



DTF6000 TRAILFINDER DIGITAL INFRARED LOOP SCANNER



- **Determines relative hot bar loop position via multiplexed scanned InGaAs photodiode array.**
- **LED Bar Display shows product pass line for correct alignment.**
- **Monitors hot bar down to 400 deg C regardless of size**
- **Automatic Gain operating via edge control margin evaluation.**
- **Analog output of product position.**
- **Digital outputs for product presence.**
- **Robust IP66 aluminum housing with water coolant chamber and air purge facility.**

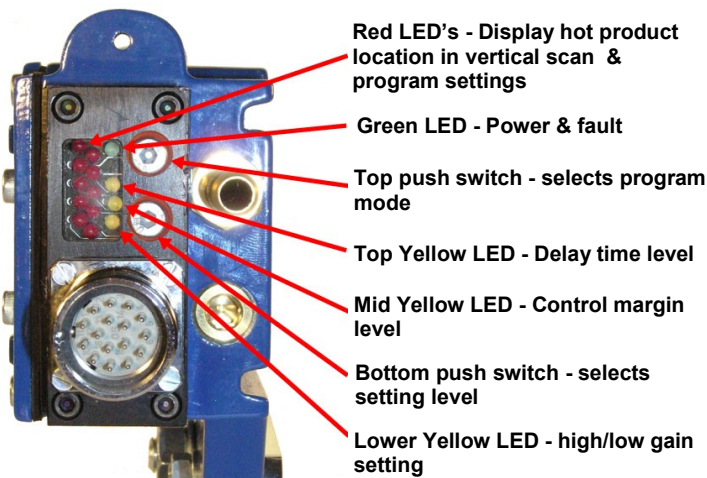
Typical Applications

Metals Industry: Loop Control, Position of hot bar, rod or wire. Centering of Hot Strip. Edge detection & positioning.
Other Industries: Edge detection and positioning of hot product.

Description

The Trailfinder operates via internal microprocessor and a multiplexed scanned InGaAs photodiode array. It provides both analog output and displays the products hot edge position via bar display.

While normal Optical Position Scanners purely detect the product above a pre-set threshold as the Trailfinder operates via a programmable control margin it ensures precise and repetitive positioned output regardless of the product's size or temperature. Hence, it is not adversely affected by lens contamination, hot scale, metalwork or steam in the field of view. As a consequence it provides very stable performance in difficult and variable environments such as found in Mill Stands that can defeat other Scanners.



Being a digital device, the Trailfinders' response time may be precisely set to accommodate black spots, steam and water as well as hot scale without detriment to its accuracy. The Trailfinder detects the product edge precisely and repeatability regardless of the product size and changes in temperature. Various analog outputs are available according to requirements.

The Trailfinder operates via the internal diode array segmented into 40 segments and scanned in 2 ms for an exceptionally fast output. The IR signal input is transmitted without loss of signal yet unwanted visible light is blocking out by internal filtering.

MODULOC[®] Technology - The Total Sensor Solution

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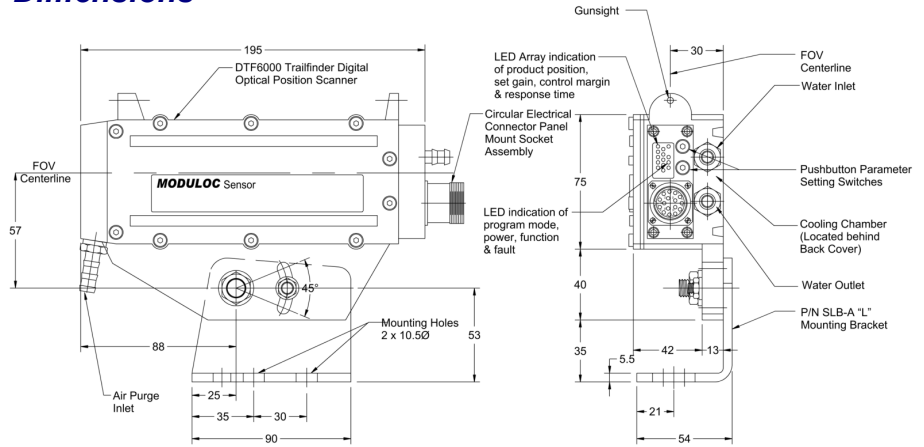
Housing Specifications

Housing: Aluminum AL6, Oven baked blue paint
Housing Rating: IEC IP66, DIN, 89011
Weight w/o Cable: 2.5 Kg
Cable Length: 1.5 M
Cooling: Standard: Water Cooled & Air Purged

Air & Optional Water Specifications

Air Pressure: 8 cu ft./min at 20 - 80 psi
Water Pressure: 5 to 10 PSI
Water Volume: Regulate between 0.2 - 0.3 liters/min.
 For Ambient Temperature up to 65°C use ambient water below 20°C
 For Ambient Temperature up to 75°C use water chilled to 5°C
Water Temp.:

Dimensions



Performance

Model	DTF 6015	DTF 6022
Horizontal Field of View	30 degrees	40 degrees
Horizontal Resolution	40 Bits	40 Bits
Vertical field of view	3 degrees	4 degrees
Reproducibility	Resolution	Resolution

Technical Info

Product Presence Outputs (3 total)	Cradle Relay, SPNO, 250 VAC, 8A NPN & PNP Outputs 400 mA, 45 V, 2A peak Opto-isolated Output 300 V, 150 mA	Supply Voltage	24VDC ±10%
		Power Consumption	2 Watts
Analog Output	0 -10 VDC Standard (Optional: +/- 10VDC, +/- 15VDC or 4-20mA)	Operating Temperature	-10°C to +45°C without cooling +2°C to 65°C with (20°C) water cooling
Linear resolution	±0.2% of full scale	Humidity	Max 90% RH (non condensing)
Response time	10 milliseconds	Storage Temperature	-20°C - +50°C
Product Temperature Limit	Minimum 400°C (750°F) Maximum 1200°C (2192°F)	Self Check	Continuous automatic self check & remote self check facility
Sensing Elements	Germanium (IR filter removes visible spectrum)	Array Scan Time	2 mS

Control Margin Illustration

Typical hot background signal

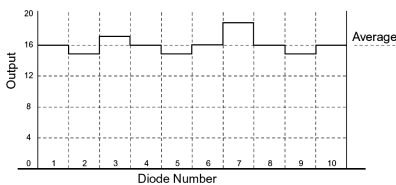
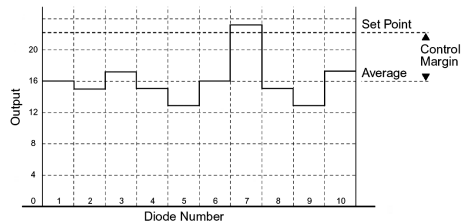


Chart illustrating signal from typical hot background

Typical signal with passing hot bar



This chart illustrates the control margin. Where the background IR is uniform then the control margin can be set to a lower figure. Any hot product passing needs to give a signal that exceeds the set point.

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

Your Local Sales Representative:



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