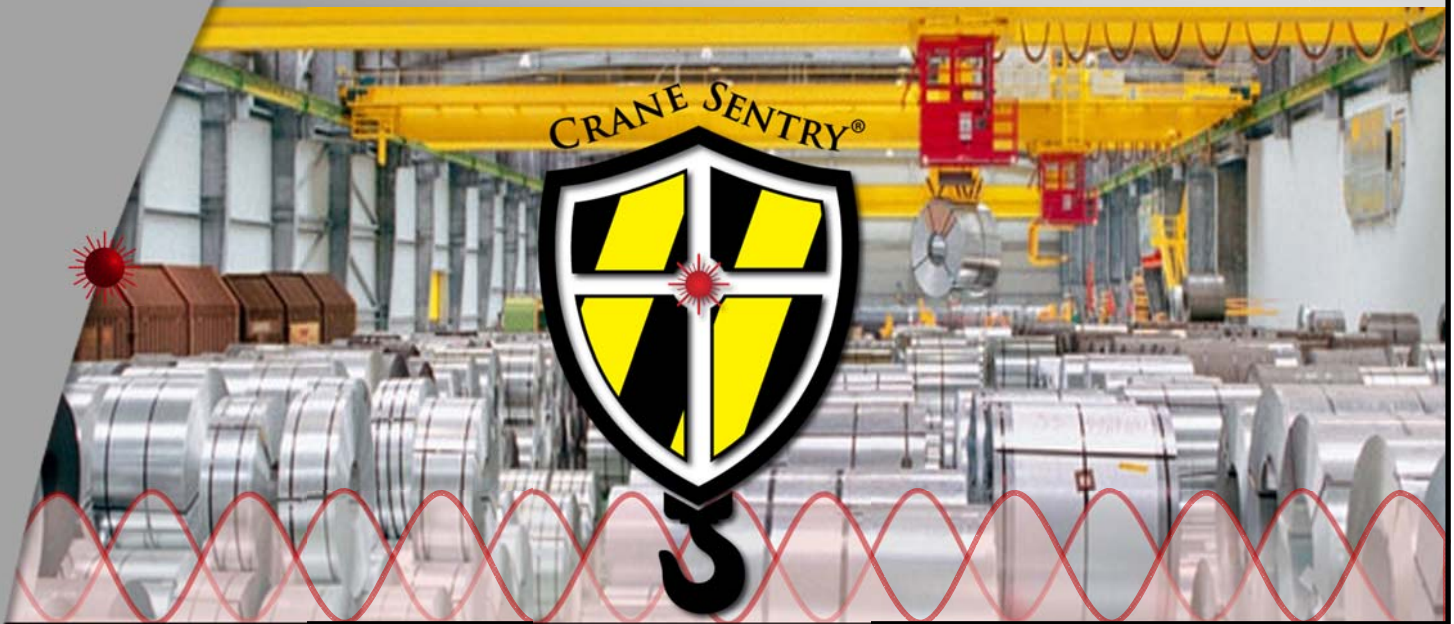




Laser-View Technologies

Smart non-contact measurement solutions for industry



What makes Crane Sentry® better?

Performance

- ▶ <1 in accuracy
- ▶ Indoor/outdoor use
- ▶ Up to 1640 ft (500 m) range
- ▶ No reflector up to 213 ft (65m)



Configuration

- ▶ Plug & play set up
- ▶ Simple touch screen
- ▶ Teach or enter set points
- ▶ Six configurable relay outputs



Features

- ▶ Connects 2 lasers
- ▶ Class II visible laser
- ▶ Modular, versatile system
- ▶ Distance, zone, or skew modes



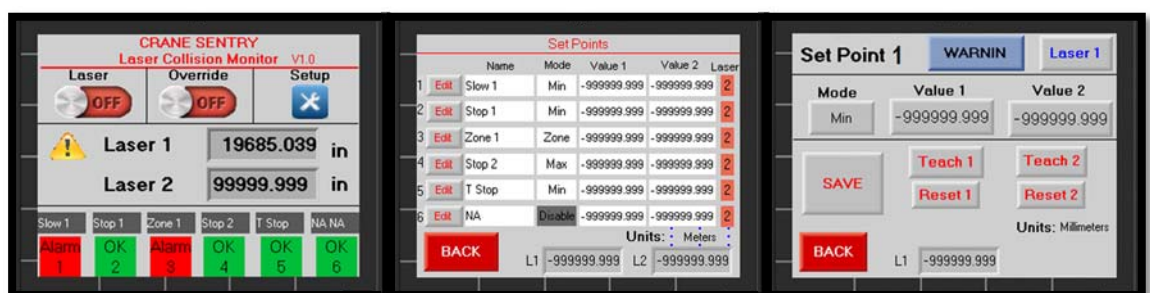
Installation/Maintenance

- ▶ IP 65 protection
- ▶ Low maintenance
- ▶ Quick aim & set installation
- ▶ Error code troubleshooting



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CRANE SENTRY LASER COLLISION MONITORING SYSTEM

Laser Collision Monitor Controller model CR6201

- ▶ Connects as many as 2 Dimetix laser distance sensors
- ▶ Program set points with simple TEACH button or key in values
- ▶ Available operating modes:
 - Distance alarms (collision monitoring)
 - Zone controls (lock out zone activity)
 - Skew (uses 2 lasers)
- ▶ Six configurable relay alarm outputs
- ▶ Simple color touch screen shows set points, live readings, and error codes
- ▶ 110 VAC/220 VAC single phase power required; laser powered through control box



Laser Specifications		
Measuring range	Imperial	Metric
Reflective foil	~1.64 ft. ... 1640 ft	~0.5 m ... 500 m
Natural surface	0.164 ft. ... 213 ft	0.05 m ... ~65 m
Accuracy @ 2 σ (10 Hz)	± 0.12 in	± 3 mm
Repeatability typ.	± 0.019 in	± 0.5 mm
Spot diameter (328 ft/100 m)	1.58 in	40 mm
Operating temperature*	-14 ^o F ... +122 ^o C	-10 ^o C ... +50 ^o C
Max. measuring rate	20 Hz	
Protection rating	IP65	

* Heating/cooling options available

Control Specifications	
General	
Power Requirement	0.45A @ 110VAC (1.36A @ 110 VAC for heated lasers)
Serial Inputs	Two RS232 inputs for two Dimetix Lasers (19200,7,E,1)
Digital Inputs	
Number of Inputs	7 pnp (source) inputs to override alarms
Input Voltage	17-28.8 VDC; 24 VDC nominal
Input Current	8mA @24 VDC
Digital Outputs	
Number of Outputs	8 pnp (source) transistor outputs; optional wiring to relay outputs
Output Voltage	24 VDC
Output Load	0.5 A maximum per output. 3A maximum total per common
Relay Outputs (optional)	
Type	CO or SPDT with lockable test button, LED and mechanical indicators
Rated Current	8A
Rated Voltage	250 VAC
Single Phase Motor Rating	0.37 kW
Graphic Display	
Type	TFT, LCD display (3.5"; 320x240 pixels)
Touchscreen	Resistive, analog
Environmental	
Operating Temp	PLC: 0 ^o C ... 50 ^o C; P/S -10 ^o C ... 70 ^o C derates at 30 ^o C (65% at 50 ^o C)
Storage Temp	PLC: 20- 60 ^o C
PLC memory battery backup	7 years typical at 25 ^o C
Expected Life time	P/S 5-10 years at room temp.
Ingress Protection	IP65/66/NEMA4x
Enclosure Material	Polycarbonate



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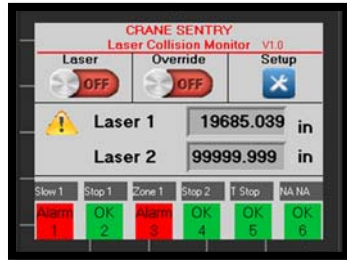


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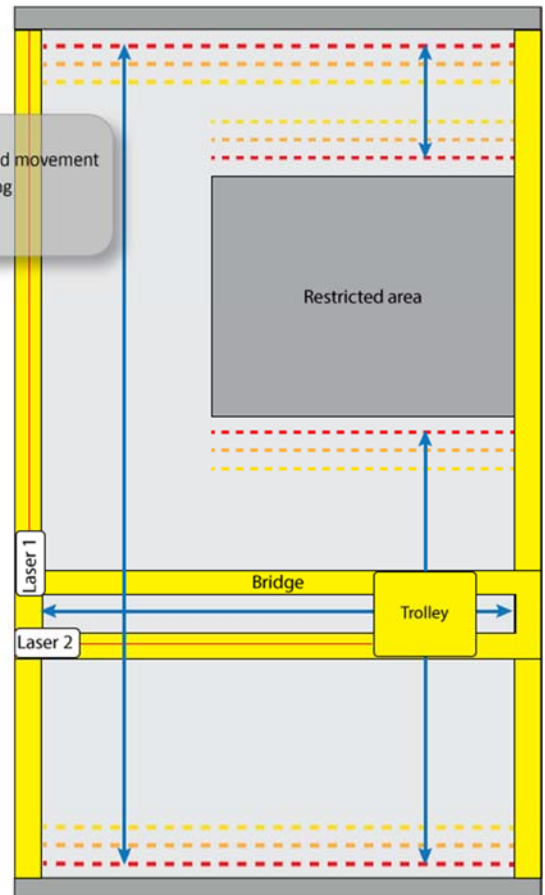
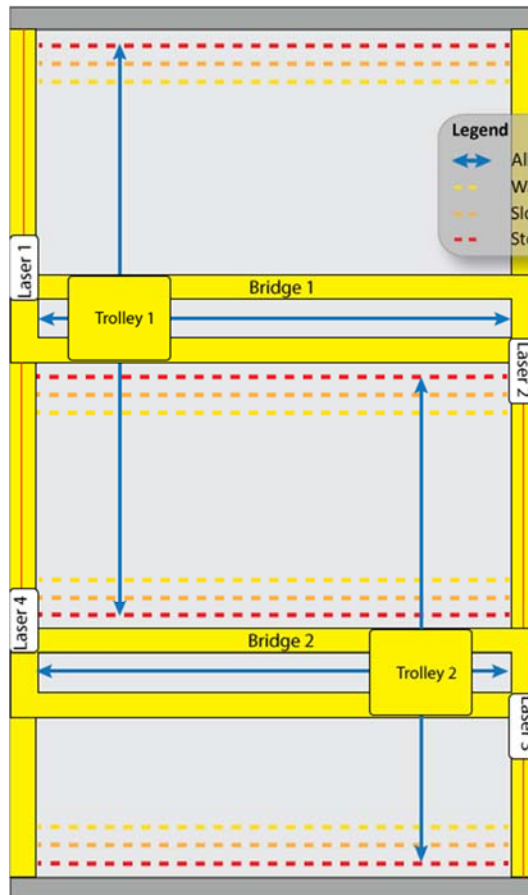
Smart non-contact measurement solutions for industry

Crane Sentry systems feature Dimetix laser distance sensors (Mfg: Dimetix AG)

- ▶ Measurement accuracy of <1 in at speeds up to 20 Hz
- ▶ Class II visible laser for safe use
- ▶ Up to 1640 ft (500 m) range
- ▶ Indoor / outdoor use



CRANE SENTRY SYSTEM LAYOUT EXAMPLES



Two Laser End Limit and Collision Detection.

One laser aims at a fixed target, the other laser aims at the second crane. Similar to the first example, when crane approaches end limits, the slow speed and end stop alarms are triggered.

Restricted Zone-Motion Control.

One laser aims at a fixed target, the other laser aims at the trolley. Motion of the trolley and bridge are restricted when both the trolley and bridge are in the restricted zone, effectively preventing the crane from entering that area. Three sets of alarms control Bridge Forward, Bridge Reverse, and Trolley Forward. The relay outputs are wired in parallel to ensure movement is restricted only when the bridge AND trolley are in the restricted zone.



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CRANE SENTRY LASER COLLISION MONITORING SYSTEM OPTIONS

Typical Crane Sentry laser collision monitoring system consists of :

- ▶ (1) Crane Sentry controller
- ▶ (1) or (2) Dimetix FLS-C30 laser distance sensor(s)
- ▶ (1) or (2) laser cable M12 to DB15 sealed connector(s)
- ▶ (1) or (2) two axis alignment bracket (s)

And the following optional accessories:

- ▶ **NEMA 4x stainless steel windowed enclosure**
 - 316 S/S construction
 - Weatherproof silicone gasketing
 - Replaceable glass optics
 - Sealed cord grip with split insert
 - Internal mounting bracket for laser (aluminum)
 - Heating and cooling options available
 - Assembled with laser and cable if applicable
- ▶ **HD laser enclosure with 4 axis mount**
 - 304 S/S upper cover
 - Painted steel flanged base plate with welded thread conduit connection (safety yellow)
 - Adjustable axis (horizontal, vertical, 2 rotation axis)
 - Replaceable glass optics
 - Internal mounting bracket for DLS series laser (aluminum)
 - Heating and cooling options available
 - Image shown with optional enclosure cooler assembled
- ▶ **Target plate**
 - Orange reflective metal target plate for distances over 65 m



NOTE: The minimum distance is 0.5 m for the FLS-C series.

- ▶ Complete modular system includes up to 2 lasers
- ▶ Quick aim & set installation, versatile application
- ▶ Intuitive operation, simple troubleshooting
- ▶ Rugged industrial package, low maintenance
- ▶ Indoor/outdoor operation
- ▶ Non-contact, eye-safe laser measurement
- ▶ High accuracy, long range, competitive cost

Please **contact** Laser-View Technologies today to request a quote or learn more about the Crane Sentry laser collision monitoring system.

