# MODULOC® Control Systems



## **SERIES 23100 SEMI-FLUSH LONG RANGE INDUCTIVE PROXIMITY SENSORS**



MD23175-120

- Base mount semi-flush or embedded into steel framework
- Long range of 80 or 120mm when fully covered
- Robust encapsulated watertight design
- ◆ DC Sensors in 3-wire NPN or PNP connection
- ♦ AC Sensors in 2-wire connection
- Dual LED indication
- Fully Adjustable Sensitivity
- ◆ Short Circuit Protected

## **Typical Applications**

Mill & Process Control: Tracking the position of bar, pipe, tube or structural shapes in the Rolling Mill.

Material Handling: Replacing limit switches on automated machinery

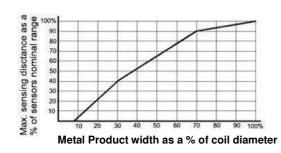
### **Product Description**

These MD23100 Series Inductive Proximity Sensors are built specifically for installation in the harshest of industrial environments. Being that these sensors are base mounting, they are ideal for mounting slightly below the floor-pan of roller tables and other conveyor systems providing surrounding metalwork is 50mm or more from the detector front face..

The combination of large sensing distances with base mounting embedded in steel surround greater than set range allows their installation with complete physical protection. Available in two configurations, these Sensors offer a very practical solution to the detection of metal product, regardless of its shape and size.

Available in AC or DC formats for direct feedback to PC systems, while at the same time capable of switching contactors.

## Establishing sensing range relative to product



As a general guideline, for reliable detection of bar, section rod or tube as it passes by the sensor, the product should cover at least 20% of the sensor length as well as be within 50% of the effective sensor range.

Sensing Distance Correction factors for various materials

Fe: 1.0 CrNi: 0.85 Brass: 54

Al: 0.5 Cu: 0.46

Where the product is expected to be above  $100^{\circ}$ C, ceramic insulation should be placed across the top face of the sensor. Sensors mounted end to end will necessitate the utilisation of alternate frequency units.

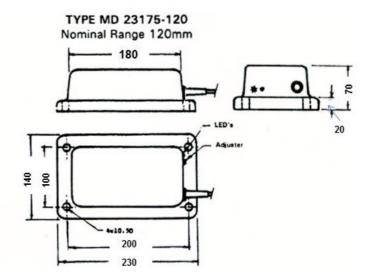
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#### **Dimensions**





#### **Performance**

Model	23150-80	23175-120
Nominal Range when fully covered by steel	80mm	120mm
Fully Covered Detection Area	70x140mm	90x170mm
Typical Min Range (20% detector length coverage)	15mm	30mm

## **General Specifications**

Housing	ABS Plastic	
Encapsulation	Polyurethane Resin	
Supply Voltage	20 to 30 vdc / 110 or 230 VAC 50/60 Hz	
Switching Frequency	5 Hz	
Short Circuit Protection (AC Types)	350mA	
Short Circuit Protection (DC Types)	450mA	
Min Load (2 wire AC Types)	7mA	
Leakage Current at 110 VAC (2 wire AC)	5mA	
Voltage Drop at 110 VAC (2 wire AC type)	30mA load / 16V 220 mA load /21 V	
Vibration & Shock Resistance	Better than DIN 89011 Cat 2	
Watertight specification	IP65	
Operating Temperature Range	10°C + 70°C	
Supply Connection Cable	1.5 mtrs olifex 2/4 x 0.5mm <sup>2</sup> standard	













PNP -N.O. PNP-N.C

NPN-N.O.

NPN-N.C.

AC - N.O.

AC - N.C.

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**Control Systems** 

Your Local Sales Representative:





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

MD23100 PROXIMITY 2013-07