

Basic Safety & Operational Specifications for Active Barriers

X57-606 Thermocouple Input (haz. area) to Isolated Current or Voltage Transmitter Output

- ◆ Accepts Grounded or Un-Grounded Thermocouples
- ◆ Plug-in Style - Simplify Installation, Commissioning, and Maintenance
- ◆ Provides Isolated Current or Voltage Signal to Safe Area
- ◆ Optional mA, mV, and Voltage Inputs
- ◆ DIN Rail or Multi-barrier Surface Mount Chassis Options



DESCRIPTION: The X57-606 is designed mainly for thermocouple inputs. However, it can also accept mV, mA, and voltage signals from any I.S. rated field device having the correct entity numbers or any device that qualifies as a “Simple Apparatus.” With complete input-to-output-to-power isolation, the X57-606 is the proper choice whenever the thermocouple or other field device must be grounded. This barrier incorporates cold junction compensation for the thermocouple inputs, and has front access to both the Zero and Span adjustments to make calibration easy. Multiple output signal formats and a variety of chassis options, and the combining of signal conditioning with I.S. barrier functions, make the X57-606 cost effective means of transporting field signals to the control room.

SPECIFICATIONS:

Type: active galvanic isolation
Chassis: plug-in single or multi-barrier chassis
Mounting: surface mount (single/multiple barrier) or single DIN rail mount
Wiring: all wiring and grounding connects to terminals on the chassis
Wire Size: up to #12 awg (1.5 mm²)
Size: 3.6”H X 0.88”W X 4.75”D (without chassis) (91.44mm X 22.35mm X 120.65 mm)
Weight: 6 oz (168 gm) (without chassis)
Power Supply: 24 VDC (21.6 to 26.4 VDC)
Power Consumption: 1.5 watts at 24 vdc
Isolation: 2000 vrms (input to output to power)
Input Types: a: T/C types J, K, R, S, T, B, E

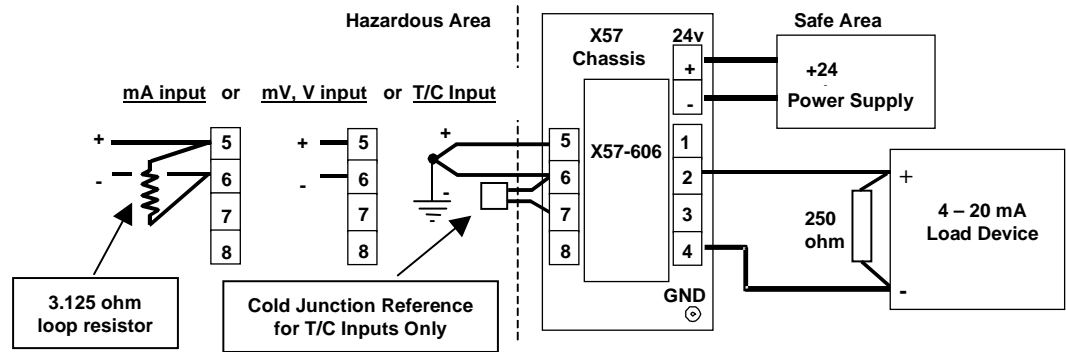
b: mV, mA, and Volts (up to 5 VDC)
Inputs Impedance: a: T/C = >10 M Ohms
 b: mV and Volts = 500 K Ohms
 c: mA = 3.125 Ohm
Outputs: 4-20 mA into 1K ohm load (powered by barrier) 1-5 VDC (Rout =15 Ohm)
Accuracy: offset = +/- 2 μv/°C referred to input
 span = +/- 0.1% of span referred to output
 T.C cold junction = +/- 0.05° per degree amb.change
 note: (T/C outputs are not linearized)
Adjustments: front access ZERO and SPAN (+/- 20% min.)
Temp. Stability: +/- 0.015% of span per °C (< 50 °C span)
Operating Temp.: -4°F to 131°F (-20°C to +55°C)
Storage Temp.: -40°F to 176°F (-40°C to +80°C)
Approvals: Class I, II, III; Div.1; Grps A-G

Specifications apply at 23 +/- 2°C (74 +/- 2°F) unless otherwise specified, and are subject to change without notice,

SAFETY PARAMETERS:				Ca (μF)			La (mH)		
	Voc/ Vmax/Uz	Isc (mA)	Rmin (ohms)	Groups A/B	Groups C, E	Groups D,F,G	Groups A/B	Groups C, E	Groups D,F,G
FM	5.5	11		52.5	157	420	309	1000	1000
CSA	5.5		62	approved	approved	approved	approved	approved	approved
UL	Pending								
CENELEC	See Data Sheet “X57EN-606” for CENELEC equivalent barrier.								

X57-606 Thermocouple Input to Isolated Current or Voltage Transmitter Output (con't)

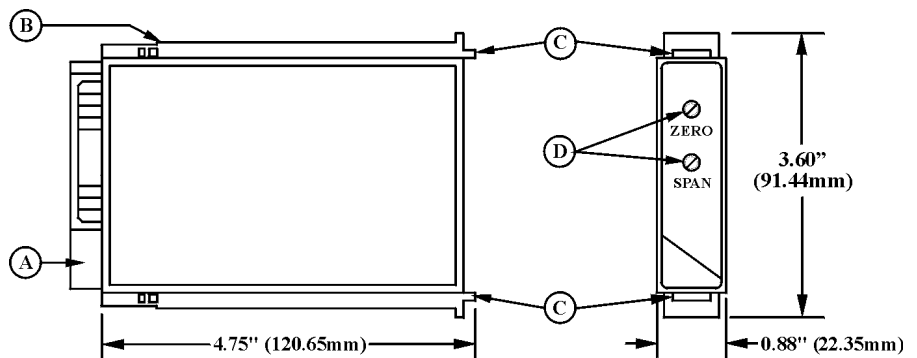
APPLICATION:



Important Notes: 1.) I.S. ground is not required.
2.) Barrier provides power for output loop.

MECHANICAL DETAIL:

- A = connector protection/ alignment shroud
- B = chassis locking ears
- C = quick release tabs
- D = zero and span adjustments



ORDERING INFORMATION:

Barriers:

X57-606-()-()-()..... Thermocouple, mV, mA, Voltage input active isolation I.S. barrier/ transmitter
 Outputs: B = 4-20 mA; D = 1-5 VDC; E = 2-10 VDC
 Input Range: specify °F or °C (e.g. " - (0/500F)" = 0 to 500°F) or -(4/20mA) = 4 to 20 mA
 Thermocouple Input Type : J, K, R, S, T, or E (omit for mV, mA, and voltage inputs)

Chassis Options:

- X57-PDIN-32 single barrier chassis for 32 mm "G" style DIN rails
- X57-PDIN-35..... single barrier chassis for 35 mm "U" style DIN rails
- X57SM-1 single barrier surface mount chassis
- X57SM-1-3-4 single barrier surface mount chassis with optional ground bar and four ground clamps
- X57SM-4-(?)-(??)-(???) four (4) barrier surface mount chassis (gnd. bars & clamps optional)
- X57SM-10-(?)-(??)-(???) ten (10) barrier surface mount chassis (gnd. bars & clamps optional)
- X57SM-16-(?)-(??)-(???) sixteen barrier surface mount chassis (gnd. bars & clamps optional)
- X57SM-20-(?)-(??)-(???) twenty barrier surface mount chassis (gnd. bars & clamps optional)

- ? ➔ 1= optional ground bar on safe side; 2= optional gnd. bar on haz. side; 3= gnd. bars on both sides; omit if not needed
- ?? ➔ Qty of gnd. clamps on safe side gnd bar. (max qty.= 16 for SM-4, 40 for SM-10, 64 for SM-16; 80 for SM-20) or omit
- ??? ➔ Qty of gnd. clamps on haz. side gnd bar. (max qty.= 16 for SM-4, 40 for SM-10, 64 for SM-16; 80 for SM-20) or omit

Accessories:

- X57-GC ground clamps
- X57-BLK blank panel for unused chassis position
- D1-32x15 32 mm X 15mm "G" style DIN rail (order by the foot)
- D2-35x7.5 35 mm X 7.5 mm "U" style DIN rail (order by the foot)

