



Isolated Transmitters



DC Millivolts Input

These models convert sensor inputs to proportional process current or voltage output signals.

Models

250T: Loop-powered transmitter series

350T: DC-powered transmitter series

450T: AC-powered transmitter series

Input Ranges

- Millivolt: -25 to 250mV
narrow span: 3 to 5mV, custom calibration

Output Ranges

- DC current: 4 to 20mA
- DC voltage: 0 to 5V or 0 to 10V

Power Requirements

- 250T: 12 to 50V DC @ 20mA (loop-powered)

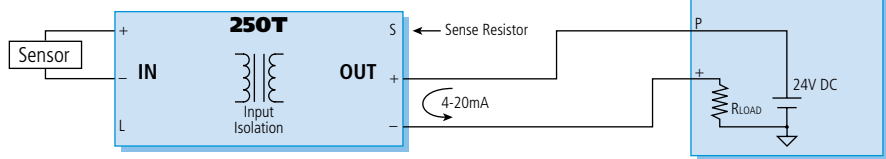
- 350T: DC voltage source (see table below)

| Output range | Power |
|--------------|----------------------|
| 4 to 20mA | 10 to 36V DC @ 30mA |
| 0 to 5V | 10 to 36V DC @ 9mA |
| 0 to 10V | 12.5 to 36V DC @ 9mA |

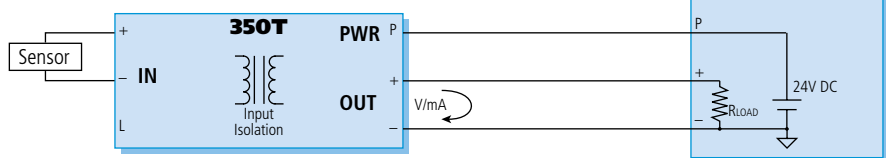
- 450T: 115V or 230V AC, ±10%, 50 to 60Hz

| Output range | Power |
|-------------------|------------------|
| 4 to 20mA | 115V AC @ 0.050A |
| 4 to 20mA | 230V AC @ 0.025A |
| 0 to 5V, 0 to 10V | 115V AC @ 0.020A |
| 0 to 5V, 0 to 10V | 230V AC @ 0.010A |

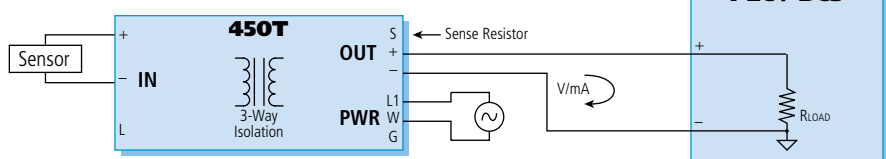
250T Loop-Powered (2-wire) Transmitter



350T DC-Powered (3-wire) Transmitter



450T AC-Powered (4-wire) Transmitter



Special Features

- Excellent accuracy and stability ensure reliable measurements in harsh industrial environments.
- RFI and EMI resistance minimize the effects of environmental noise.
- 90% span adjustment enables precise application calibration.

- 1500V AC peak isolation (250V AC or 354V DC continuous) prevents ground loops.

250T models:

Input isolated from output/power.

350T models:

Input isolated from output and power. Output and power share a common.

450T models:

3-way isolation. Input, output, and power circuits are isolated from each other.

- Compact, 1-inch wide housing uses less space for easier installation in control panels.

- Low power consumption. 350T units operate on currents as low as 9mA to help prevent expensive upgrades to larger power supplies.

Performance

Ambient Temperature Range

Operating: -13 to 185°F (-25 to 85°C).
Storage: -40 to 185°F (-40 to 85°C).

Accuracy

±0.1% of calibrated span or ±0.01mV, whichever is greater. Includes repeatability, hysteresis, terminal point linearity, and adjustment resolution.

Ambient Temperature Effect

Less than ±0.01% of output span per °F (±0.018% per °C). ±0.025% of output span per °F (±0.045% per °C) for narrow span units. (Specification includes the combined effects of zero and span over temperature).

Noise Resistance

RFI: Less than ±0.5% of output span effect.
EMI: Less than ±0.25% of output span effect.

Noise Rejection

Common Mode: 130dB at 60Hz, 100 ohm unbalance.
Normal Mode: 30dB at 60Hz, 100 ohm source.

Response Time

Output reaches 98% of output span in 300ms.

Bandwidth

-3dB at 3 Hz, typical.

Output Compliance

250T: $R_{LOAD} (max.) = (V_{SUPPLY} - 12V) / 20mA$.
350T: $R_{LOAD} (max.) = (V_{SUPPLY} - 2.5V) / 20mA$.
450T: $R_{LOAD} = 600$ ohms.

Input Impedance

1.0M ohm at 10mV span, typical; input current, ±10nA, typical.



Ordering Information

Select one option from each column. Example: 450T-MV1-Y-1-DIN-NCR-C

To order factory calibration, append "-C" to end of model number. Specify ranges on order.

| Base | Input | Mounting | | Approval |
|------|-------|----------|------|----------|
| 250T | -MV1 | -DIN | -N4 | -NCR |
| | -MV2 | -ST | -N12 | -OL1 |
| | -MV3 | -SM | -XP | -DT1 |
| | | | | -EP1 |

Note:
All 250Ts have 4 to 20mA output and are loop-powered.

| Base | Input | Output | Mounting | Approval |
|------|-------|--------|----------|----------|
| 350T | -MV1 | -Y | -DIN | -NCR |
| | -MV2 | -V0 | | |
| | -MV3 | -V5 | | |

Note:
All 350Ts accept 10 to 36V DC power supply.

| Base | Input | Output | Power | Mounting | Approval |
|------|-------|--------|-------|----------|----------|
| 450T | -MV1 | -Y | -1 | -DIN | -NCR |
| | -MV2 | -V0 | -2 | | |
| | -MV3 | -V5 | | | |

Input Options

- MV1: Millivolt.
Span adjust: 5 to 55mV DC
Zero adjust: -5 to 25mV DC
- MV2: Millivolt.
Span adjust: 25 to 250mV DC
Zero adjust: -25 to 125mV DC
- MV3*: Millivolt, narrow span.
Span adjust: 3 to 5mV DC
Zero adjust: -5 to 25mV DC
Specify calibration range on order.

Output Options (350T, 450T only)

- Y: 4 to 20mA DC.
- V0: 0 to 10V DC into 10K ohms or greater
- V5: 0 to 5V DC into 5K ohms or greater

Power Options (450T only)

- 1: 115V AC power
- 2: 230V AC power

Mounting Options

- Mountings
- DIN: DIN rail G or T mount
- ST: SNAPTRACK mount [250T only]
- SM: Surface-mount [250T only]
- External housings
- N4: NEMA 4, water-tight [250T only], holds two
- N12: NEMA 12, oil-tight [250T only], holds two
- XP: Explosion-proof NEMA 4 [250T only], holds one

Approval Options

- NCR: No certification/approval required.
- OL1†: CSA approval, Ordinary Locations [250T only].
- DT1†: CSA approval, Div. 2 hazardous locations: Class I; Div. 2; Groups A, B, C, D [250T only].
- EP1††: CSA approval, Explosion-proof for hazardous locations: Class I; Groups B, C, D Class II; Groups E, F, G. NOTE: Only available with explosion-proof housing (-XP) [250T only].

Ordering Notes

- * Unit requires factory calibration. Append "-C" to end of model number. Specify ranges on order.
- † Units are shipped separately from any optional enclosures (i.e. units are not installed in any external housing).
- †† Units shipped installed in external enclosure.

Accessories

- Power supplies**
See Power Supplies on page 213.
- DIN RAIL 3.0**
- DIN RAIL 16.7**
DIN rail strip, Type T, 3 inches (75mm) or 16.7 inches (425mm)
- 20RM-16-DIN**
19" rack-mount kit with DIN rail. Holds sixteen 250T/350Ts or ten 450T transmitters.
- 350T-N4-WM**
NEMA 4 water-tight enclosure, wall-mount. Holds two 350Ts or one 450T transmitter.
- 350T-N12-WM**
NEMA 12 oil-tight enclosure, wall-mount. Holds two 350Ts or one 450T transmitter.



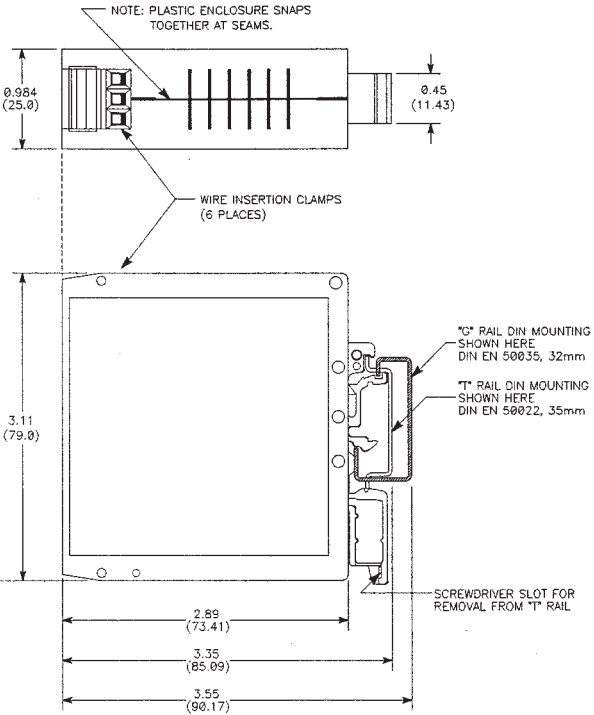
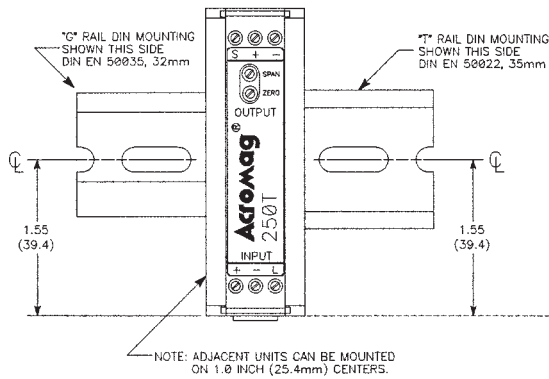
Dimensions

Transmitters: 250T, 350T

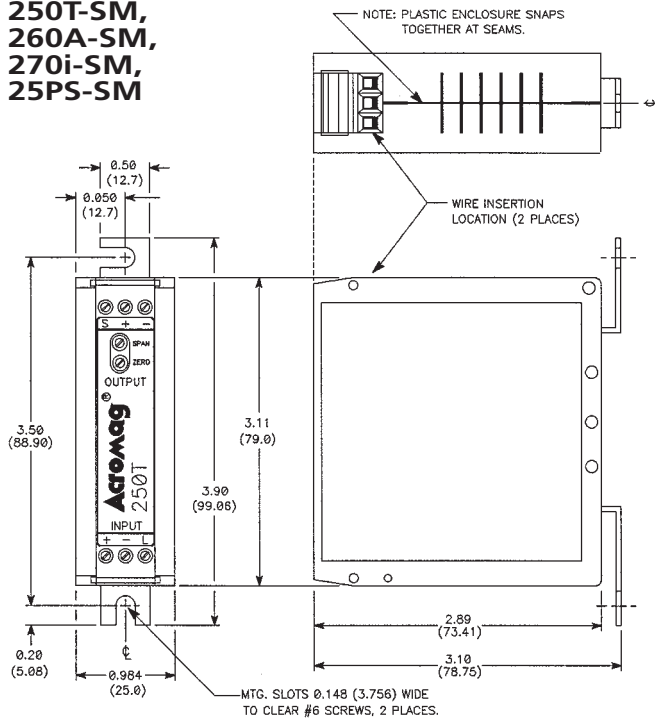
Isolators: 270i, 340i,

Limit Alarms: 260A

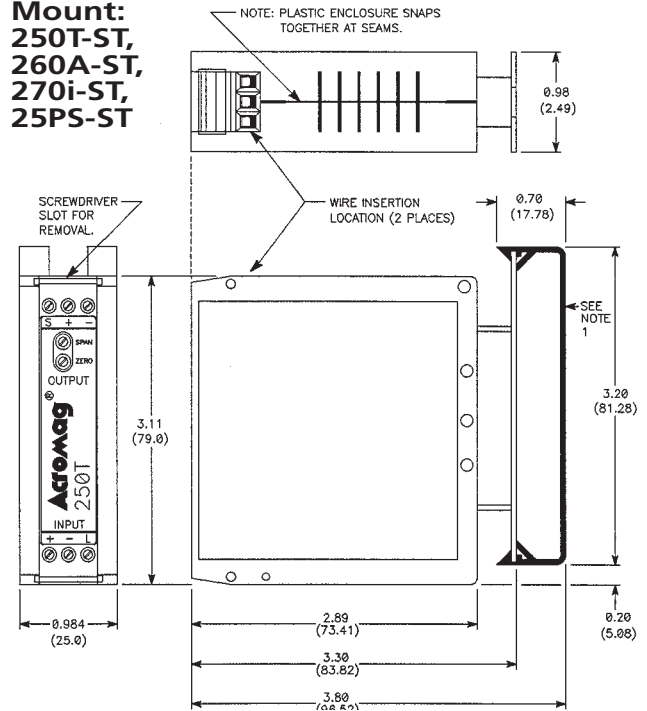
Power Supplies: 25PS, 35PS-2U



**Surface Mount:
250T-SM,
260A-SM,
270i-SM,
25PS-SM**



**Snaptrack
Mount:
250T-ST,
260A-ST,
270i-ST,
25PS-ST**



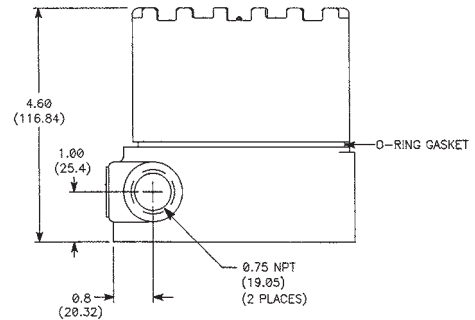
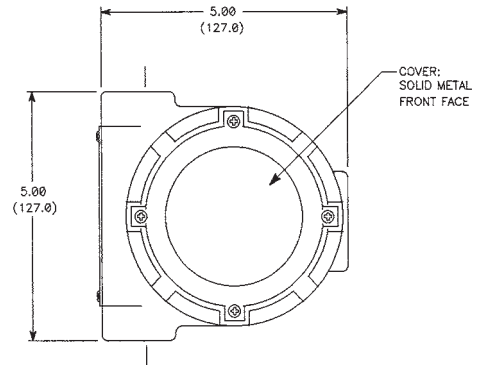
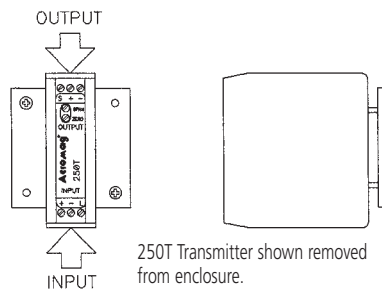
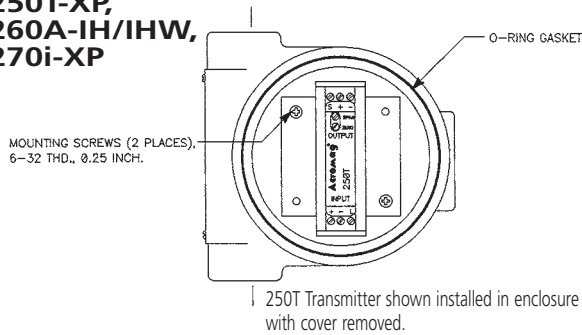
Dimensions are in inches (millimeters).



Dimensions

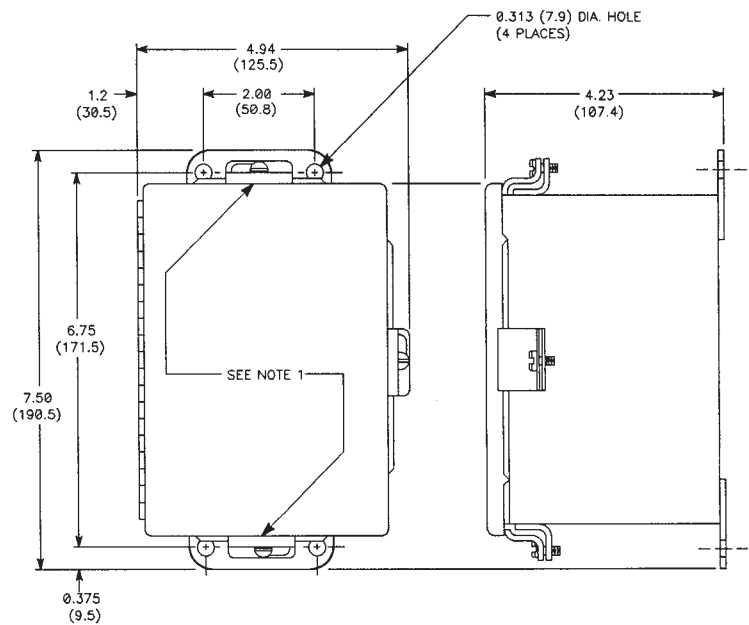
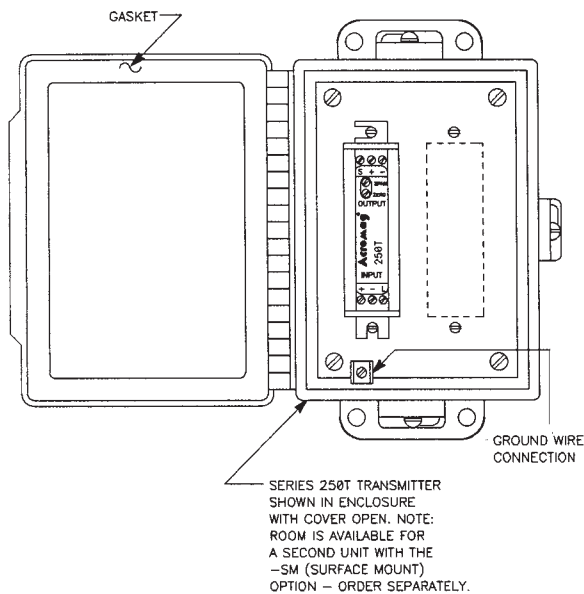
Explosion-Proof and Industrial Housing

250T-XP,
260A-IH/IHW,
270i-XP



NEMA-4 and NEMA-12 Enclosures

250T-N4 / N12, 25PS-N4 / N12
260A-N4 / N12, 270i-N4 / N12



- NOTES:
1. THESE SPECIFIC CLAMPS ON NEMA 4 ENCLOSURES ONLY.
 2. CONDUIT MOUNTING HOLES AND FITTINGS ARE CUSTOMER SUPPLIED.

Dimensions are in inches (millimeters).

Flat Pack

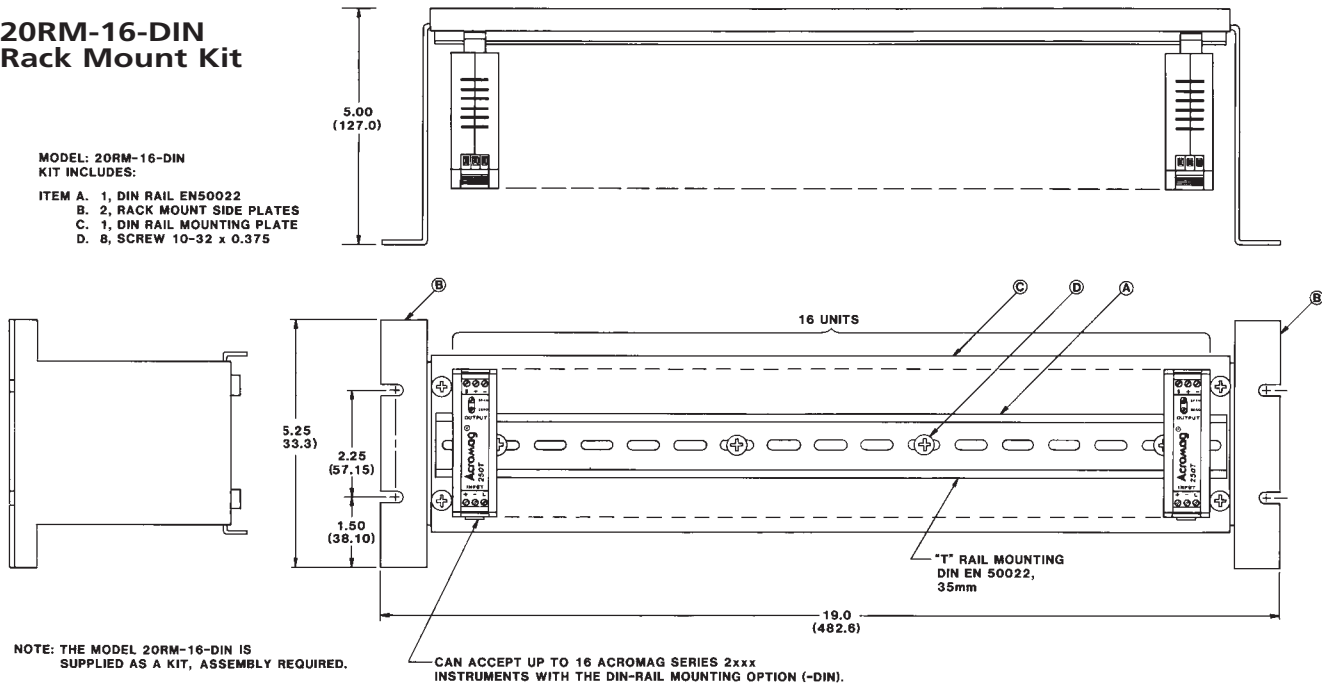


Dimensions

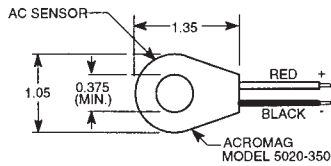
20RM-16-DIN Rack Mount Kit

MODEL: 20RM-16-DIN
KIT INCLUDES:

- ITEM A. 1, DIN RAIL EN50022
- B. 2, RACK MOUNT SIDE PLATES
- C. 1, DIN RAIL MOUNTING PLATE
- D. 8, SCREW 10-32 x 0.375



AC Sensor 5020-350



Dimensions are in inches (millimeters).

Flat Pack