



INSPECTION TECHNOLOGY FOR CANMAKERS

METAL SENSING SOLUTIONS WORLDWIDE

WWW.PRIMECONTROLS.COM

***PRIME
CONTROLS***
Metal Sensing Solutions

We always focus on providing better solutions through communication and value. At Prime Controls, we work with our customers to find the right solution for their needs.

Trusted by can machinery suppliers around the world to help their machines perform faster, better, smarter and with higher quality.

Prime Controls' metal sensing systems detect quality issues such as double sheet detection, the detection of double shells and missing tabs, and leak or hole detection. For leak detection, we offer complete light and air tester controls.

Our innovative product line is setting a higher standard for quality, reliability and accuracy for canmakers.

As standard components on most EOE conversion presses, Prime Controls' sensors and controls have inspected nearly every beverage can end in the world. Our can end products not only prevent double shells from entering the press, they also guarantee the presence of the tab on the shell as it exits. As the ends exit the press, our light leak detection sensors detect leaks five microns and below at speeds that exceed the industry standards. We also offer double shell detection for curlers for continuous prevention of double ends along with detection for EPL Sealings, Safety Seal, Shell Press and Magnetic Conveyors. Our double end detection is also available for Crowns and Quick Peel Ends.

SD220 SYSTEM



A standard component on conversion presses all over the world, the SD220 double shell and missing tab detection system provides two key quality inspection points on the conversion press, preventing two shells from entering a press and ensuring the tab has been attached as the end exits the machine.

2 functions in **1** control

COMPLETE SYSTEM INCLUDES:

- | | | |
|---|---------------------------------|--|
| 1 | SD220 Shell/Tab Detector | Dual-probe, non-contact double shell and missing tab detector for conversion presses |
| 4 | P15 Series Probes | Metal thickness of .050mm-.76mm (.002"-.03")
P15CBE: Smooth barrel with 15" encapsulated pigtail cable
P15AVSE: Short probe with collar and 15" encapsulated pigtail cable |
| 4 | CBL101 Series Cables | Connector cable, shielded, 2 conductor twisted pair
Available in lengths of 3 meters, 3 meters with right angle, 6 meters, 10 meters, 17 meters, 30 meters |

*Mounting bracket available if needed.



SD230 TRISENSE SYSTEM

The SD230 TriSense provides a simple and dependable way to monitor can ends traveling through a conversion press. Using a set of sensors installed at the in feed and discharge of each lane, as well as a light leak detection system immediately following the press, the SD230 detects both double shells, missing tabs and leaks all in one system. The HMI connectivity feature of the SD230 provides operators with diagnostic information and remote setup and operation of the whole system.

COMPLETE SYSTEM INCLUDES: (PER LANE)

- | | | |
|---|--------------------------|---|
| 1 | SD230 Shell/Tab Detector | Double shell, missing tab and leak detector for conversion press |
| 4 | P15 Series Probes | Metal thickness of .050mm-.76mm (.002"-.03")
P15CBE: Smooth barrel with 15" encapsulated pigtail cable
P15AVSE: Short probe with collar and 15" encapsulated pigtail cable |
| 4 | CBL101 Series Cables | Connector cable, shielded, 2 conductor twisted pair
Available in lengths of 3 meters, 3 meters with right angle, 6 meters, 10 meters, 17 meters, 30 meters |
| 1 | LH200 Light Head Sensor | Detects holes through metal can ends 5 microns and below |
| 1 | CBL108 Series Cable | Power connector cable, 8 conductor
Available in lengths of 2 meters, 5 meters, 15 meters |
| 1 | SL100 LED Strobe Lamp | Specifically designed to replace Xenon Strobe Lamps. Strobes at rates over 1,100 ends per minute and significantly reduces operating cost by having a life of 6+ years (1.5 billion ends) |
| 1 | CBL128 Series Cable | Interconnect cable, 8 positions
Available in lengths of 5 meters, 10 meters |
| 1 | CBL230 ETH Series Cable | Interconnect cable, 8 positions |
| 1 | PS504 Power Supply | 24V DIN rail power supply with universal 100Vac to 240Vac input |
| 1 | AC230-RJ Breakout | DIN rail terminal block |

(PER PRESS)

- | | | |
|--------|--|---|
| 1 | SQ100 Sequencer Module | Electronic sequencing module used to stagger the enable signals to the LH200 modules, ensuring no two units flash simultaneously |
| 1 | ET230 EthernetIP Gateway† | Industrial communications gateway that allows the TriSense system to communicate with PLC and HMI |
| - OR - | | |
| 1 | MI230 HMI Display† | Preprogrammed HMI for retrofitting presses to allow for industrial communications |
| 3 | CBL112 Series Cables | Interconnect cable, male to female
Available in lengths of 1 meter, 2 meters, 2 meters with field attachment |
| 1 | CBL113 Series Cable (For ET230 Option) | Connector cable, 5 conductor, female
Available in lengths of 2 meters, 2 meters with right angle, 5 meters, 10 meters |
| 1 | CBL230 Series HMI Cable (For MI230 Option) | RS485 to HMI Cable
Available in lengths of 2 meters, 2 meters with field attachment, 5 meters with field attachment, 10 meters with field attachment |

†Optional

SD230 TRISENSE SYSTEM



3 functions in 1 control

SD222 SYSTEM



The SD222 System offers double end detection for ends entering a conversion press, on a curler or traveling on the line throughout the plant. The SD222 is a dual-channel system, providing protection for two lanes, when paired with four non-contacting sensors. The SD122 is a single channel/one lane version that is also available.

COMPLETE SYSTEM INCLUDES:

- | | | |
|---|----------------------|--|
| 1 | SD222 Series Control | Dual-channel/2-lane double end detector |
| 4 | P15 Series Probes | Metal thickness of .050mm-.76mm (.002"-.03")
P15CBE: Smooth barrel with 15" encapsulated pigtail cable
P15AVSE: Short probe with collar and 15" encapsulated pigtail cable |
| 4 | CBL101 Series Cables | Connector cable, shielded, 2 conductor twisted pair
Available in lengths of 3 meters, 3 meters with right angle, 6 meters, 10 meters, 17 meters, 30 meters |

*Mounting bracket available if needed.

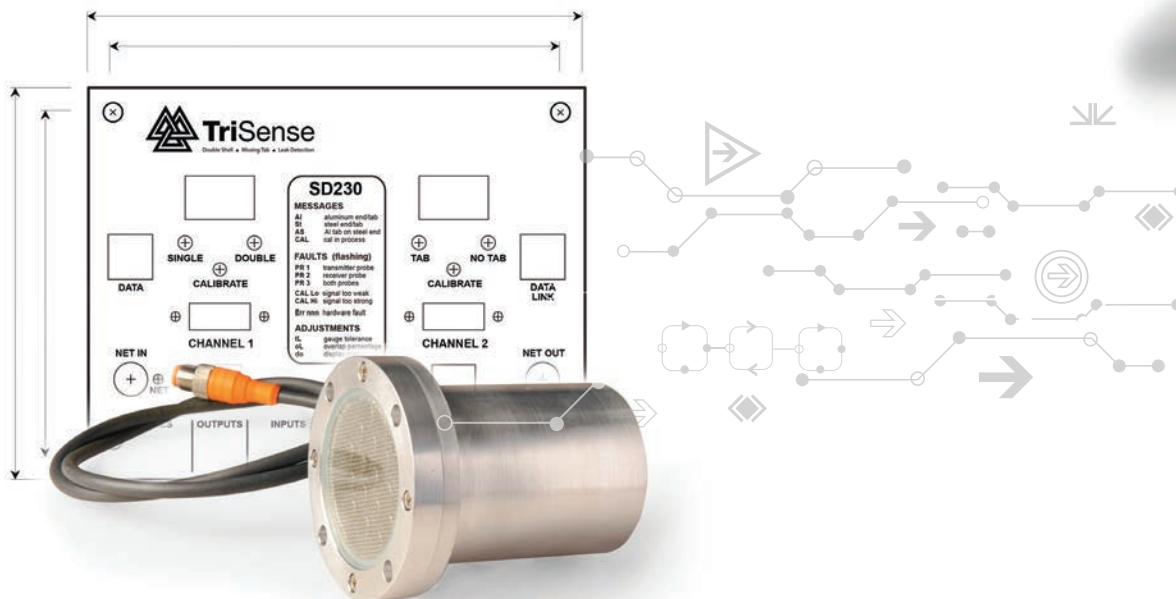
END LIGHT LEAK DETECTION SYSTEM



Prime Controls offers complete end light leak detection for high-speed EOE conversion presses with its Light Leak Detection Series. The detection series is comprised of the LH200 Light Head Sensor and SL100 LED Strobe Lamp. The system will detect holes through metal can ends on a conversion press with leak diameters 5 microns and below – outperforming industry requirements, and at rates over 1,100 ends per minute.

COMPLETE SYSTEM INCLUDES:

- 1 LH200 Light Head Sensor Detects holes through metal can ends 5 microns and below
- 1 SL100 LED Strobe Lamp Specifically designed to replace Xenon Strobe Lamps. Strobes at rates over 1,100 ends per minute and significantly reduces operating cost by having a life of 6+ years (1.5 billion ends)
- 1 SQ100 Sequencer Module Electronic sequencing module used to stagger the enable signals to the LH200 modules, ensuring no two units flash simultaneously
- 1 CBL108 Series Cable Power connector cable, 8 conductor
Available in lengths of 2 meters, 5 meters, 15 meters
- 1 CBL128 Series Cable Interconnect cable, 8 positions
Available in lengths of 5 meters, 10 meters
- 1 PS504 Power Supply 24V DIN rail power supply with universal 100Vac to 240Vac input



DS70 SERIES



Single probe, non-contacting! The DS70 Series double end detectors are “small, innovative and powerful.” When combined with a specific single probe sensor, they will detect and prevent double end instances as they travel throughout the end plant on a magnetic conveyor. For steel and tinplate ends.

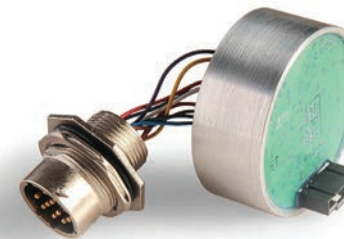
Series Control Options:

- DS71: Output type PNP, push-button calibration
- DS72: Output type NPN, push-button calibration
- DS73: Output type PNP, remote calibration
- DS74: Output type NPN, remote calibration

COMPLETE SYSTEM INCLUDES:

- 1 DS70 Series Control Double end detector for magnetic conveyors
- 1 PN18 Probe Metal thickness of .050mm-2.5mm (.002"-.100")
- 1 CBL104 Series Cable Connector cable, shielded, 4 conductor for the DS71 and DS72 controls
Available in lengths of 3 meters, 6 meters
- OR -
- 1 CBL113 Series Cable 5 conductor, female for the DS73 and DS74 controls
Available in lengths of 2 meters, 2 meters right angle, 5 meters, 10 meters
- 1 CBL110 Series Cable Interconnect cable between control and sensor
Available in lengths of 2 meters, 5 meters

DM201



Specifically designed to control and improve the performance of dispensing guns for the canmaking industry, the DM201 reduces the amount of heat buildup inside the dispensing gun resulting in a more accurate spray and longer run time between required cleanings. Other capabilities that the DM201 offers are the ability to calibrate the nozzle depth automatically, along with a monitoring output to tell the PLC that the gun is working correctly. This driver operates on 24VDC power, and offers outputs for the solenoid, spray status and nozzle bottom. Inputs are for power, increase and decrease nozzle calibration, and trigger.

Solenoid Driver for the following machine type: **End Liners**

3-PIECE SOLUTIONS

As a trusted supplier of high-speed, online inspection equipment for food, aerosol and other 3-piece cans worldwide, Prime Controls offers solutions that improve the bottom line, boost product accuracy and ramp up manufacturing efficiencies. Our product line of double sheet detectors and air leak detection systems provide peace of mind for canmakers, while safeguarding machinery and ensuring quality finished products.

MD30 TESTALERT SYSTEM



The MD30 TestAlert upgrades 3-piece can leak testers with today's technology. The MD30 TestAlert was designed to replace older, obsolete controls such as the MD2, MD3 and MD20. The system includes an easy-to-use touchscreen display that shows detailed information about the tester and allows for easier troubleshooting. It was designed for Borden/Alcoa-style can or end testers, but works just as well with other OEM tester machines.

COMPLETE SYSTEM INCLUDES:

- | | |
|--|---|
| 1 MD30 Control | Air tester control for Borden/Alcoa-style can or end testers |
| 1 MI102 HMI Display | A full-color, touch screen HMI display to be used with the TestAlert system |
| 1 TE200/TE201 Timing Encoder | TE200: Timing signal generator for external reset sensor, with rubber coupling. Gearless
TE201: Timing signal generator for external reset sensor, >5 inch shaft coupling. Gearless |
| 2 TD10 Transducers (Test Pressure - One for Odd/ One for Even) | TD10-015-2: Leak Tester Pressure sensor that provides calibrated absolute linear pressure measurements. 2 PSI nominal rating (Food Can) - OR -
TD10-045-5: Leak Tester Pressure sensor that provides calibrated absolute linear pressure measurements. 5 PSI nominal rating (Aerosol) |
| 1 TD10 Transducer (Supply Air) | TD10-045-15: Leak Tester Pressure sensor that provides calibrated absolute linear pressure measurements. 15 PSI nominal rating (Food Cans) - OR -
TD10-225-105: Leak Tester Pressure sensor that provides calibrated absolute linear pressure measurements. 105 PSI nominal rating (Aerosol) |
| 1 AC400-7/PS503 | Relay bank for interfacing with AC solenoids — 7 relays, power supply — +24VDC 4.2A, pre-wired with fuse and terminal block on DIN rail |
| 1 CBL130 Encoder Cable | TE encoder cable, 8 conductor, M23 connector
<i>Available in lengths of 10 meters, 25 meters</i> |
| 1 CBL141 HMI Cable | HMI cable, 6 conductor, DB-9 connector
<i>Available in lengths of 2 meters, 10 meters, 15 meters, 25 meters</i> |
| 3 CBL113 Transducer Cables | Connector cable, 5 conductor, female
<i>Available in lengths of 2 meters, 2 meters with right angle, 5 meters, 10 meters</i> |

STM SYSTEM



The Smart Test Module is an air test module for containers. It combines pressure sensor and processor in one package for multiple types of air leak detection. The STM can be used for bell test, decay test or peak pressure sensing.

STM1-1.5: Low pressure: 0 to 1.5 PSI range

STM1-5: Low pressure: 0 to 5 PSI range

STM1-15: Low pressure: 0 to 15 PSI range

COMPLETE SYSTEM INCLUDES:

- | | |
|---|---|
| 1 STM Series Control | Air test module for containers |
| 1 RI100 Reset Illuminator | Reset illuminator designed to excite the RESET circuit of an STM1 pressure test module during air leak testing |
| 1 RR100 Infrared Light Receiver | Infrared light receiver designed to sense the report output signal of the STM1 pressure test module |
| 1 T1 Connector | Last connector for STM daisy chain |
| 1 CBL112 Series Cable | Interconnect cable, male to female
<i>Available in lengths of 1 meter, 2 meters, 2 meters with field attachment</i> |
| 1 CBL113 Series Cable | Connector cable, 5 conductor, female
<i>Available in lengths of 2 meters, 2 meters with right angle, 5 meters, 10 meters</i> |
| 1 PIM1 Microcontroller Interface Module | Connects between a master controller, such as a PLC, and one or more STM1 leak test modules, and translates simple ASCII commands from the master controller to message packets intelligible to the STM modules |

PD150 SYSTEM



When paired with two non-contacting sensors for ferrous or non-ferrous metal parts, the PD150 system verifies the presence of a double end seamed onto a can, a defect that occurs all too often. These defects can be costly and time consuming for the can plant.

Missing Part Detection for the following machine types: **Seamer, Beader**

COMPLETE SYSTEM INCLUDES:

- | | |
|------------------------|--|
| 1 PD150 Control | Dual-probe, non-contacting metal part detector |
| 2 P15T18S Probes | Metal thickness of .050mm-1.27mm (.002"-.05") |
| 2 CBL101 Series Cables | Connector cable, shielded, 2 conductor twisted pair
<i>Available in lengths of 3 meters, 3 meters with right angle, 6 meters, 10 meters, 17 meters, 30 meters</i> |

2-PIECE SOLUTIONS

Prime Controls provides vital inspection solutions for 2-piece beverage can plants all around the world. From a wide range of double sheet detectors, designed to ensure no two sheets of metal enter a press to light leak detection for finding very small pinholes in can bodies at high speeds online during the leak testing process, Prime Controls' solutions keep can lines moving and efficient.

Light Leak Detection for the following machine type: **Can Body Light Tester and Necker/Flanger**

LT LED LEAK DETECTION



The LT Series Leak Detection System is a complete online, high-speed leak detection system, specifically designed and integrated into the Stolle Randolph LT Series Can Body Light Tester. In this day and age, most of these light testers have been in the field for decades and are outfitted with older LT19 or previous generation light heads and halogen lamps. Upgrading to the latest LT20 array heads and LED lamps will save canmakers time and money, ensuring the highest performance.

COMPLETE SYSTEM INCLUDES:

- | | | |
|---|------------------------------------|--|
| 1 | LT20 Light Array Head (Per Pocket) | High-speed can tester light head array used to detect leaks in can bodies |
| 1 | LR10 Reject Pickup | Detects the optical signals from the Prime Controls LT20 or Hyde Park LT19 Light Head and produces an electrical output signal in response. The LR10 is a replacement for the Hyde Park LR4 and LR5 Reject Receivers |
| 1 | RI101 Reset Illuminator | Reset illuminator used to reset the LT20 array head reject signal |
| 6 | TL102 Series LED Illuminators | LED Lamp upgrade for the Stolle Randolph LT Series Can Body Light Tester. By upgrading to LED from the halogen lights, canmakers can expect to save time and money by reducing energy consumption, labor cost and downtime for unplanned lamp replacements |
| 1 | LT Mechanical Assembly Series | Mechanical assembly for LT Light Tester |
| 1 | LT Electrical Assembly Series | Electrical assembly for LT Light Tester |

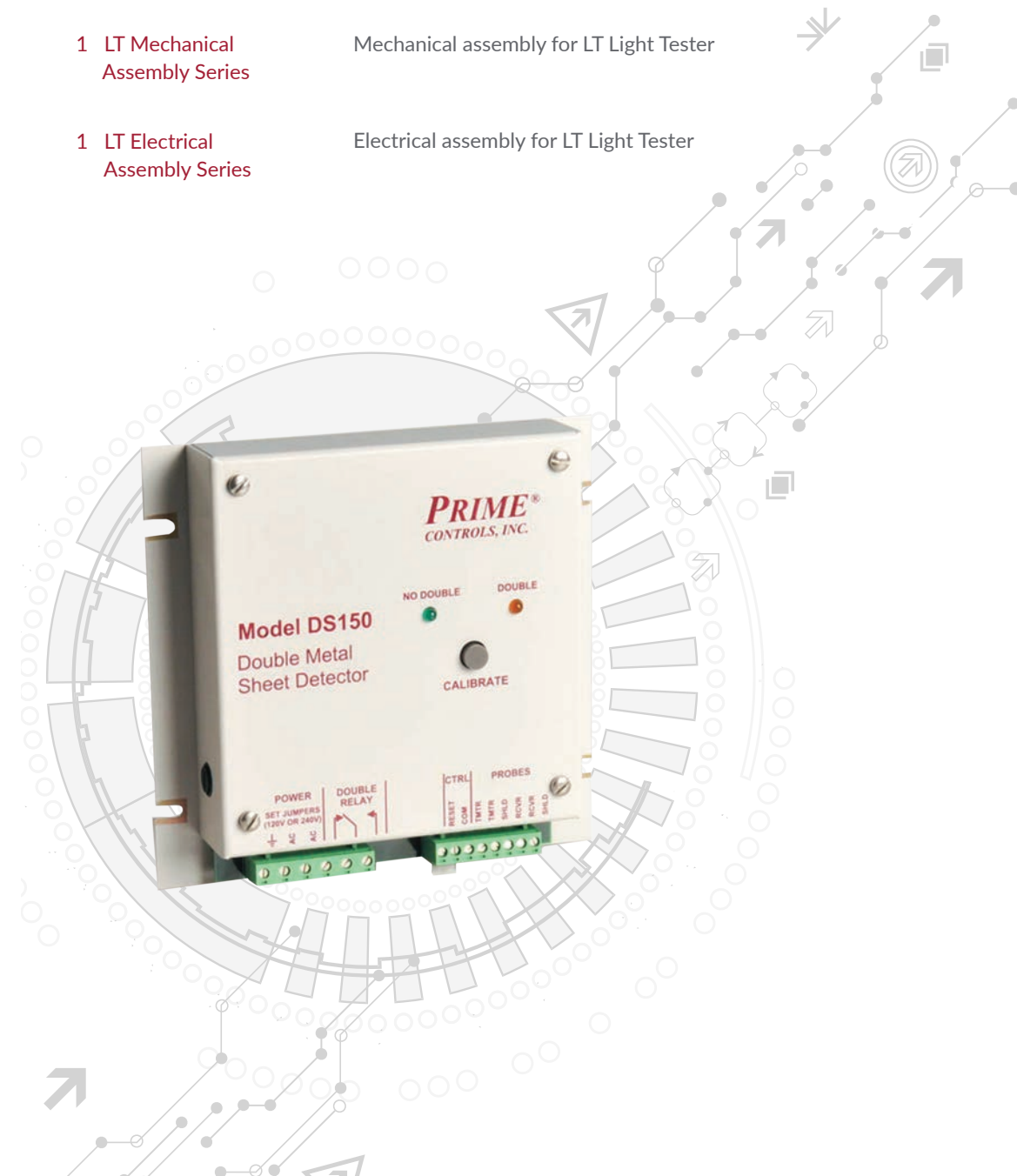
LT LED UPGRADE SYSTEM



The LT Series LED Lamp Upgrade was specifically designed for the Stolle Randolph LT Series Can Body Light Tester. By upgrading to LED from the halogen lights, canmakers can expect to save time and money. Reduce energy consumption, labor cost and downtime for unplanned lamp replacement by upgrading to the LT Series LED Upgrade.

COMPLETE SYSTEM INCLUDES: (PER POCKET)

- | | | |
|---|-------------------------------|--|
| 6 | TL102 Series LED Illuminators | LED Lamp upgrade for the Stolle Randolph LT Series Can Body Light Tester |
| 1 | LT Mechanical Assembly Series | Mechanical assembly for LT Light Tester |
| 1 | LT Electrical Assembly Series | Electrical assembly for LT Light Tester |



DOUBLE SHEET DETECTION SOLUTIONS

Prime Controls' double sheet detectors are trusted by the top canmakers from around the world. Backed by 25+ years of experience, our extensive line of world-class double sheet detection solutions improve your bottom line, boost product quality and ramp up your manufacturing efficiency.

Double Sheet Detection for the following machine types:
Metal Printing Press, Slitter Table, Coating Machine, Destacker, Metal Stamping Press, Sheet Feeder, Shell Press

DS60 SERIES



Simple, small, low cost. Innovatively packaged double sheet detection systems. Small, but powerful, this compact, double sheet detector control is just 18mm in diameter, but delivers the same great double sheet detection with added features and flexibility for thin steel and other ferrous metals when sensing from only one side is possible.

Steel & Ferrous metals only

DS60: Output type PNP and NPN. No part present output

DS63: Output type PNP, input type PNP for remote calibration

DS64: Output type NPN, input type NPN for remote calibration

COMPLETE SYSTEM INCLUDES:

- 1 DS60 Series Control Single-probe, contacting double sheet detector for thin steel and ferrous metals
- 1 PM Series Probe Metal thickness of .050mm-1.524mm (.002"-.06")
 - PM4: 18mm diameter threaded barrel
 - PM10: 30mm diameter threaded barrel
 - PM15: 36mm diameter threaded barrel
 - PM11C: 30mm diameter threaded barrel with 10" pigtail cable
- 1 CBL104 Power connector cable, shielded, 4 conductor
Available in lengths of 3 meters, 6 meters
- OR -
- CBL113 Series Cable 5 conductor, female
Available in lengths of 2 meters, 2 meters right angle, 5 meters, 10 meters
- 1 CBL110 Series Cable Interconnect cable between control and sensor
Available in lengths of 2 meters, 5 meters

*Mounting bracket available if needed.

DS150 SERIES



A DS150 Series solution includes a nice range of controls, including everything from basic to ultimate features. When paired with two non-contacting double sheet sensors, it can measure a wide range of thicknesses for all metal types. These control systems detect double sheet instances, where the metal is able to pass between the sensors for a non-contacting, non-marring solution.

ALL metals

DS150: Basic double sheet detector

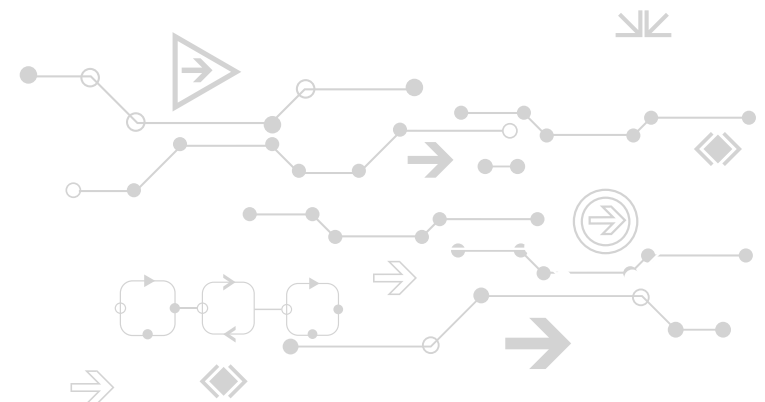
DS152: 24V DC power basic double sheet detector

DS1510: Basic plus double sheet detector with over/under thickness indication and automatic calibration

DS1522: The ultimate double sheet detector with over/under thickness detection, automatic calibration, incremental threshold adjustment and 64-slot calibration memory

COMPLETE SYSTEM INCLUDES:

- 1 DS150 Series Control Dual-probe, non-contact double sheet detector for all metal types
- 2 of the same Probes
 - P15 Series Probe Non-ferrous sensitive for metal thickness of .050mm-1.27mm (.002"-.05")
 - P15T18S: 18mm diameter threaded barrel
 - P15T30S: 30mm diameter threaded barrel
 - OR -
 - P70 Series Probe Ferrous sensitive with metal thickness of .050mm-1.27mm (.002"-.05")
 - P70T18S: 18mm diameter threaded barrel
 - P70T30S: 30mm diameter threaded barrel
 - OR -
 - P1000 Series Probe Ferrous sensitive with metal thickness of .1mm-7.5mm (.004"-.300")
 - P1000BC: Heavy aluminum cast housing with M12 connector
- 2 CBL101 Series Cables Connector cable, shielded, 2 conductor twisted pair
Available in lengths of 3 meters, 3 meters with right angle, 6 meters, 10 meters, 17 meters, 30 meters



DOUBLE SHEET DETECTION SOLUTIONS

DS100 SERIES



This rugged and time-enduring favorite of double sheet detectors is ideal for one-sided sensing of thin steel and other ferrous metals. Housed in our standard sheet metal housing or an IP65 rated polycarbonate enclosure.

Steel & Ferrous metals only

DS100: Double sheet control in a sheet metal housing will mount in an electrical enclosure

DS101: Double sheet control in an IP 65 Rated Polycarbonate Enclosure, for easy and flexible mounting out in an open plant floor environment, on a machine or in an electrical enclosure

COMPLETE SYSTEM INCLUDES:

- 1 DS100 Series Control Single-probe, contacting double sheet detector for thin and ferrous metals
- 1 PM Series Probe Non-ferrous sensitive for metal thickness of .050mm-1.524mm (.002"-.06")
 - PM4: 18mm diameter threaded barrel
 - PM10: 30mm diameter threaded barrel
 - PM15: 36mm diameter threaded barrel
 - PM11C: 30mm diameter threaded barrel with 10" pigtail cable
- 1 CBL100 Series Cable Connector cable, shielded, 3 conductor
Available in lengths of 3 meters, 3 meters with right angle, 6 meters, 10 meters, 15 meters

DS600 SERIES



Suitable double sheet detector for very thin to very thick non-ferrous metals. Single sensor, non-contacting and non-marring. Industrial communications is available through the ET600 gateway via EthernetIP.

Aluminum only

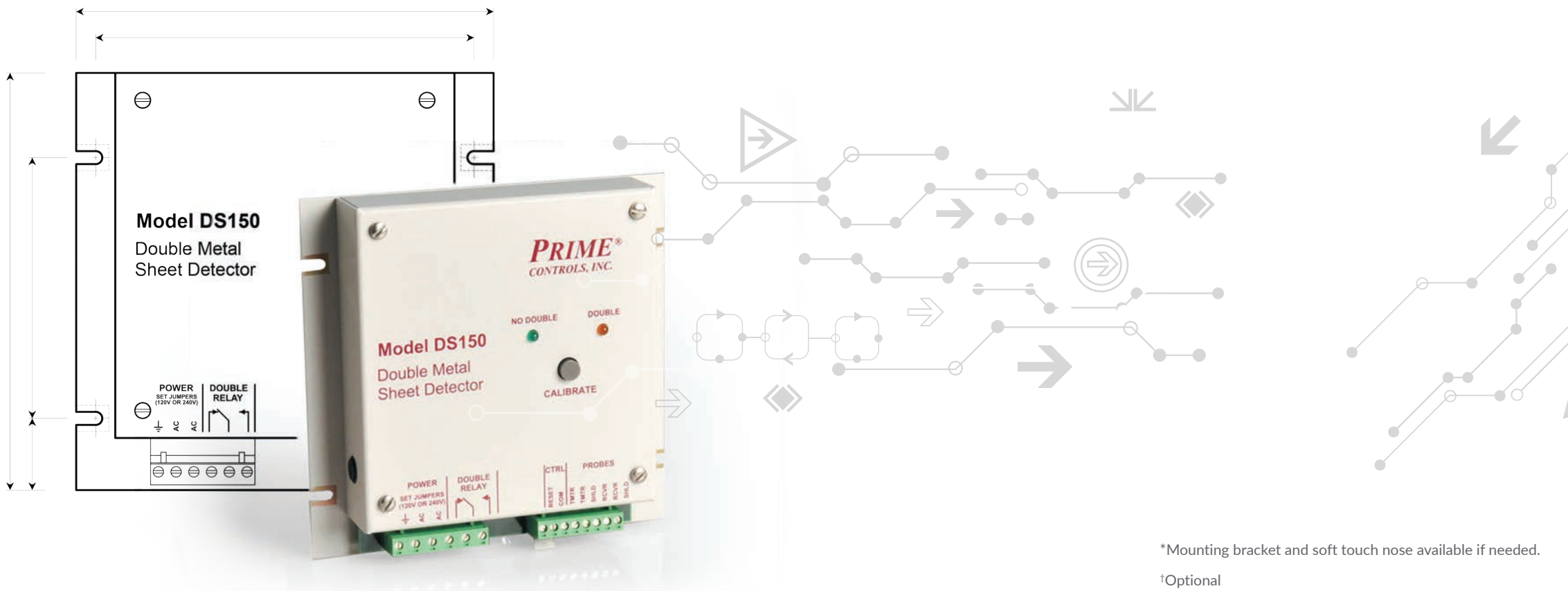
DS600: Basic double sheet detection control for aluminum metals

DS600-P: Premium control plus 8-slot calibration memory selected through discrete input/output

DS600-PC: Premium^{PLUS} control with 64-slot memory, memory backup and industrial communications

COMPLETE SYSTEM INCLUDES:

- 1 DS600 Series Control Single-probe, non-contacting double sheet detector for thin to thick aluminum metals
- 1 P80T30P Probe Metal thickness of .025mm-3.81mm (.001"-.15")
P80T30P: 30mm PVC threaded barrel
- 1 CBL600 Series Cable High-flex PUR cable
Available in lengths of 5 meters, 15 meters
- 1 ET600[†] Industrial communications gateway via EthernetIP



*Mounting bracket and soft touch nose available if needed.

†Optional

NEARLY ALL OF THE CANS IN THE WORLD HAVE BEEN INSPECTED BY OUR PRODUCTS.

Prime Controls is revolutionizing metal sensing and control technology for all canmaking needs with our vast and innovative product line. We're changing the way your work is done with sensing and detection solutions that improve your bottom line, boost product quality and ramp up your manufacturing efficiency.

As a crucial part of the quality control process, our products are designed to provide canmakers assurance of a quality final product. From world-class double sheet detection to double shell and missing tab solutions and both air and light leak detection, we've got you covered.



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