

MODULOC[®] Control Systems



REMOTE MD95100-Q1PS UNDER-THE-LINE DIGITAL HOT METAL DETECTOR



The Quartz Lens is shown protruding from the purged mounting to show how the air purge flows past the lens tube to keep it clear of contaminate.

- ◆ Remote Purged Shrouded Under-the-Line Lens
- ◆ Quartz 1° F.O.V. Lens rated to 1000°C
- ◆ Bar Display shows IR Signal relative to set Trip Level
- ◆ Programmable 450°C to 1100 deg C Trip Level
- ◆ Operates from 80-240 VAC and 24 VDC supply
- ◆ Cradle, Fast Reed Relay and NPN/PNP Outputs
- ◆ Programmable response time from 2 to 200 msec
- ◆ Remote IR Self-check facility
- ◆ Air filter with Vortex cooling option

General Description

The MD95100-Q1PS Under-the-line Hot Metal Detector (HMD) is specifically designed for mounting of the Remote Lens in the high ambient under the line in the Rolling Mill or within the Stands. This mounting arrangement close to the underside of the line (typically 500mm) enables more precise detection of the passing hot product with the Lens out of harms way with the Controller at an easily accessible location.

The shrouded Quartz Remote Lens incorporates a quartz 1000°C rated lens in a stainless tubular housing assembly secured inside a purged stainless tubular housing with this in then in turn protected by a stainless shroud and nozzle through which the air purge supply exits. This arrangement protects the lens from the high radiant and ambient heat as well as preventing the mill contaminate entering the lens, plus clearing the steam in the field of view of the lens. The lens is connected via 15M of 400°C spec flexible stainless sheathed optic lead that is further protected by an outer flexible stainless conduit.

The HMD Controller incorporates a Bar Display showing the IR input signal relative to the pre-set trip level. This enables the user to verify the Sensors performance is not being influenced by contamination, hot scale or water/steam and thereby adjust "prior" to failing to detect the passing hot product. This bar display also provides the scale settings for the programmable thresholds and response times via simple switch action. The Controller is protected by mounting Cradle allowing quick extraction for adjustment or replacement.

REMOTE MD95100 CONTROLLER

LED Bar Display allows the user to clearly identify the amount of received IR from the hot bar to establish the correct trip level.

An LED in this display facilitates alignment of a low energy source (torch) which would be insufficient to switch the Detector.

Adjustment of both the threshold and response time is also clearly defined in this bar display,



Red LEDs - show IR signal relative to set Trip Level

Blue LED - Power & Self Check Failure function

Yellow LEDs - show programme mode for adjustment

MODULOC[®] Technology - The Total Laser Solution

A Rotalec Company

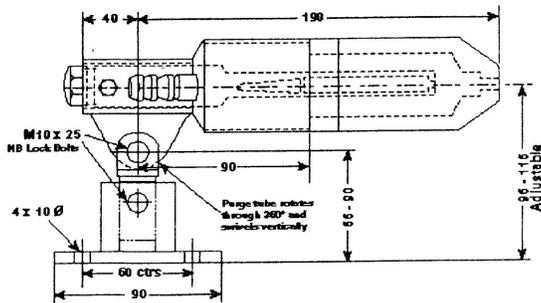
Head Office & Canadian Sales
Montreal, Canada
E : info@rotalec.com
T : 514-341-3685

UK Manufacturing & Sales
Hertfordshire SG3 6JP
E : sales@moduloc-intl.com
T : +44 (0) 845-873-6501

USA Sales
Minneapolis MN55344
E : sales@moduloc-usa.com
T : 952-238-8453

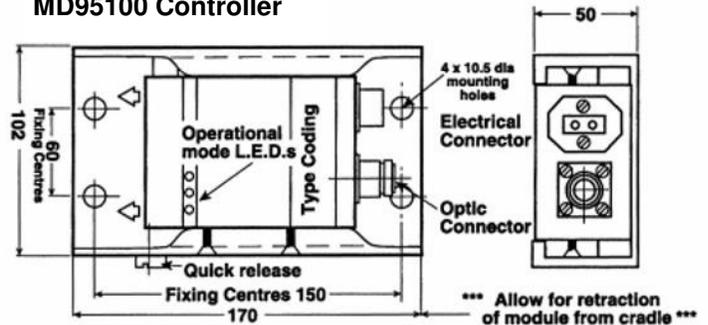
Dimensions

Quartz Q1 Lens

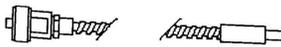


Containing High Temperature rated Quartz Lens rated to 1,000°C and 1°C FoV. Weight 2.2 kg

MD95100 Controller



MD95100 Controller shown pre mounted in protective cradle. Weight 1.7 Kg



Detector provided with 15m of Stainless Sheathed Optic Lead which in turn protected by 4m of Flexible Stainless Conduit supplied with 2 off supporting L-brackets

General Specifications

Sensing element	Extended Wavelength InGaAs Diode	Supply Voltage	80-240 VAC and 24 VDC \pm 15%
Power Indication	Blue LED	Power Consumption	5 VA
Function Indication	Outer Yellow LED	Controller Operating Temperature	-20°C to +60°C
% IR Signal	Red/Green/Red LEDs	Storage Temperature	-25°C to +75°C
Remote Self-Check	Middle Yellow LED	Output (#1)	Relay Output (N/O) 250 VAC, 8A 20 msec response time
Min/Max IR threshold settings	Down to 450°C and upto 1100°C via programming switch	Output (#2)	Switch selectable NPN & PNP Outputs, N/O 500mA, 45V, 2A peak
Response Time	2msec. Min to 200msec max, via programming switch	Output (#3)	PNP and NPN Outputs, N/O 500mA, 45V, 2A, peak
Controller Housing	Aluminium AL6 Oven Baked black paint IP66 Enclosure	Electrical Connection	IP65 Plate Metal Screwed Plug connection with 1.5m cable

REMOTE LENS/COMPONENT PARTS

This illustration shows the Lens Assembly with the Quartz Lens and protective shroud nozzle removed.

This illustration shows each component part. Namely:

1. The Purged Mounting with Protective Flexible tube spigot in place without tubing secured.
2. The Quartz Lens Tube assembly with the hot gland connector. The Quartz Lens itself is replaced by un-screwing the lens captive cover.
3. The protective Shroud through which the air purge vents.

Note: The swivel/lift post is not shown



MODULOC[®] Technology - The Total Laser Solution

MODULOC[®]
Control Systems

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

Your Local Sales Representative:

