



Single Probe Double Sheet Detector

The **Pulser** is a Single Probe, Double Sheet Detector that monitors steel (ferrous metals) where space limits a dual probe detector. With a maximum single blank thickness of 6mm (0.24"), the **Pulser** handles 30% greater thicknesses than comparable sheet detectors.

The secret behind the **Pulser** is its electromagnetic probe. Previous methods of single probe sensing used permanent magnets which held on to the metal sheets, making sheet transfer difficult. The **Pulser's** advanced technology uses a short pulsed signal to take the sample, releasing the sheet immediately. Four different sensor probe models (PE36, PE42, PE54 and PE75) handle different maximum detectable thicknesses and all four probes operate with the same model DS200 Control. The probes are housed in rugged 303 stainless steel and Prime's select cable/connectors provide excellent signal integrity and noise immunity in an industrial environment.

The **Pulser** is easily teachable. Place your normal metal thickness in front of the probe and push the calibrate button once. *The **Pulser** automatically measures the thickness, calculates the double value and sets the reject threshold.* There's nothing more to adjust. The optional two sample calibration process allows you to teach the detector to respond to a thickness change as small as 5%. When power is lost or a sensor failure is detected, the double relay will de-energize, indicating a double sheet.

The **Pulser** has an additional transistor output that activates each time the built-in metal proximity detects metal. It can be used to count sheets; act as a fast jam detector or indicate that the last sheet has advanced.

And as with all Prime Controls products, we guarantee you'll be pleased with the **Pulser** or we'll take it back and refund your money.



Probe has a polished steel face with built-in metal proximity detector

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Specifications

Power Input: 90-264 Volts AC, 50-60 Hz < 2W

Outputs: **SPDT contact relay (Double Detect)**
 Internal relay is normally energized and opens when a double is detected.
 Max. load 10 Amps @ 240 VAC,
 8 Amps @ 24 VAC, ½ HP @ 240 VAC
 Output response: PE36 < 140 mSec.,
 PE42 < 150 mSec., PE54 < 200 mSec.,
 PE75 < 250 mSec.

Solid State Output
 +24V when metal is detected.
 0 VDC when no metal is detected.
 Source 24 Volts, 50mA max.

Output Fail Safe: Relay contact goes to double condition.
 Solid state output turns off, indicating no metal present.

Metal Sensitivity: Ferrous metal, steel, tinplate

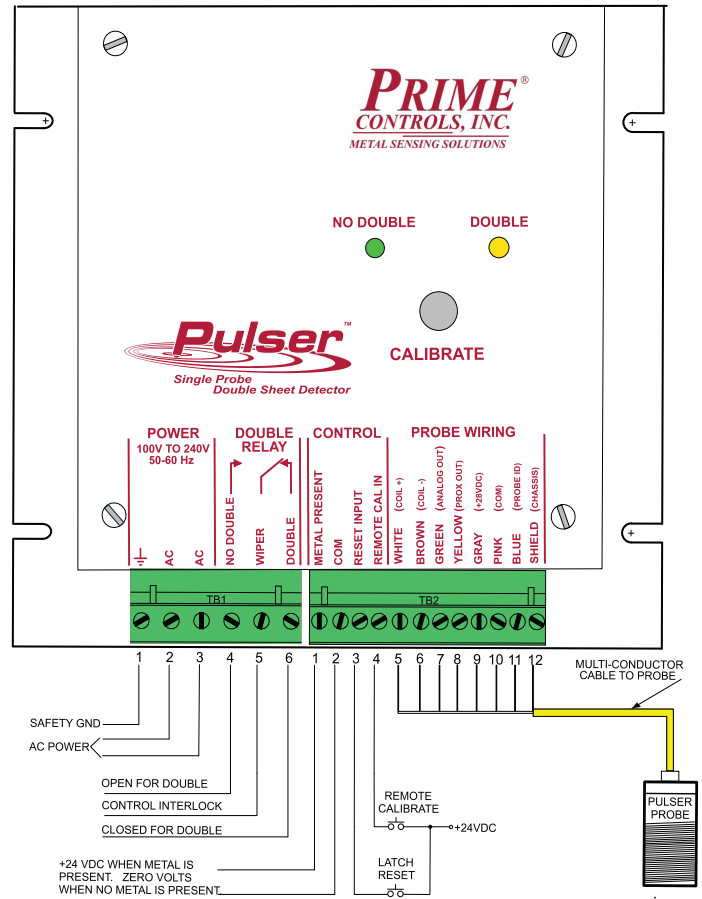
Thickness Range: 0.25 mm to 6.0 mm (0.01" to 0.24").
 See table below for probe ranges.

Calibration: Push-button switch with single sheet sample, or external +24V signal

Indicators: Green for single; amber for double; blinking LEDs for a bad or disconnected probe.

External Inputs: Calibrate & reset of latched output.

Sensor Operation: An electromagnetic pulse causes a magnetic flux field that is shunted by the thickness of metal. Max thickness is limited by the diameter of the probe. *The chart below shows the range for each probe.*



Probe Model	Probe Diameter	Min Thickness	Max Thickness
PE36	36 mm (1.42")	0.25 mm (0.01")	2.3 mm (0.09")
PE42	42 mm (1.65")	0.25 mm (0.01")	3.6 mm (0.14")
PE54	54 mm (2.13")	0.25 mm (0.01")	4.6 mm (0.18")
PE75	75 mm (2.95")	0.25 mm (0.01")	6.0 mm (0.24")

