



ADTECH

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200 SERIES TWO-WIRE FIELD SELECTABLE WIDE RANGING TRANSMITTERS GUIDE



FEATURES

- **TYPES OF INPUTS:** AC I/V (TRMS OR AVERAGE); FREQUENCY, MILLIVOLTS, POTENTIOMETER, RTD, DC I/V, T/C.
- **NO INTERACTION:** ZERO AND SPAN CONTROLS
- **ELEVATION/SUPPRESSION:** UP TO 100% OF RANGE
- **POWER RANGE:** 8 TO 42 VDC
- **RFI-RESISTANT**
- **TEMPERATURE COEFFICIENTS:**
ZERO = $\pm 0.007\%$ / °C OF SPAN- TYPICAL
SPAN = $\pm 0.008\%$ / °C OF SPAN- TYPICAL
- **REPEATABILITY:** $\pm 0.002\%$ TYPICAL
- **BANDWIDTH:** (-3 DB) : 3.2 HZ TYPICAL
- **ISOLATION:** 1000 VDC OR 600 VAC
- **POWER SUPPLY EFFECT:** $\pm 0.005\%$ OF SPAN
- **RESPONSE TIME:** 110 MILLISECONDS TYPICAL
- **REVERSE POLARITY PROTECTION**

TYPICAL APPLICATIONS

MEASUREMENT OF :

- TEMPERATURE
- FLOW
- SPEED
- POSITION
- DISPLACEMENT
- ROTATION
- AC CURRENT
- AC VOLTAGE
- DC SIGNALS

AC INPUT ACX 240 (ISOLATED)	FREQUENCY INPUT FDX 250 (ISOLATED)	MV INPUT MVX 206 (NON-ISOLATED)																																													
INPUT/OUTPUT	INPUT/OUTPUT	INPUT/OUTPUT																																													
<p>INPUT SIGNALS AC CURRENT: ANY 0-1 TO 0-5 AMPS AC, BURDEN LESS THAN 0.5 VA (SELECTABLE AVERAGE OR TRUE RMS RESPONDING) AC VOLTAGE: ANY 0-0.25 TO 0-250 VAC, BURDEN LESS THAN 0.5 VA (SELECTABLE AVERAGE OR TRUE RMS RESPONDING) (4 MAJOR RANGES 0.25, 2.5, 25, 250) ZERO ADJUSTMENT: ±5% NOMINAL OF SPAN COURSE SPAN ADJUSTMENT: 100% OF A MAJOR RANGE (VOLTAGE ONLY) FINE SPAN ADJUSTMENT: ±5% NOMINAL OF MAJOR RANGE (±1 AMP FOR CURRENT INPUT) INPUT FREQUENCY RANGE: 25-1,000 Hz INPUT OVERLOAD CAPABILITY: 200% CONTINUOUS</p> <p>OUTPUT SIGNAL: 4-20 mA DC OUTPUT LOOP DRIVE CAPABILITY R (OHM) = $\frac{(V_{SUPPLY} - V_{MINIMUM}) 1.000}{I_{OUT MAX. MA}}$ V MINIMUM = 8.0 VDC</p> <table border="1" data-bbox="32 661 479 745"> <thead> <tr> <th>I out</th> <th colspan="4">4-20 mA</th> </tr> </thead> <tbody> <tr> <td>V supply</td> <td>12</td> <td>24</td> <td>36</td> <td>42</td> </tr> <tr> <td>R(ohms)</td> <td>200</td> <td>800</td> <td>1400</td> <td>1700</td> </tr> </tbody> </table>	I out	4-20 mA				V supply	12	24	36	42	R(ohms)	200	800	1400	1700	<p>INPUT SIGNALS VOLTAGE (AMPLITUDE): 10 MV-100 VRMS (0-5 KHZ); 50 MV TO 60 VRMS (5 KHZ TO 30 KHZ) CONTACT: DRY, 2 mA @ 24 VAC RATING FREQUENCY RANGE: 0-30 HZ TO 0-30 KHZ FULL SCALE MAJOR RANGE SWITCH: PROVIDES 11 DISCRETE RANGES WITH THE ZERO CONTROL ADJUSTABLE 10% OF OUTPUT AND SPAN CONTROL ADJUSTABLE FROM 50% TO 100% OF THE MAJOR RANGE SELECTED</p> <p>OUTPUT SIGNAL: 4-20 mA DC OUTPUT LOOP DRIVE CAPABILITY R (OHM) = $\frac{(V_{SUPPLY} - V_{MINIMUM}) 1.000}{I_{OUT MAX. MA}}$ V MINIMUM = 8.0 VDC</p> <table border="1" data-bbox="576 672 1023 756"> <thead> <tr> <th>I out</th> <th colspan="4">4-20 mA</th> </tr> </thead> <tbody> <tr> <td>V supply</td> <td>12</td> <td>24</td> <td>36</td> <td>42</td> </tr> <tr> <td>R(ohms)</td> <td>200</td> <td>800</td> <td>1400</td> <td>1700</td> </tr> </tbody> </table>	I out	4-20 mA				V supply	12	24	36	42	R(ohms)	200	800	1400	1700	<p>INPUT SIGNALS 0.5 MV TO 100 MV SPAN (Z IN GREATER THAN 10 MEGOHMS) ZERO SUPPRESSION: UP TO 100% OF THE MAJOR RANGE SELECTED IN 16 DIVISIONS OF THE COARSE ZERO ADJUSTMENT SWITCH SPAN: FROM 0.5 MV TO 100 MV FULL SCALE SWITCH SELECTABLE. THE COARSE SPAN SWITCH ADDS 16 DIVISIONS TO EACH MAJOR RANGE.</p> <p>OUTPUT SIGNAL: 4-20 mA DC OUTPUT LOOP DRIVE CAPABILITY R (OHM) = $\frac{(V_{SUPPLY} - V_{MINIMUM}) 1.000}{I_{OUT MAX. MA}}$ V MINIMUM = 8.0 VDC</p> <table border="1" data-bbox="1117 672 1563 756"> <thead> <tr> <th>I out</th> <th colspan="4">4-20 mA</th> </tr> </thead> <tbody> <tr> <td>V supply</td> <td>12</td> <td>24</td> <td>36</td> <td>42</td> </tr> <tr> <td>R(ohms)</td> <td>200</td> <td>800</td> <td>1400</td> <td>1700</td> </tr> </tbody> </table>	I out	4-20 mA				V supply	12	24	36	42	R(ohms)	200	800	1400	1700
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<p>PERFORMANCE</p> <p>* CALIBRATED ACCURACY: ±0.25% * INDEPENDENT LINEARITY: ±0.15% MAXIMUM, ±0.06% TYPICAL</p> <p>REPEATABILITY: ±0.005% MAX., ±0.002% TYP. ZERO TC: ±0.01% OF SPAN MAX /°C SPAN TC: CURRENT: +0.02% OF SPAN MAX /°C LOAD EFFECT: ±0.005% ZERO TO FULL LOAD OUTPUT RIPPLE: 10 MV P/P MAXIMUM RESPONSE TIME: 350 MILLISECONDS (10 TO 90% STEP RESPONSE) AVERAGE RESPONDING BANDWIDTH: (-3 DB): 1 HZ TEMPERATURE RANGE: -25° TO 185°F (-31° TO 85°C) OPERATING; -40° TO 200°F (-40° TO 93°C) STORAGE POWER SUPPLY EFFECT: ±0.005% OF SPAN, MAX. ISOLATION: INPUT/OUTPUT/CASE: 1000VDC, 600 VAC NOTE: ALL ACCURACIES ARE GIVEN AS A % OF SPAN.</p>	<p>PERFORMANCE</p> <p>* CALIBRATED ACCURACY: ±0.1% * INDEPENDENT LINEARITY: ±0.02% MAXIMUM, ±0.01% TYPICAL REPEATABILITY: ±0.005% MAX., ±0.002% TYP. ZERO TC: ±0.01% OF SPAN MAX /°C SPAN TC: ±0.01% OF SPAN MAX /°C LOAD EFFECT: ±0.005% ZERO TO FULL LOAD OUTPUT RIPPLE: 10 MV P/P MAXIMUM RESPONSE TIME: 350 MILLISECONDS (10 TO 90% STEP RESPONSE) BANDWIDTH: (-3 DB): 1 HZ TEMPERATURE RANGE: -25° TO 185°F (-31° TO 85°C) OPERATING; -40° TO 200°F (-40° TO 93°C) STORAGE POWER SUPPLY EFFECT: ±0.005% OF SPAN, MAX. ISOLATION: INPUT/OUTPUT/CASE: 1000VDC OR 600 VAC NOTE: ALL ACCURACIES ARE GIVEN AS A % OF SPAN.</p>	<p>PERFORMANCE</p> <p>* CALIBRATED ACCURACY: ±0.1% * INDEPENDENT LINEARITY: ±0.01% MAXIMUM ±0.006% TYPICAL (14-BIT DIGITAL LINEARITY) REPEATABILITY: ±0.005% MAX., ±0.002% TYP. ZERO TC: ZERO TC: ± $\frac{0.025}{INPUT SPAN (MV)}$ + 0.005 % OF SPAN MAX / °C SPAN TC: ±0.008% OF SPAN MAX/°C LOAD EFFECT: ±0.005% ZERO TO FULL LOAD OUTPUT RIPPLE: 10 MV P/P MAXIMUM RESPONSE TIME: 110 MILLISECONDS (10 TO 90% STEP RESPONSE) BANDWIDTH: (-3 DB): 3.2 HZ TEMPERATURE RANGE: -25° TO 185°F (-31° TO 85°C) OPERATING; -40° TO 200°F (-40° TO 93°C) STORAGE POWER SUPPLY EFFECT: ±0.005% OF SPAN MAX. NOTE: ALL ACCURACIES ARE GIVEN AS A % OF SPAN.</p>																																													
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MV INPUT MVX 226 (ISOLATED)	POTENTIOMETER INPUT PTX 273 (NON-ISOLATED)	RTD INPUT RBX 274 (NON-ISOLATED)																																													
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RTD INPUT RBX 272 (ISOLATED)	I/V/MV INPUT SCX 202 (ISOLATED)	T/C INPUT TCX 226 (ISOLATED)																																													
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8 TO 42 VDC: STANDARD	8 TO 42 VDC: STANDARD	8 TO 42 VDC: STANDARD																																													
MECHANICAL	MECHANICAL	MECHANICAL																																													
<p>ELECTRICAL CLASSIFICATION: GENERAL PURPOSE CONNECTION: SCREW, COMPRESSION TYPE, ACCEPTS UP TO 14 AWG CONTROLS: TWO 16 POSITION ROTARY SWITCHES FOR COARSE ZERO AND SPAN CONTROL; TWO MULTITURN POTENTIOMETERS FOR FINE ZERO AND SPAN CONTROL AND JUMPERS FOR RTD TYPE; MAJOR RANGE AND INPUT ZERO ELEVATION. MOUNTING: DIN RAILS, SURFACE, SNAP TRACK, OR NEMA 4 OR 7 WEIGHT: NET UNIT: 4 OZ. (115 GRAMS); SHIPPING: NOMINAL 7 OZ. (200 GRAMS)</p>	<p>ELECTRICAL CLASSIFICATION: GENERAL PURPOSE CONNECTION: SCREW, COMPRESSION TYPE, ACCEPTS UP TO 14 AWG CONTROLS: TWO MULTITURN POTENTIOMETERS FOR FINE ZERO AND SPAN CONTROL AND JUMPERS FOR RANGES MOUNTING: DIN RAILS, SURFACE, SNAP TRACK, OR NEMA 4 OR 7 WEIGHT: NET UNIT: 4 OZ. (115 GRAMS); SHIPPING: NOMINAL 7 OZ. (200 GRAMS)</p>	<p>ELECTRICAL CLASSIFICATION: GENERAL PURPOSE CONNECTION: SCREW, COMPRESSION TYPE, ACCEPTS UP TO 14 AWG CONTROLS: TWO 16 POSITION ROTARY SWITCHES FOR COARSE ZERO AND SPAN CONTROL; TWO MULTITURN POTENTIOMETERS FOR FINE ZERO AND SPAN CONTROL AND JUMPERS FOR RTD TYPE; MAJOR RANGE AND INPUT ZERO ELEVATION. MOUNTING: DIN RAILS, SURFACE, SNAP TRACK, OR NEMA 4 OR 7 WEIGHT: NET UNIT: 4 OZ. (115 GRAMS); SHIPPING: NOMINAL 7 OZ. (200 GRAMS)</p>																																													
OPTIONS	OPTIONS	OPTIONS																																													
<p>H 15 D, H 25 - H 30 LPI 40 D</p> <p>MOUNTING LOOP POWERED INDICATOR</p>	<p>H 15 D, H 25 - H 30 LPI 40 D</p> <p>I 14</p> <p>MOUNTING LOOP POWERED INDICATOR VOLTAGE / CURRENT INPUTS</p>	<p>H 15 D, H 25 - H 30 LPI 40 D</p> <p>MOUNTING LOOP POWERED INDICATOR</p>																																													

THE ADTECH 200 SERIES TWO-WIRE TRANSMITTERS PROVIDE FIELD MOUNTED EFFICIENCY AND EASE OF WIRING IN A COMPACT DIN PACKAGE. THE UNITS CONVERT SENSOR INPUTS TO THE INDUSTRY STANDARD 4-20 mA DC TWO-WIRE LOOP OUTPUT FOR INTERFACE DIRECTLY WITH THE PLC'S, DCS'S AND PROCESS COMPUTERS.

MOST UNITS PROVIDE INDEPENDENT LINEARITY EQUIVALENT TO 14-BIT DIGITAL ACCURACY AND INCLUDE USER FRIENDLY FEATURES SUCH AS WIDE RANGING AND NON-INTERACTIVE ZERO AND SPAN CONTROLS.

THE COMPACT DIN MOUNTING STYLE ALLOWS HIGH DENSITY MOUNTING IN NEW OR EXISTING FIELD MOUNTED OR CONTROL PANEL ENCLOSURES.

STANDARD MOUNTING IS DIN RAIL. SURFACE OR SNAP TRACK MOUNTING IS PROVIDED AT NO CHARGE. NEMA 4 OR 7 ARE OPTIONALLY AVAILABLE.

THESE UNITS ARE DESIGNED FOR INDUSTRIAL ENVIRONMENTS. THE HOUSING IS MADE OF RUGGED KRILEN FOR PROTECTION AGAINST CORROSION, MOISTURE AND DUST.

SCREW COMPRESSION TERMINALS ARE PROVIDED FOR POSITIVE FIELD CONNECTIONS.

REVERSE POLARITY PROTECTION AND CURRENT LIMITING ARE SUPPLIED AS STANDARD.

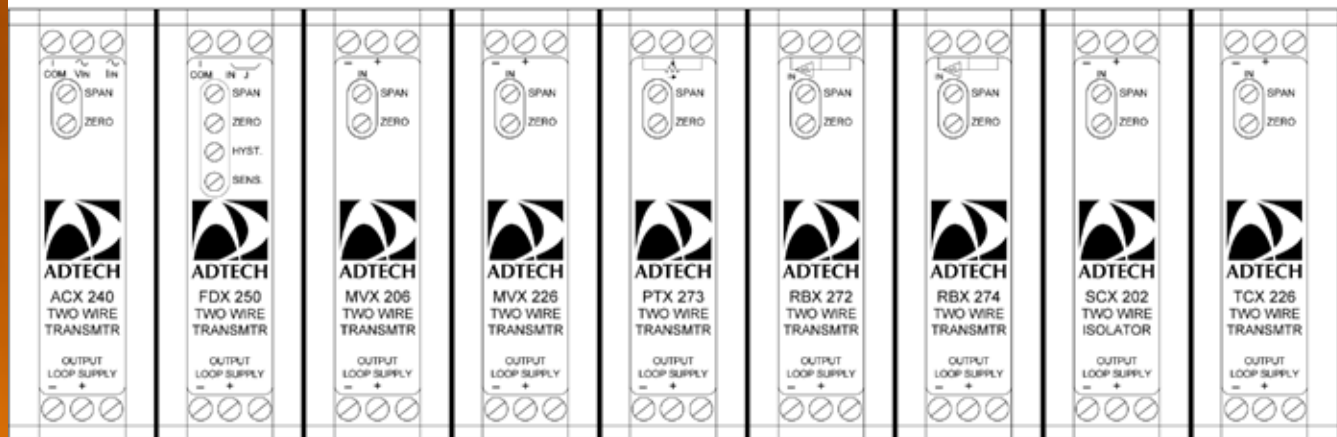
THE POWER RANGE OF 8 TO 42 VDC PROVIDES VALUABLE ADDED DRIVE CAPABILITY.

THE INPUT CAN BE FACTORY SET TO ORDER AS SPECIFIED (NO CHARGE) OR RECONFIGURED IN THE FIELD BY SIMPLY ADJUSTING SWITCHES, MULTI-TURN POTENTIOMETERS, AND PLUG-IN JUMPERS.

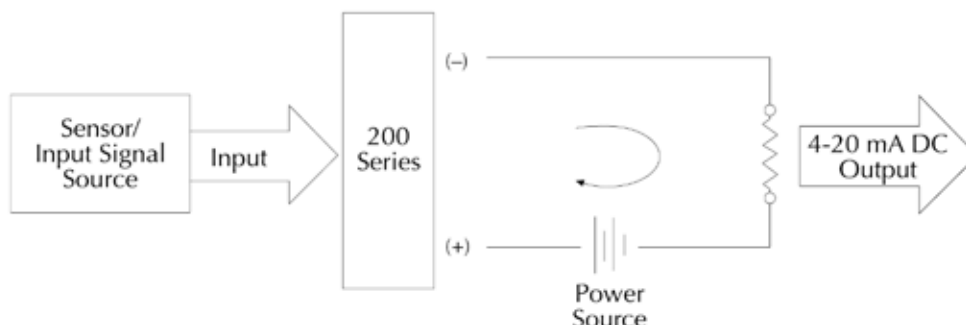
INTEGRAL LCD FIELD INDICATOR (LPI 40D) IS OPTIONALLY AVAILABLE.

AC TO DC OR DC TO DC INSTRUMENT POWER SUPPLIES ARE AVAILABLE. THE IPS 2402 AC/DC POWERS UP TO 2 UNITS. THE IPS 2416 AC/DC OR DC/DC POWERS UP TO 16 UNITS. DIN, SURFACE, SNAP TACK OR NEMA MOUNTINGS ARE AVAILABLE.

Connections

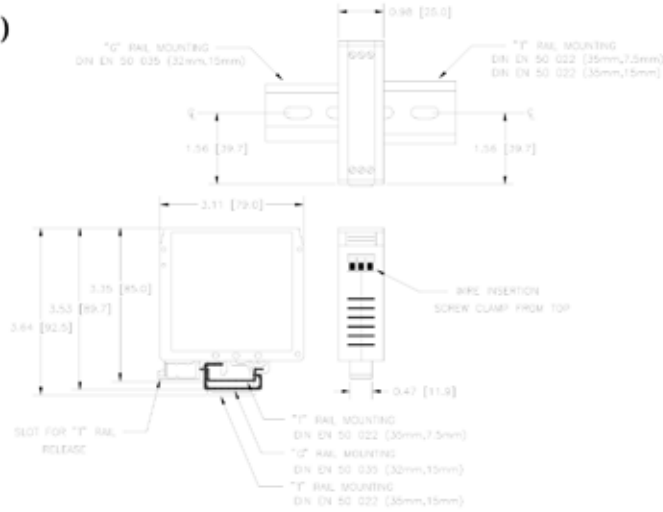


Typical Connection

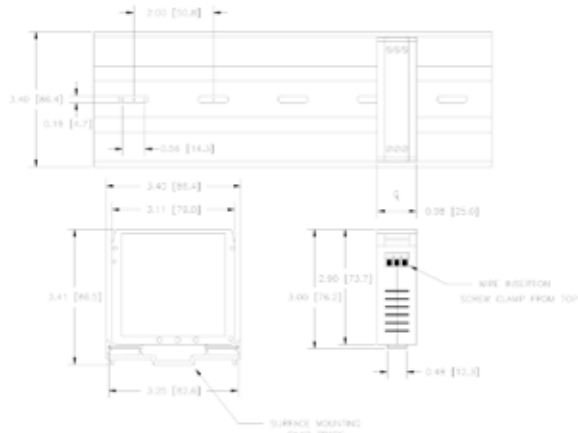


Outline & Mounting

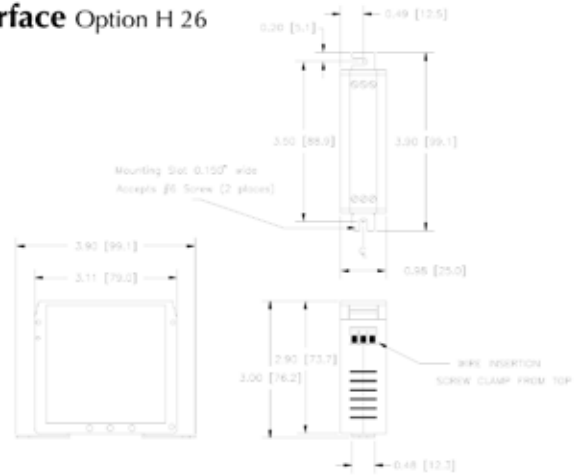
DIN Mount (Standard)



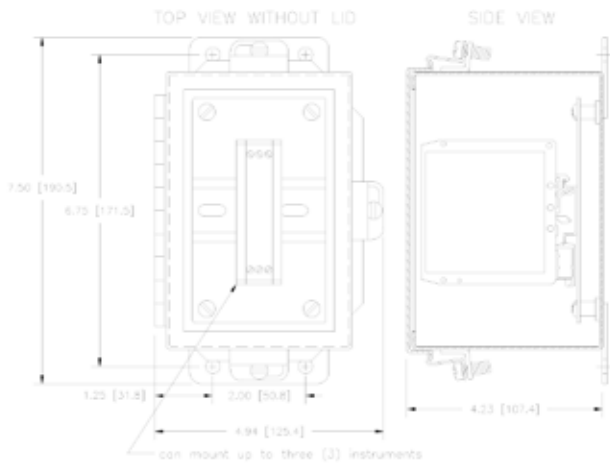
Snap Track Option H 25



Surface Option H 26



NEMA 4 Option H 27



NEMA 7 Option H15D

