



# ADTECH

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## LOOP ISOLATOR MODEL NO. SCX 102

THE ADTECH SCX 102 LOOP ISOLATOR PROVIDES A SOLUTION FOR GROUND LOOPS AND PROBLEMS ENCOUNTERED IN CONNECTING TOGETHER RECORDERS, PROCESS CONTROL SYSTEMS, AND COMPUTERS. THE SCX 102 BREAKS THE GALVANIC PATH BETWEEN THE TRANSMITTED SIGNAL AND THE OUTPUT RECEIVING DEVICE, INSURING RELIABLE AND ACCURATE CURRENT-TO-CURRENT SIGNAL TRANSFER.

THE SCX 102 ACCEPTS A 4-20 MA DC SIGNAL AND PROVIDES AN ISOLATED 4-20 MA DC OUTPUT.

OPERATING POWER IS DERIVED FROM THE INPUT SIGNAL, SO NO EXTERNAL POWER SOURCE IS REQUIRED.

THE SCX 102 IS EASILY INSERTED BETWEEN THE LOOP(S) REQUIRING INPUT/OUTPUT ISOLATION PROVIDING AN EXACT ONE-TO-ONE 4-20 MA DC CURRENT TRANSFER.

THE SCX 102 PROVIDES THE LOWEST INPUT BURDEN IN ITS CLASS, MAKING IT IDEALLY SUITED FOR MOST SIGNAL REPEATING /ISOLATING APPLICATIONS.

STANDARD FEATURES INCLUDE A 0 TO 750 OHM OUTPUT LOAD RANGE, AND  $\pm 0.1\%$  ACCURACY WITHOUT THE NEED TO RECALIBRATE FOR LOAD RESISTANCE CHANGES.

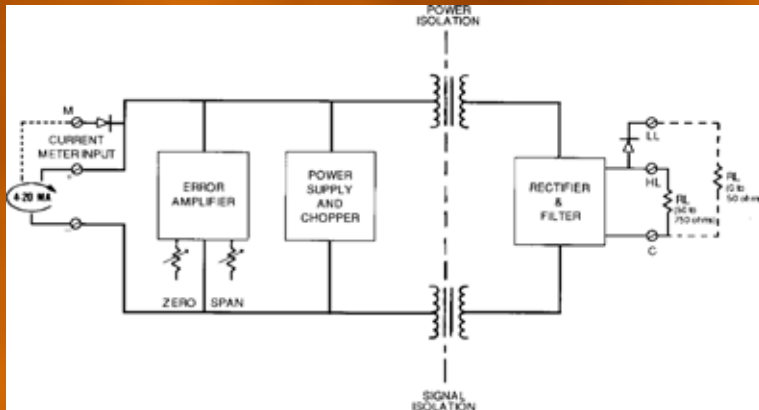
ADDITIONAL STANDARD FEATURES INCLUDE REVERSE POLARITY PROTECTION AND CONVENIENT CURRENT MONITORING TERMINALS AS SHOWN IN THE DIAGRAMS.

AN EXTREMELY IMPORTANT STANDARD FEATURE IS AN OUTPUT OVERVOLTAGE CLAMP THAT PREVENTS OVERLOADING OF THE INPUT LOOP UNDER AN OPEN OUTPUT LOOP CONDITION.

DIN MOUNTING IS SUPPLIED AS STANDARD. SURFACE MOUNT (OPTION H 26) AND SNAP TRAK (OPTION H 25) ARE AVAILABLE AT NO EXTRA COST. SPECIFY.

### TYPICAL APPLICATIONS

- INTERFACE NON-EQUAL PLANT GROUND SYSTEMS
- SOLVES GROUND LOOP PROBLEMS
- MEET SAFETY STANDARDS FOR SHOCK HAZARD
- COMPUTER/PROGRAMMABLE CONTROLLER INTERFACE

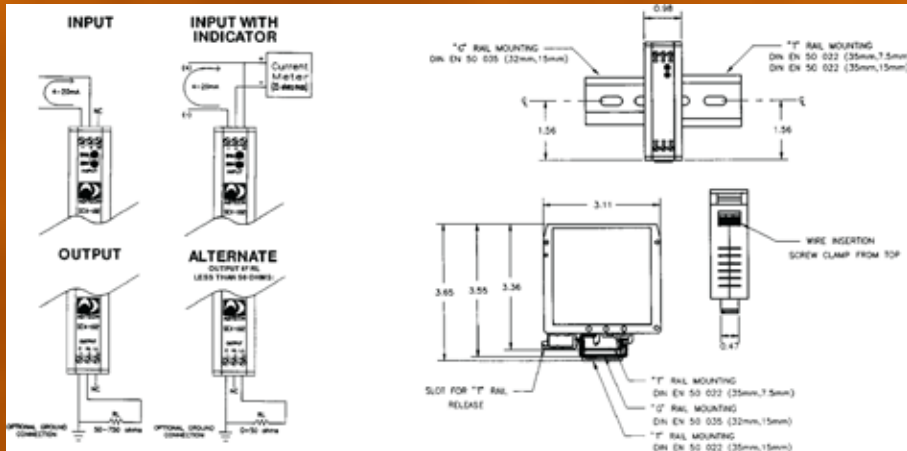


### FEATURES

- DC CURRENT INPUT/OUTPUT: 4-20 mA
- REPEATABILITY:  $\pm 0.01\%$  OF SPAN
- HIGH ACCURACY:  $\pm 0.1\%$  OF SPAN
- OUTPUT RIPPLE: LESS THAN 0.1% OF OUTPUT SPAN
- NO EXTERNAL POWER SOURCE: LOOP POWERED



# CONNECTIONS / DIMENSIONS



## INPUT/OUTPUT PERFORMANCE

**INPUT SIGNALS:**  
4-20 mA DC

**OUTPUT SIGNALS:**  
4-20 mA

**CALIBRATED ACCURACY:**  $\pm 0.1\%$  INCLUDING THE COMBINED EFFECTS OF REPEATABILITY, HYSTERESIS, ADJUSTMENT RESOLUTION, AND TERMINAL LINEARITY.  
**TEMPERATURE STABILITY:**  $\pm 0.01\%$  / °C MAX.,  $\pm 0.004\%$  / °C TYPICAL

**RESPONSE TIME:** 150 MILLISECONDS (10% TO 90% STEP INPUT)

**TEMPERATURE RANGE:**  
-18°F TO 185°F (-25°C TO 85°C) OPERATING;  
-40°F TO 200°F (-40°C TO 93°C) STORAGE

**ISOLATION:** 250 VAC, 350 VDC COMMON-MODE

**LOAD RESISTANCE EFFECT:** 0.1% OF OUTPUT SPAN MAXIMUM OVER THE ENTIRE LOAD RANGE  
**OUTPUT RIPPLE:**  $\pm 0.1\%$  OF OUTPUT SPAN MAX.

(IT WILL WITHSTAND 1,500 VAC DIELECTRIC STRENGTH TEST FOR 1 MINUTE WITHOUT BREAKDOWN.)

**INPUT VOLTAGE DROP:**  $2.8 + 1.1 (RL + 40) I$ -INPUT (WHERE I- INPUT IS IN AMPS)



## POWER

**EXTERNAL POWER:** NONE

## MECHANICAL

**ELECTRICAL CLASSIFICATION:** GENERAL PURPOSE CONNECTION: SCREW COMPRESSION TYPE, ACCEPTS UP TO 14AWG WIRE

**CONTROLS:** MULTITURN POTENTIOMETERS FOR ZERO /SPAN MOUNTING: DIN - STANDARD ( SEE OTHER OPTIONS BELOW)  
**WEIGHT:** NET UNIT: 4 OZ. ( 115 GRAMS)  
**SHIPPING:** 7 OZ. (200 GRAMS)

## OPTIONS

OPTION NO.	DESCRIPTION
H 15D	EXPLOSION PROOF: CLASS 1, GROUP B,C & D
H 25	SNAP TRACK MOUNT
H 26	SURFACE MOUNTING
H 27	NEMA 4 ENCLOSURE
H 29	T 35 DIN "T" RAIL 2 FT. LONG
H 30	T 32 DIN "G" RAIL 2 FT. LONG

### Ordering Information

- Model number
- Mounting, housing, and miscellaneous options

Please refer to the Housing and/or Option Section for more specific and detailed information.