MODULOC SENSOR ENTERPRISES

MSE

DSE-WHD Weld Hole Detector

- ***Reliable detection of Ø6 mm holes up to 150 km/h.***
- ***Resistant to ambient light interference***
- ***Dust, mist and vibration tolerant.***
- ***Detects holes with transmitter completely covered by strip.***
- ***Detects holes with one edge of Transmitter Unit not covered by the strip.***
- ***Detects holes with both edges of transmitter uncovered by the strip.***
- ***NO moving parts.***
- ***Flexible mounting of the Transmitter and Receiver Units with M6 "swivel in the nut" on the bottom side of 45x45mm standard aluminum profiles.***

General Description

Moduloc Sensor Enterprises is proud to introduce the DSE-WHD Weld Hole Detector manufactured by Danish Sensor Engineering ApS (DSE). Weld Hole Detectors are used for detection of punched marker holes that are close to welding seams in metal sheet production such as continuous sheet galvanizing lines, tin lines, annealing lines and pickling lines or any process that requires the detection of punched marker holes.

This new and innovative DSE design provides a comprehensive and efficient approach to weld hole detection at ultra high -speed, ensuring seamless operations and improved productivity. The Weld Hole Detector consists of a Transmitter unit that is mounted below the line, a Receiver Unit that is mounted above the line, and a Control Box that mounted remotely off to the side for easy access by mill personnel. The two Transmitter Unit and the Receiver Unit are connected to the Control Box via 3 meter long individual cables (other cable lengths are available).

The Control Box has built in advanced control electronics and power supply for operation from either 110 or 230 VAC. The control box has a System Health Relay with NO and NC Form C contacts, and Weld Hole Detection Relay with with NO and NC Form C contacts, and a Weld Hole Detection PNP Transistor.

The control box has a 3.5 inch display that displays when a new weld hole is detected, and counters that displays the number of events since last reset and the total number of events since power on.

The Transmitter Unit emits red light that is synchronized with the Receiver Unit at a very high speed. The synchronization and wavelength of the emitted light allows the Weld Hole Detector to have high resistance to ambient light that is in magnitude >70,000 LUX.

The Transmitter and the Receiver are available in lengths of 240mm (9.45"), 480mm (18.8"), and 960 mm (37.8"). With its user-friendly interface and advanced features, this DSE alternative IR detection systems guarantees accurate and precise results, meeting the high standards and expectations of our customers.

Typical Applications

Metals Industry	Continuous Galvanizing Lines, Continuous Tin Lines, Continuous Galvanneal Lines Continuous Anneal Lines, Continuous Pickling Lines and any Continuous Process Line where the detection of pinched marker holes is required.

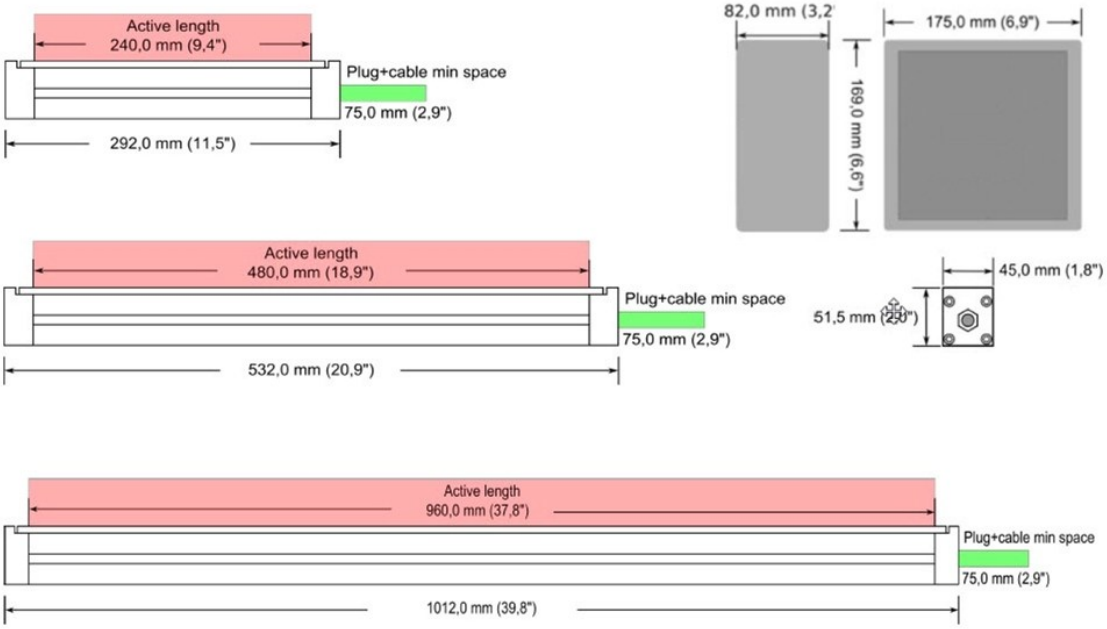
Control Box Housing Specifications

Housing: Aluminum, Powder Coat
Housing Rating: IEC IP65, DIN 89011
Weight w/o Cable: 0.8 Kg (1.8lb)
Connectors: IP65 Plug/Socket

Part Number Specifications

DSE-WHD-XXX
Transmitter/Reciever Length: **-240 =** 240 mm
-480 = 480 mm
-960 = 960 mm
Example: DSE-WHD-240 Weld Hole Detector with Transmitter and Receiver Length of 240 mm.

Transmitter and Receiver Units



Control Box

General Specifications

Available Transmitter Lengths:	DSE-WHD-240: 240 mm(9.45") DSE-WHD-480: 480 mm (18.8") DSE-WHD-960: 960 mm (37.8")	Supply Voltage	85-240 VAC. 1, 50/60Hz
		Power Consumption	Max 30 W
Hole Size:	Ø6 mm to Ø10 mm (Ø0.236" to Ø0.393")	Operating Temperature	0°C (32°F) to +60°C (140°F)
Distance Transmitter to Receiver:	550 to 700 mm (21.7 to 27.6")	Storage Temperature	-20°C (-4°F) to +70°C (158°F)
Distance Transmitter to Strip	25 to 250 mm (0.98 to 9.8")	Relative Humidity	max 90 % RH
Maximum Target Speed:	DSE-WHD-240: 42 mps (137.8 fps) DSE-WHD-480: 21 mps (68.89 fps) DSE-WHD-960: 10 mps (32.8 fps)	Transmitter and Receiver Material:	Aluminum with Glass Window
Response Time:	< 6 ms	Degree of Protection:	IP(65)
Min. Time between two Holes:	1 second	Emitter and Receiver Weight:	DSE-WHD-240: 2.5 kg (5.5 lbs) DSE-WHD-480: 4.5 kg (9.9 lbs) DSE-WHD-960: 7.5 kg (16.5 lbs)
Min. Distance from Edge to Hole:	15 mm (0.59")		
Relay Type:	Galvanic isolated Form C SPDT max 24 VDC / 2 Amp	Cable lengths:	3 meters (9.8ft), optional lengths are available
Transistor Output:	PNP, 24 VDC, 0.25A, with <1 ms response time	Display size:	3.5 inch (88.9mm)

Outputs: System Check Relay: Normally activated & Error deactivated
Event Relay and Transistor: Activated on Event and hold of preset time (on Control Box)
Preset Time: OFF (default)100 ms, 500 ms, 1s, 10 s (Preset reset times)
Sensitivity: OFF (default), 80%, 60%, 40% (% reduction to avoid pin holes)
Auto Reset: ON = "New Event Warning" will automatically rest after 60 seconds, (Default)
OFF = "New Event Warning" Reset by pressing "Reset Eveny Counter" button

Display: New Event, Event Counter, Relay States, Total Ebents, & Time since last Event.
Buttons: Reset Event Counter, Reset Event Lock, Reset System
Functions: Auto Reset New Event Warning, Reduce Sensitivity, Auto Reset Event Output (buttons via System Screen)

This DES-WHD Weld Hole Detector is manufactured by DSE Danish Sensor Engineering ApS Herlev Denmark which was founded 1996.

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