Basic Safety & Operational Specifications for Active Barriers

X57-620;-621;-622 Signal Driver for Haz. Area Loads (Loop Powered Indicators, I/Ps, etc.)

♦ **I to I Repeater/Isolator from Safe to Hazardous Area**

♦ **Current or Voltage Signal Fomats (zero based or elevated)**

♦ **Plug-in Style - Simplify Installation, Commissioning, and Maintenance**

♦ **2500 Vrms Input to Output Isolation**

♦ **DIN Rail or Multi-barrier Surface mount Chassis Options**

DESCRIPTION: The Ronan Model X57-620 series accepts a mA or voltage input in a safe area and accurately repeats it as a mA output to a load in the hazardous area. The module utilizes transformers to provide isolation between the safe and hazardous areas and from the power supply. The safe area and hazardous circuits are independently floating and either, or both, may be grounded. However, a intrinsically safe ground connection is not required. The outputs of the X57-620 series can be adjusted for either "true zero" (0 mA) or "live zero" (4 mA) values with either of the zero values as inputs. Voltage outputs may be generated in the hazardous area by connection of an appropriate loop resistor across terminal 5 and 7. For example, a 250 ohm resistor provides 1 to 5 V signal over the range of 4 to 20 mA.

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 mm^2)
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)
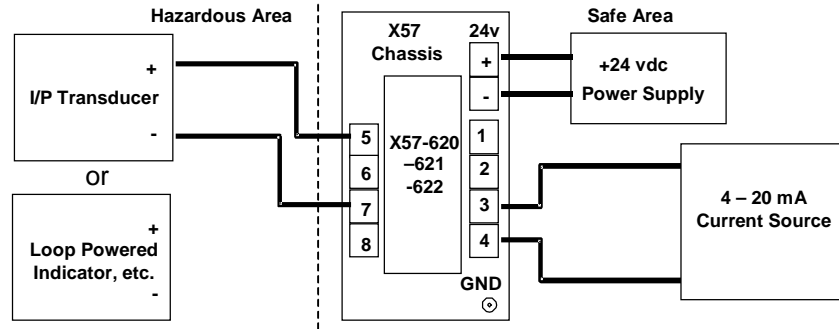*Accuracy:* +/- 0.1% of output span

Power Supply: 24 vdc (21 - 30 VDC)
Power Consumption: < 1.6 watts (at 24 VDC)
Input: 0-20 mA, 4-20 mA, 0-5 V, 1-5 V, 0-10 V, 2-10 V
Zero & Span Adjustability: zero = +/- 25%; span = +/- 10%
Input Impedance: mA input = 250 Ω ; V input = 500K Ω
Output: 4-20 mA, adjustable to 0-20 mA
Maximum Output Load: 900 Ω (for mA outputs)
Output Impedance: < 500 Ω (for V outputs)
Input/Output Isolation: 2500 Vrms
Response Time: 30 msec (0-95% of final value)
Operating Temp.: -4°F to 131°F (-20ºC to +55ºC)
Storage Temp.:   -40°F to 176°F (-40ºC to +80ºC)

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	28.5	82		0.14	0.41	1.1	5.5	21.8	43.6
CSA	28.5		350	approved	approved	approved	approved	approved	approved
UL	Pending								
CENECLEC	See Data Sheet "X57EN-620" for CENELEC approved equivalent barrier.								

APPLICATION:

Important Notes: I.S. ground is not required.

MECHANICAL DETAIL:

A = connector protection/
    alignment shroud
B = chassis locking ears
C = quick release tabs
D = front access adjustments
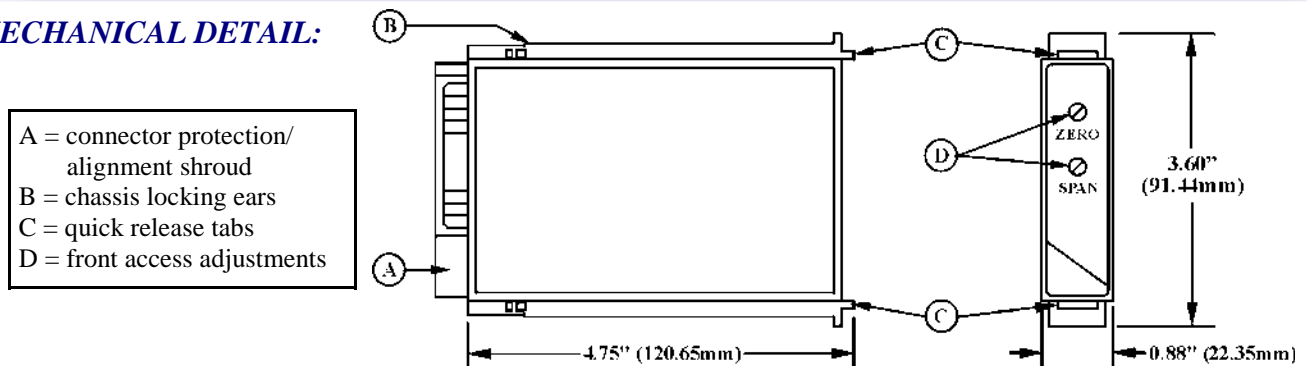
ORDERING INFORMATION:

Barriers:

X57-620 .... Signal Driver (current to current)
X57-621 .... Signal Driver (voltage to current)
X57-622 .... Signal Driver (voltage to current)

	INPUTS (adjustable)	OUTPUTS (adjustable)
X57-620	4-20 to 0-20 mA	4-20 to 0-20 mA
X57-621	1-5 V to 0-5 V	4-20 to 0-20 mA
X57-622	2-10 V to 0-10V	4-20 to 0-20 mA

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)

32 mm "G" Style

35 mm "U" Style