

Stato-Sonde

Z6H



High Sensitivity : 572 °F

Heavy duty optical fiber

High temperature optics

Different fiber length



Presentation and operating principle

The **Stato-Sonde Z6H** is a Hot Metal Detector for material at temperatures over 572 °F. Thanks to its optical fiber it is able to detect products which are not in its direct field of view (due to physical obstructions, limited space, etc.) even in areas with high ambient temperature. Its rugged design enables the **Stato-Sonde Z6H** to withstand the very severe environmental conditions of the steel industry.

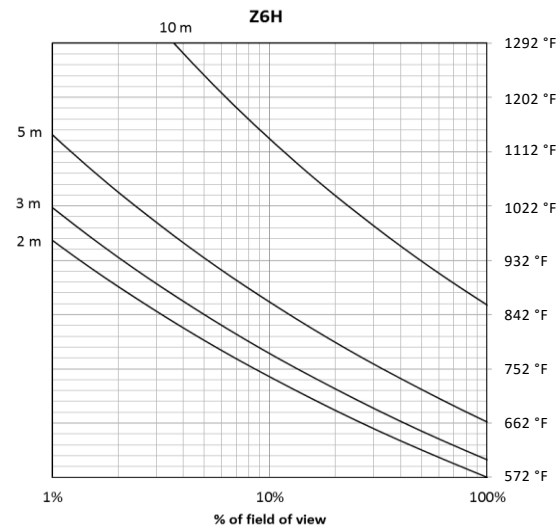
The **Stato-Sonde Z6H** is a self-contained sensor, complete with:

- A metal-jacketed fiber optic cable (with optional lenses)
- A cast aluminium housing containing the complete electronic assembly, power supply, photosensitive element and amplifier with transistor or relay outputs.

The infrared radiation of the hot product is focused by a lens, then collected by the fiber optics cable and transmitted to the photosensitive element. The photocell signal is processed by the electronic circuit which outputs the detection signal. The sensor field of view is determined by the lens assembly mounted on the fiber optics cable.

Technical features

- Metal-jacketed fiber optic cable
- Min. detection temperature:
 - 300 °C (570 °F) with 2 m fiber
 - 315 °C (600 °F) with 3 m fiber
 - 350 °C (660 °F) with 5 m fiber
 - 460 °C (860 °F) with 10 m fiber
- Sensitivity adjustment potentiometer and multicolor indicating LED under the rear cover
- TEST function to simulate hot product
- Easy access to clean window in the hood



Detection temperature for different % of the field of view filled with Hot Product for 2 m, 3 m, 5 m and 10 m fiber length, sensor adjusted at max sensitivity (7).

Outputs / Models	Z6H - . . . - SP / . / . Transistor output	Z6H - . . . - SR / . / . Isolated solid state relay output	Z6H - . . . - R / . / . Relay output
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

Operating voltage	220 V (-15%) to 240 V (+10%) - 50 / 60 Hz or 110 V (-15%) to 115 V (+10%) - 50 / 60 Hz or 24 V (±10%) - 50 / 60 Hz	24 V DC (±20%)
Power consumption	4.5 VA	4 W
TEST input	Connect to 0V to remotely simulate hot product (not available for Z6H - • C - R, Z6H - • C - SR with AC supply voltage)	
Lamp indicator	Off : no detection Green : detection Orange : detection during TEST	
Connection	Terminal block – 2 x PG9 (Z6H - • B - •) Connector with 2 m cable (other length : 3, 5 or 8 m) (Z6H - • C - •)	
Weight	About 3 kg	
Protecting rating	IP 67 (cast aluminium case)	
Operating ambient temperature	14 to 170 °F ; up to 250 °F with water-cooling (industrial quality water at about 77 °F, 1-2 bar and 1-2 l/min)	
Operating ambient temperature optic	0 °F to 480 °F ; up to 930 °F with water-cooling (industrial quality water at about 77 °F, 1-2 bar and 1-2 l/min)	

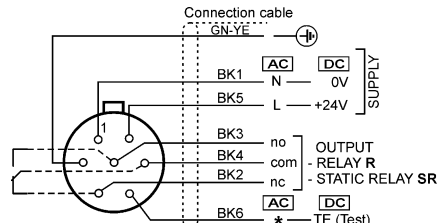
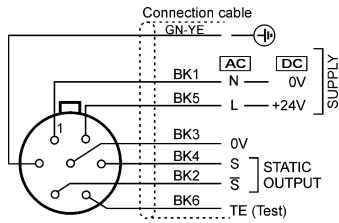


Dimensions

Stato-Sonde Z6H

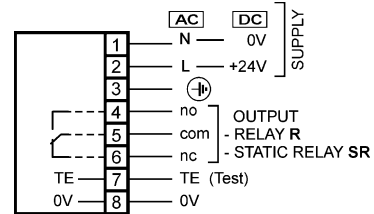
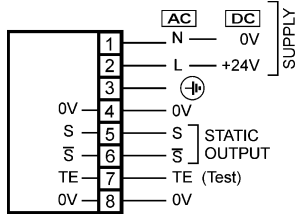
Connection

Connection via connector (Z6H - C -)



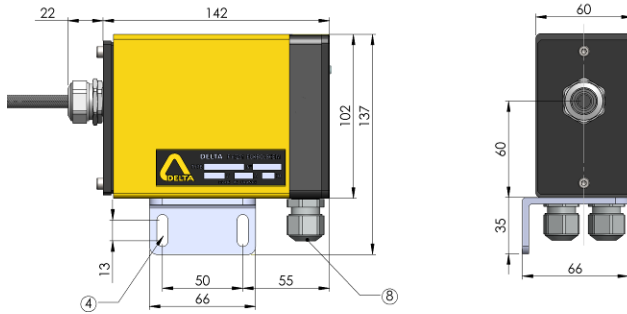
* Do not connect to any voltage.

Connection via terminal block (Z6H - B -)

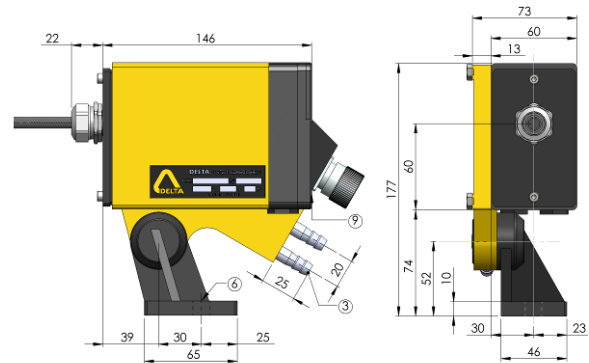


Dimensions

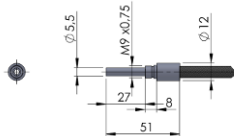
Z6H - LB -



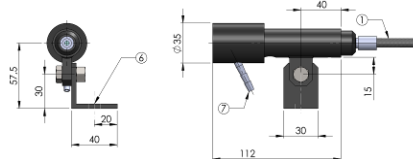
Z6H - JC -



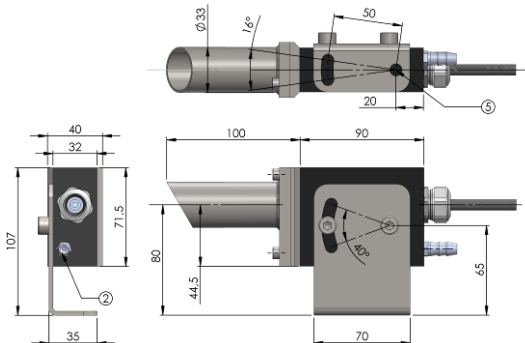
Z6H- - - / - / - 36



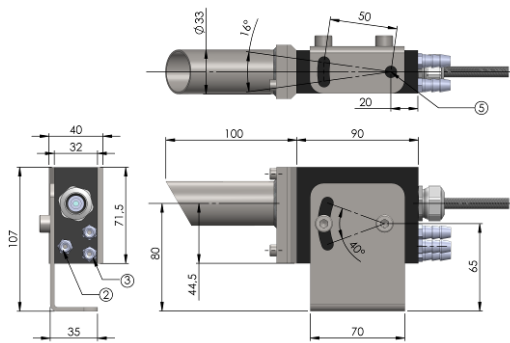
Z6H- - - / - / - A



Z6H- - - / - / - B



Z6H- - - / - / - BF



- ① Minimum radius of optical fiber: 80 mm
- ② Air Supply Ø 10
- ③ Water Supply Ø 10
- ④ Mounting with 2 screws M6
- ⑤ Mounting with 2 screws M8
- ⑥ Mounting with screw M10
- ⑦ Air Supply Ø 6
- ⑧ PG9 cable glands (2), for cable with diameter 7 - 10,5 mm
- ⑨ Connector clearance 90 mm

Options and Accessories

- Other fibre length on request.
- Radiant Bar **BR3000**.
- For detection below the strip, please contact us.



Reference for order

Stato-Sonde Z6H - ● - ● - ● / ● / ● - ● - ●

Case	Mounting	Connection	Output	Fiber Length	
	L Bracket	B Terminal Block	SP Transistor	2 2 m	
				3 3 m	
	J Mounting stand & cooling jacket	C Connector	SR Static Relay	5 5 m	
				10 10 m	
				R Relay	

Stato-Sonde Z6H - ● - ● - ● / ● / ● - ● - ●

Optic	Protection	Supply Voltage
Ref. 2 	Type A Air purging 	115 VAC 230 VAC 24 VAC 24 VDC
Ref. 12 	Type B Air purging with stainless steel hood 	
	Type BF Air purging with stainless steel hood and water cooling 	
Ref. 36 	No protection, only fiber	

Example: Z6H-JC-SP/3/2-BF 230 VAC: with mounting stand and cooling jacket, connector, transistor output, Fibre optic length 3 m, optic Ref. 2, protection type BF with air purging stainless steel hood, with water cooling, supply voltage 230 VAC.

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Subject to change without further notice

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