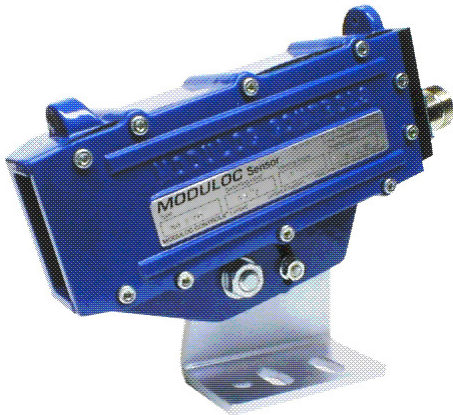




HIGH SENSITIVITY MD8400 HOT METAL DETECTOR



The self-contained Model MD8200 Hot Product Detector is available with either air coolant chamber venting as air purge or alternatively with a water coolant chamber and separate air purge.

Ideal Detector for Run-Out Tables in Bar and Rod Mills as well as Aluminium Mills or Extrusion Plants

Detects Steel at 160°C and Aluminum at 200°C

- 110 VAC or 24 VDC connection in one unit.
- Lens options: 4° or 1° x 25° F.O.V.
- Output #1: Relay with SPNO contact.
- Output #2: Selectable PNP or NPN Transistor.
- Adjustable response time from 2 to 200 msec.
- Remote Self-check facility.
- Robust IP66 aluminum housing with combined air purge & cooling facility. Optional water cooling.
- Excellent Steam Penetration

General Description

This high sensitivity MD8400 Hot Metal Detector is a robust sensor activated solely by the low end invisible infrared radiating from hot metal. It is impervious to water or steam and is built to withstand the harshest environments.

This Detector is specifically designed to enable detection of the colder steel bar and rod on the run-out table in the Bar and Rod Mill and the detection of aluminum in the Hot Strip Mill and extrusion plant. Operating via exceptionally long wave length InGaAs diode technology, detection at these low temperatures is now practical. Furthermore, this Detector incorporates special filtering that removes both the high-end Infrared signal as well all the visible spectrum to minimize sensitivity to reflected extraneous light.

For general tracking, the spot lens is used and where high accuracy is required or the product deviates about the centreline (i.e. Rod Mill) the 1° x 25° lens should be utilized. In this latter instance the stated trip level will be proportionally higher (50°C max. in the Rod Mill). This would not be the case with Strip Mills for which this lens is also highly suited for providing high accuracy detection at the coiler.

This Detector is especially suitable where ambient temperatures are subject to wide deviations. In standard format, a large air cooled chamber vents via a deflector in front of the lens providing combined air purged facility. Alternatively, an optional sealed water coolant radiator & separate air purge facility may be provided.

The MD8400 operates from either 110VAC-50/60 Hz or 24VDC power input. Also available for 230 VAC connection. Standard output includes a cradle relay with a 8A/250VAC SPNO volt free contact plus a switch selectable PNP & NPN transistor output. Alternatively, an optional reed relay with SPNO contact can be provided in place of the cradle relay.

The MD8400 includes a remote self check. This facility remotely initiates an IR diode in close proximity to the photodiode. When activated by a remote contact, the detector switches and its performance checked.

The MD8400 Hot Metal Detector is the ideal Sensor for use on Run-out table in the Steel Mill or in the Aluminium Strip Mill or extrusion plant.

MODULOC® Technology - The Total Sensor Solution

A Rotalec Group Company

Group Head Office
Quebec, Canada
E: Info@rotalec.com
T : 514-341-3685

Manufacturing & International Sales
Hertfordshire, England
E: sales@moduloc-intl.com
T: +44 (0) 845-873-6501

USA Office
Minneapolis MN55344
E: sales@moduloc-usa.com
Tel: 952-238-8453

Enclosure Specifications

Housing: Aluminum AL6, Oven baked blue paint
Housing Rating: IEC IP66, DIN 89011
Weight w/o Cable: 1.9 Kg
Connector: IP65 Plug/Socket
Cable Length: 1.5 M

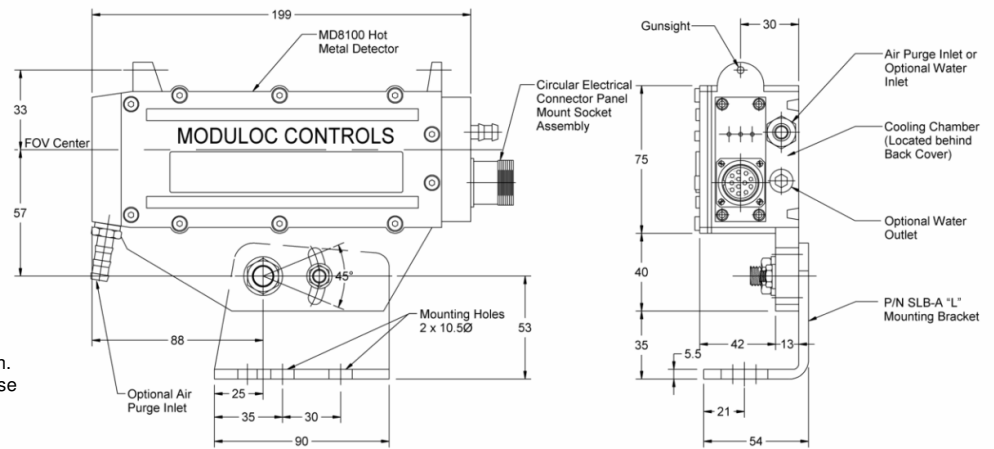
Air Specifications

Air Pressure: 1 cu ft./min at 5 PSI for normal conditions
 5 cu ft./min at 15 PSI for severe

Water Specifications

Water Pressure: 5 to 10 PSI
Water Volume: Regulate between 0.2 - 0.3 liters/min.
Water Temp.: For Ambient Temperature up to 80°C use ambient water below 20°C.
 For Ambient Temperature up to 90°C use water chilled to 5°C .

Dimensions



All Dimensions are in mm.

Part Number Specifications

MD8400-XX-XXX-X

Supply Voltage: -81 110 VAC ± 15% 50/60 Hz and 24 VDC ± 15%
 -82 220 VAC ± 15% 50/60 Hz

Lens: -CR2 1° x 25° F.O.V. Rectangular Slit
 -C4 4° F.O.V. Spot

Cooling: -A Air Cooled & Air Purged
 -D Water Cooled & Air Purged

General Specifications

Lens F.O.V.:	Standard: CR2 1 x 25° Rectangular Slit Optional: C4 4° Spot
Sensing Element	Long wave length InGaAs
Power Indication:	Red LED
Function Indication	RED LED
Remote Self-Check	Single wire to +24 VDC internal line
I.R. Threshold setting	DIP switch selectable in 50°C steps between 160°C to 440°C off Steel and from 200°C to 500°C off Aluminum
Cut - off wavelength	2.55 to 2.6 um
Response Time:	2 msec. min to 200 msec max., dip switch selectable.
Supply Voltage	Standard: 110 VAC ± 15% 50/60 Hz and 24 VDC ± 15% Optional: 220 VAC ± 15% 50/60 Hz
Power Consumption	5 VA
Operating Temperature	-20°C to +60°C without air cooling -20°C to +70°C with air cooling +2°C to +80°C with (20°C) water cooling
Output (#1)	Relay Output (SPNO) 250 VAC, 8A with 20 mSec response time. Optional: Reed relay
Output (#2)	Switch selectable NPN or PNP Outputs, N.O., 500 mA, 45 V, 2A peak

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Control Systems

We reserve the right to alter specifications without prior notice. Specifications without tolerances are typical values.

Your Local Sales Representative:



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