

Stato-Sonde

Z3



Detection from 400 °C (750 °F)

Viewing angle: 15° vertical, 4° horizontal

Designed for harsh environment



Stato-Sonde Z3 – Presentation

The **Stato-Sonde Z3** is a hot metal detector used for the detection of product with temperature over 400 °C / 750 °F.

It has been designed to operate in industries such as steel mills and foundries.

Presented in a resistant case, it is designed for use in the severe conditions of the steel industry. It includes a protective hood with air purging and an optional cooling jacket.

Working Principle

The infrared radiation of the hot stock is focused by a lens and then collected by a photo-electric cell. If the energy level is over the adjusted level the output of the **Stato-Sonde Z3** detector will be switched on.

Special Features

- Optical field: 15° vertical, 4° horizontal adjustable with a shutter at the front side of the protective hood.
- High current static output, relay output or opto solid state relay.
- External sensitivity adjustment (located under the cover at the back side of the apparatus).
- TEST function to simulate hot product, from the control room (built in lamp) for simulation
- Multicolor LED indicator.
- Optional connector and silicone cable with protective steel braid (Z3 - • C - ••).
- Frontal hood that can be hinged down to easily clean the sensor lens. This protective hood is equipped with an inlet for compressed air, to keep out dust.
- A cooling plate is available, with a water flow rate of 2 l/min, for use when ambient temperature is over 75 °C / 170 °F.
- Modular construction, allowing rapid maintenance.

Technical Characteristics

Specifications

Minimum temperature of the product to detect: for steel (For other materials, the temperature range depends on the product's emissivity.)	400 °C / 750 °F (1)
Angle of aim (maximum values, depending on adjustable shutters to reduce the width of the field of view)	15° vertical 4° max horizontal (2)

(1) Lower minium detection temperature available on request

(2) Adjustable shutter to reduce the width of the field of view – ref.: 7092092

Optimum distance between sensor and different types of products

Wire, 5 mm diam., 800 °C (1472 °F)	0.30 to 0.60 m
Bars 10 to 40 mm, 700 °C (1292 °F)	0.50 to 1.50 m
Billet	1.50 to 2.50 m
Plate	2 to 4 m
Bloom, Slab	3 to 5 m

Outputs

Model	Z3 - •• - SP <i>Transistor output</i>	Z3 - ••• - SR <i>Isolated solid state relay output</i>	Z3 - ••• - R <i>Relay output</i>
Electrical characteristics	2 complementary push-pull outputs, short circuit protection, Low impedance : 0/24 V - 100 mA max.	2 Optocoupled complementary Solid State Relay: Impedance : 50 Ω Switching capacity +/- 350 V peak +/- 100 mA peak	Single pole changeover Switching capacity: 230 V a.c. – 2.5 A a.c.
Response time	0.2 ms		Make time: 8 ms Break time: 4 ms



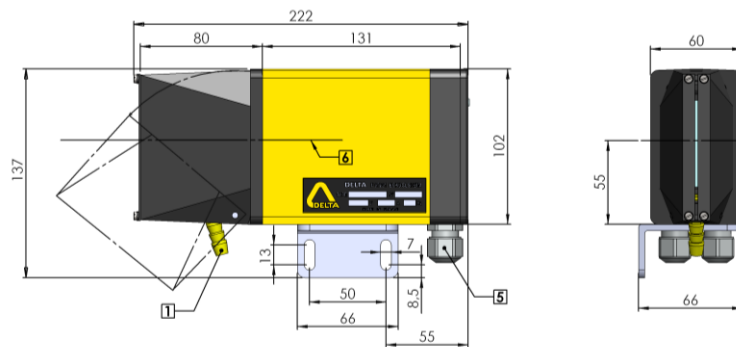
Other Data

Operating voltage	220 V (-15%) to 240 V (+10%) - 50 / 60 Hz or 110 V (-15%) to 120 V (+10%) - 50 / 60 Hz or 24 V (±10%) - 50 / 60 Hz	24 V DC (±20%)
Power consumption (no load)	4.5 VA	4 W
TEST input	Connect to 0V to remotely simulate hot product (not available for Z3 - • C - R, Z3 - • C - SR with AC supply voltage)	
Lamp indicator	Off: no detection Green: detection Orange: detection during TEST	
Connection	Terminal block – 2 PG 9 (Z3 - • B - • •) Connector fitted with silicone cable with protective steel braid (Z3 - • C - •) Standard length of 2 m (other length : 3, 5 or 8 m)	
Weight	2.5 kg (Z3 - JC - •) - 1.8 kg (Z3 - LB - •)	
Protecting rating	IP 67 (cast aluminium case)	
Air Purging	Protection of the optic with clean air: 50 to 200 g/cm ² , 4 to 16 l/min	
Operating ambient temperature	-10 to 75 °C (14 to 170 °F) Up to 120 °C (250 °F) with water-cooling (industrial quality water at about 25 °C (77 °F), 1-2 bar and 1-2 l/mn)	



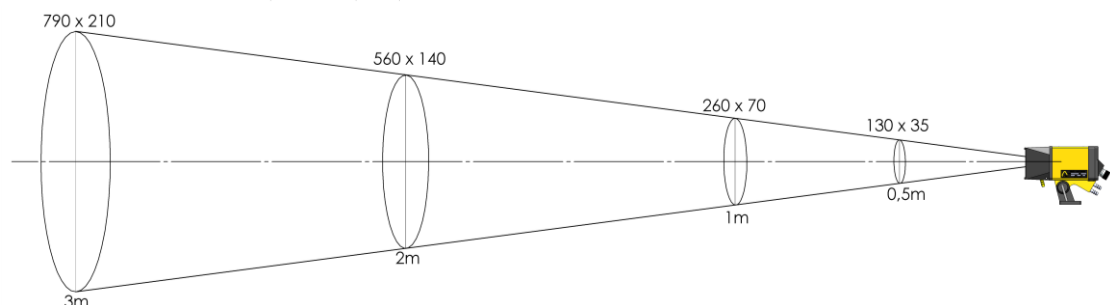
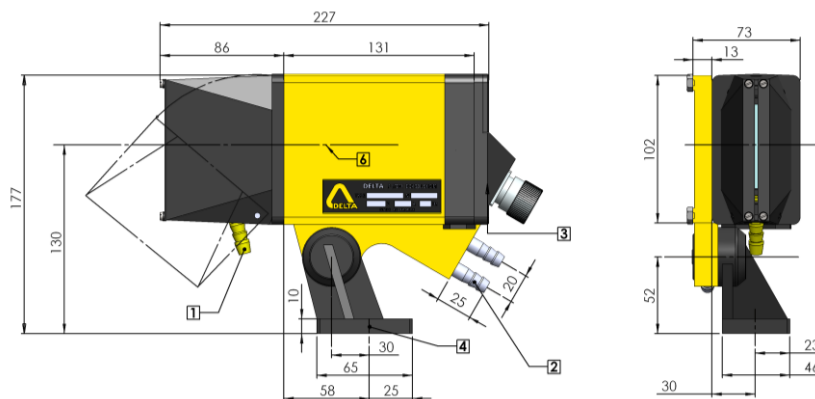
Dimensions

Z3 - LB - • •



- 1 Air supply
Ø 10
- 2 Water supplies
Ø 10
- 3 Connector
clearance
90 mm
- 4 Mounting with
screw
Ø 10
- 5 Cable glands (2) for
cable with diameter
7 – 10.5 mm
- 6 Optical axis

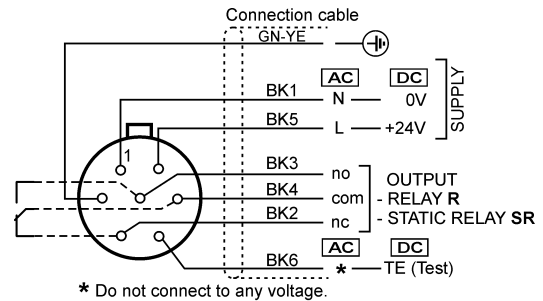
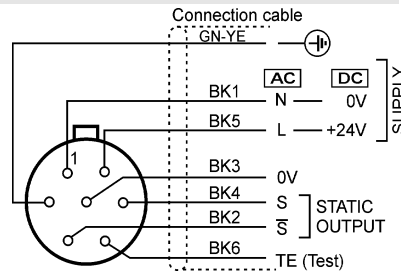
Z3 - JC - • •



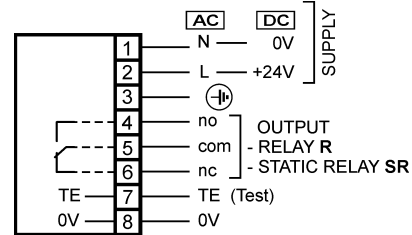
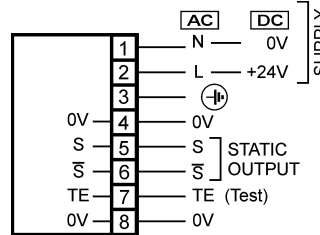


Connection

Connection via connector (Z3 - • C - •)



Connection via terminal block (Z3 - • B - •)



Reference for order

CASE	MOUNTING	CONNECTION	OUTPUT	SUPPLY VOLTAGE
	L Bracket	B Terminal block	SP Solid-state	230 V AC
			SR Opto solid-state relay	115 V AC 24 V AC 24 V DC
	J Mounting stand and cooling jacket	C Connector	R Relay	

Z 3

-

[] []

-

[] []

E.g. Z3 - JC - SP 230 VAC

DELTA

Tel: +33 388 78 21 01 - Fax: +33 388 76 02 29
 info@deltasensor.eu - www.deltasensor.eu

DELTA Sensor (China)

Tel: +86 519 8188 2500 - Fax: +86 519 8188 2400 - info@deltasensor.com.cn

DELTA Vertriebsgesellschaft mbH (Germany)

Tel: +49 700 3358 2736 - Fax: +49 700 3358 2835 - info.de@deltasensor.eu

DELTA Sensor (India)

Tel: +91 11 4054 8170 - Fax: +91 11 4054 8172 - info@deltasensor.co.in

DELTA USA, Inc. (North America)

Tel: +1 (412) 429 3574 - Fax: +1 (412) 429 3348 - info@delta-usa.com

DELTA Sensor (Russia)

Tel: +7 916 682 6027 - info.ru@deltasensor.eu

DELTA USA INC. (North America)

CARNEGIE OFFICE PARC - BUILDING 2, SUITE 180
 600 NORTH BELL AVENUE, CARNEGIE, PA 15160

Tel: (412) 429 3574 Fax: (412) 429 3348
 info@delta-usa.com www.delta-usa.com

Subject to change without prior notice