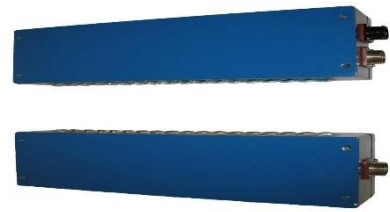# WHD - Weld Hole Detector

Logika Technologies Weld Hold Detector, Model WHD, is primarily used in the metallurgical industry to detect punched hole close to welding seams in metal sheet production line. These holes are purposely made so these seams may be later detected and cut out of the rolled product.

Logika Weld Hole Detector comprised of an emitter and a receiver mounted above and below a steel sheet line. The emitter produces modulated infrared light that is collimated by a series of lenses. Normally, the steel plate blocks all of the light so that nothing reaches the receiver. Wherever a seam is welded in the steel plate, a hole is also punched to mark the seam. When the hole reaches the detect zone, the receiver will "see" the light through this hole and set an output.

WHD – X XX - XXX

Base Model

Power Input
024 = 24 VDC
110 = 110 VAC
220 = 220 VAC

Temperature Range	-25C to 70C (-13F to 158F)
Detection Range	The length of the optical array is the same as the area scanned for weld holes. Single hole detection: 12" (304mm),16" (408mm),20" (510mm) Double hole detection: 21" (527mm).
Emitter	Infrared LED, wavelength 870nm,100KHz pulse output
Receiver	High speed receiver PIN tube with narrow band infrared filter, high immunity to light disturbance up to 10000 LUX
Max Sheet Speed	For Φ12mm hole, maximum speed 600 m/min
Response Time	PNP,NPN ≤1ms, Relay ≤ 20ms
Working Distance	0.2-2.0M (hole size: Φ 12mm) 0.2-3.0M (hole size: Φ 20mm)
LED Indicator	Emitter : Green = power on, Red=emitter alarm
Receiver	Red = detect, Yellow=sync alarm(On Alarm)
Output	Relay contact (1NO,1NC) Contact capacity: AC250V 5A; DC 30V 5A PNP output: 24V@100mA, overload protection on detect NPN output: 24V@100mA , overload protection no detect
Output Hold time	10ms-4s adjustable, clockwise extends holding time

Key Features

- ➢ Design for harsh environment with IP66 Enclosure
- ➢ Easy installation with included mounting hardware
- ➢ LED indicator: Green = "power on" / Red = "detection"
- ➢ Optional junction box

Typical Applications

- ➢ Cold rolling
- ➢ Hot strip mill
- ➢ Steel sheet coiling

Additional Options

- ➢ Single hole system
- ➢ Junction Box Wiring
- ➢ Power Connections options
- ➢ Adjustable Sensor/location Mounting

Electrical Connections

Output Cable:
Number Color Function Junction Box Terminal

Number	Color	Function	Junction Box Terminal
1	Brown	+24VDC	24VOUT
2	Red	0VDC	0V
3	Orange	PNP Hi=Detect	S
4	Yellow	NPN Low=Detect	/S
5	Green	Relay NC.	NC
6	Blue	Relay Common	Com
7	Purple	Relay NO.	NO
8	Grey	Alarm	Alarm
9	Shield	Earth	Earth

Number	Color	Function
1	Brown	+24VDC
2	Red	0VDC
3	Orange	SYNC+
4	Yellow	SYNC-
5	Green	Alarm
6	Shield	Earth

Enclosure Dimensions