due to a bad tightening of electrical terminals. We therefore recommend the use of this device, waterproof, at the head of the power line of the jacket or blanket heater.

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

**Wall mounting:** Four removable and rotatable legs.

**Electrical connection:** On 6mm<sup>2</sup> internal connection block.

**Cable glands:** Two M20 cable glands in PA66.

**Current leakage sensitivity:** 20mA (difference of current measured between the phase line and neutral line).

**Overcurrent sensitivity:** 20A.

**Nominal voltage:** 220-240V.

**Number of poles:** 2.

### Main reference

Y8WSY060000000U9

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