Pre-wired pole-mount box for ITS sensor surge protection

The SmartSensor™ surge preassembled cabinet provides off-the-shelf surge protection for your SmartSensor. Fully assembled and prewired, this pole-mount cabinet protects sensor installations involving an underground cable run from electrical surges.

- Includes terminal blocks and a surge suppression module for a complete pole-mount surge suppression cabinet
- Includes color-coded terminal blocks that match SmartSensor cable colors for foolproof cable landing
- Insulation displacement terminal blocks for quick, no-fuss cable termination
- Cabinet includes a grounding lug for a solid earth ground connection necessary for reliable surge protection
- Preassembled, prewired and tested for first-try functionality
- Clearly labeled with “To SmartSensor” and “To Traffic Cabinet” cable terminations to minimize incorrect wire termination
Technical specifications

Assembly components
- Click 200 SmartSensor surge protector
- 1 T-bus connector (power and communication)
- 2 end brackets with labels
- 2 end bracket without labels
- 24 terminal blocks for cable terminations from the sensor and to the traffic cabinet: insulation displacement to plug insulation displacement
- 1 terminal block for earth ground: grounded spring cage to spring cage 10 AWG
- C10 fiberglass cabinet with grips

Click 200 specifications
- Physical
  - Weight: 0.3 lbs. (0.14 kg)
  - Physical dimensions: 4.5 in. x 4 in. x 0.9 in. (11.4 cm x 10.2 cm x 2.3 cm)
  - Ambient operating temp: -29°F to 165°F (-34°C to 74°C)
  - Humidity: up to 95% RH
- Mounting
  - DIN rail-mountable
  - Hot-swappable
- Connections
  - Pluggable screw terminals for easy pre-wiring
  - Other ports: DB-9 connector for RS-232 communication; RJ-11 connector for RS-485 communication; 5-position connector for power and RS-485 to and from the T-bus
- Three-stage protection
  - Three stages of protection: gas tubes; inductors on the DC power lines and TVS diodes on the communication buses; resettable fuse on the DC power line and varistors on all communication buses
- DC power protection
  - Complies with the applicable standards stated in the IEC 61000-4-5 Standard for DC power lines
  - Test results available for the following test conditions: surge voltages ±0.5kVA, 1kVA, 2kVA and 4kVA; common mode (input to ground); differential mode (input to input); 8x20µs waveform; 2 ohm generator impedance; minute-long pause between surges
- RS-485 protection
  - Complies with the applicable standards stated in the IEC 61000-4-5 Standard for communication lines
  - Clamping voltage: 8 VDC
  - Differential clamping voltage: 12 VDC
  - Test results available for the following test conditions: surge voltages ±0.5kVA, 1kVA, 2kVA and 4kVA; common mode (input to ground); differential mode (input to input); 8x20µs waveform; 12 ohm generator impedance; minute-long pause between surges

T-bus connector specifications
- Physical
  - Dimensions: 1.4 in. x 1.2 in. x 0.7 in. (3.5 cm x 3 cm x 1.7 cm)
  - Weight: 0.01 lbs. (4.5 g)
  - Comes in two models: green for data and power, gray for power only
- Mounting
  - DIN rail-mountable
- Power
  - Nominal current IN: 8 A
  - Nominal voltage UN: 150 V
- Testing
  - Passed manufacturer’s mechanical, electrical and material tests
- Warranty
  - One-year warranty against material and workmanship defect

End bracket specifications
- Physical
  - Weight: 0.01 lbs. (6.2 g)
Surge Preassembled Cabinet

**IDC to plug IDC terminal blocks specifications**

- **Physical**
  - Dimensions: with plug: 0.2 in. x 2.1 in. x 2.6 in. (5.3 cm x 6.6 cm); without plug 0.2 in. x 2.1 in. x 1.45 in. (5.3 cm x 3.7 cm)
  - Insulating material: PA
  - Insulating material group: I
  - Flammability: UL 94 V0
  - Pollution degree: 3
  - Ambient operating temperature: -67°F to 212°F (-55°C to 100°C)
  - Plug connector comes in left, middle, and right models for correct assembly
  - Matching end cover protects exposed conductor

- **Mounting**
  - DIN rail–mountable

- **Power**
  - Nominal current IN: 17.5 A
  - Nominal voltage UN: 500 V
  - Maximum load current: 17.5 A

- **Connections**
  - Number of connections: 2
  - Terminal block base connect: insulation displacement
  - Terminal block plug connect: insulation displacement
  - Removable plug
  - Wire: 24–16 AWG

- **Color coding**
  - Comes in three different models: gray (standard); green (earth ground); and blue (used to color-code plugs to ensure correct placement)

- **Ground**
  - Green block is grounded via metal foot to DIN rail
  - Rated surge voltage: 8 kV
  - Surge voltage category: III
  - Connection in acc. with standard: IEC 60947-7-2

- **Testing**
  - Passed manufacturer’s mechanical, electrical, and material tests

- **Warranty**
  - One-year warranty against material and workmanship defect

**Grounded terminal block specifications**

- **Physical**
  - Dimensions: 0.24 in. x 2.2 in. x 1.4 in. (0.6 cm x 5.6 cm x 3.6 cm)
  - Insulating material: PA
  - Insulating material group: I
  - Flammability: UL 94 V0
  - Number of connections: 2
  - Pollution degree: 3
  - Matching end cover protects exposed conductor

- **Mounting**
  - DIN rail–mountable

- **Ground**
  - Rated surge voltage: 8 kV
  - Surge voltage category: III
  - Connection in acc. with standard: IEC 60947-7-2

- **Connections**
  - Connections: Spring cage
  - Wire: 28–10 AWG
  - Stripping length: 3/8 in. (0.95 cm)
  - Internal cylindrical gage: A4

- **Testing**
  - Passed manufacturer’s mechanical, electrical, and material tests

- **Warranty**
  - One-year warranty against material and workmanship defect

**Fiberglass cabinet specifications**

- **Physical**
  - Dimensions: 10 in. x 8 in. x 6 in. (25.4 cm x 20.3 cm x 15.2 cm)
  - Weight: 6 lbs. (2.7 kg)
  - Ambient operating temperature: -40°F to 250°F (-40°C to 120°C)
  - Inflammability rating: UL 94-5V
  - 180° door opening
  - Made of compression-molded fiberglass-reinforced polyester
  - Chemical- and UV-resistant through use of SolarGuard™ technology
  - Cable grips provide a water-tight and weatherproof entry for running cables into the cabinet
  - Overhang cover on smooth-sided base
  - Raised cover for additional depth
  - Stainless steel latches, screws, and full-length hinge
  - Seamless polyurethane door gasket
  - Two latches: hinged lock latch and hinged padlock latch
  - Padlock latch for quick entry
  - Integrated mounting flange
  - Ships with backplate and mounting brackets
Mounting
- Shipped with mounting brackets attached
- Can be used with Band-It mounting straps or equivalent

Connections
- Grounding post
- Optional installed cable grips provide weatherproof entry for cables

Security
- Two latches: hinged lock latch or hinged padlock latch

Testing
- Building materials tested by manufacturer
- NEMA 4X-tested for indoors and outdoors to provide a degree of protection against falling dirt, rain, sleet, snow, wind-blown dust, splashing water, hose-directed water, ice

The advertised detection accuracy of the company’s sensors is based on both external and internal testing, as outlined in each product’s specification document. Although our sensors are very accurate by industry standards, like all other sensor manufacturers we cannot guarantee perfection or assure that no errors will ever occur in any particular applications of our technology. Therefore, beyond the express Limited Warranty that accompanies each sensor sold by the company, we offer no additional representations, warranties, guarantees or remedies to our customers. It is recommended that purchasers and integrators evaluate the accuracy of each sensor to determine the acceptable margin of error for each application within their particular system(s).
Bid specifications

1.0 General. This item shall govern the purchase of a preassembled surge suppression cabinet equivalent to the Wavetronix SmartSensor™ surge preassembled cabinet as part of a radar vehicle sensing device (RVSD) system or a continuous tracker advance detector (CTAD) system.

2.0 Product description. When an underground cable run is necessary, the RVSD or CTAD system shall include a preassembled surge suppression cabinet that includes the following elements: a device for providing DC, RS-232, and RS-485 surge suppression equivalent to the Click 200; T-bus connector; end blocks; terminal blocks for the termination of two cables; a terminal block for earth ground; and a cabinet.