Pribusin Inc.

Manufacturers of Process Controls and Instrumentation

Instruction Manual

Model: *ITC-XXX-XX-DC*

Function: *Isolator*

Input:
- ☐ X=1: 1-5 mA
- ☐ X=2: 4-20 mA
- ☐ X=3: 0-1 mA
- ☐ X=4: 10-50 mA
- ☐ X=5: 1-5 VDC
- ☐ X=6: 0-10 VDC
- ☐ X=7: _____

Output:
- ☐ X=1: 1-5 mA
- ☐ X=2: 4-20 mA
- ☐ X=3: 0-1 mA
- ☐ X=4: 10-50 mA
- ☐ X=5: 1-5 VDC
- ☐ X=6: 0-10 VDC
- ☐ X=7: _____

Output:
- ☐ X=1: 1-5 mA
- ☐ X=2: 4-20 mA
- ☐ X=3: 0-1 mA
- ☐ X=4: 10-50 mA
- ☐ X=5: 1-5 VDC
- ☐ X=6: 0-10 VDC
- ☐ X=7: _____

Power:
- ☐ 12 VDC, 390 mA Max
- ☐ 24 VDC, 190 mA Max
- ☐ 40 VDC, 120 mA Max

Serial #: _____

(If special or required)

For Technical Assistance And Questions Call
USA: (231) 788-2900 CANADA: (905) 660-5336

Restocking Policy

All product returned to Pribusin Inc. in prime condition (not damaged, scratched or defaced in any way) within seven (7) months from the original date of shipment is subject to a 50% restocking charge. All product must be accompanied by a Return Authorization number (RA number) which must be obtained from Pribusin Inc. prior to returning any product.

After seven (7) months from the original date of shipment, products cannot be returned for restocking.

Custom designed products, modified products or all non-standard products may not be returned for restocking.

Warranty Policy

Pribusin Inc. warrants equipment of its own manufacture to be free from defects in material and workmanship, under normal conditions of use and service, and will replace any component found to be defective, on its return to Pribusin Inc., transportation charges prepaid, within one year of its original purchase. Pribusin Inc. will extend the same warranty protection on equipment, peripherals and accessories which is extended to Pribusin Inc. by the original manufacturer. Pribusin Inc. also assumes noliability, expressed or implied, beyond its obligation to prelace any component involved. Such warranty is in lieu of all other warranties, expressed or implied.

Pribusin Inc.

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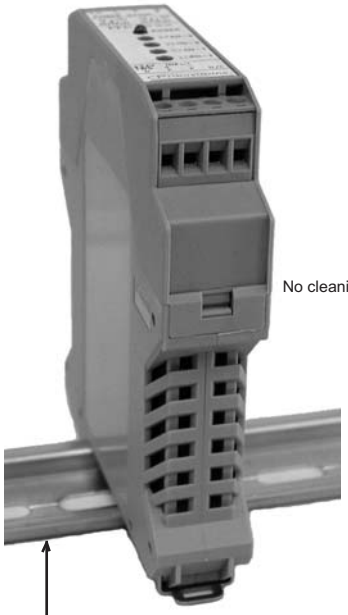
Model: ITC-XXX-XX-DC

Dual Output Isolated Signal Conditioner



Standard Features:

- Dual Isolated Outputs (Can be Different Types)
- High Input-Output-Power Isolation (2000 VAC Test for 1 second)
- Low Input Impedance on 4-20mA Inputs
- Small Size - Fits on Terminal Block Rail
- Industry Standard Inputs and Outputs (see back)
- High Output Drive (1000 Ohms for 4-20 mA)
- Two Wire Supply Option for Two Wire Transmitters
- Power: 24 VDC, 120-190 mA
- High Noise Rejection
- CSA Certification 2054910

C US

Pollution Degree 2 Installation Category II Do Not Expose To Direct Sunlight

The ITC-XXX is a dual signal isolator that provides high isolation from Input to Output1 to Output2 to Power in a small, easy to install package. The universal DIN rail mount often makes it possible to install the ITC-XXX right next to the instrument that is to be isolated. The many different input and output configurations allow it to be used in a great variety of applications ranging from PLC front end conditioning to adding an extra loop with lots of drive to an existing, almost fully loaded, loop.

The high output drive (1000 Ohms @ 4-20 mA for each output) allows the ITC-XXX to drive several other instruments directly from either of its outputs. The standard two wire supply allows the ITC-XXX to be used with two wire field transmitters such as differential pressure transducers, temperature sensors, etc. Both outputs can be of a different type to provide maximum flexibility in system designs.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired

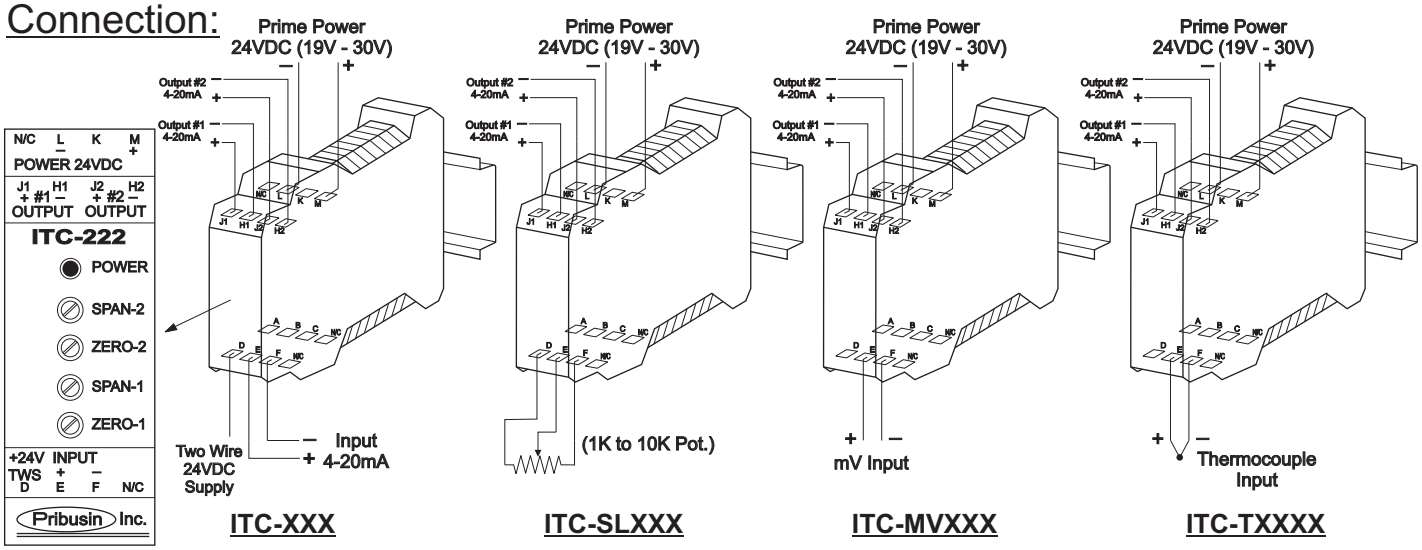
Specifications:

	ITC-XXX	ITC-SLXXX	ITC-MVXXX	ITC-TXXXX
Power [1] 12VDC 24VDC 40VDC	250mA, 390mA max. 120mA, 190mA max. 75mA, 120mA max.	255mA max. 122mA max. 76mA max.	250mA max. 120mA max. 75mA max.	250mA max. 120mA max. 75mA max.
Isolation	High Input to Output1 to Output2 to Power (2000 VAC Test for 1 second)			
Input Impedance	see Input table	10 Meg Ohm	10 Meg Ohm	10 Meg Ohm
Accuracy / Linearity	± 0.2% max., ± 0.1% typ.	± 0.2% max., ± 0.1% typ.	± 0.3% max., Drift 1µV/°C	Linear with Material ± 2°C
Loop Res. D Effect	-0.1% per 100 Ohms change			
Common Mode Rej.	at 60 Hz = 120 dB			
Response Time	50 msec to 63%	75 msec to 63%	100 msec to 63%	100 msec to 63%
Drift at 25 Deg.C	24 Hours: ± 0.03%, 30 Days: ± 0.1%		24 Hours: ± 0.3%, 30 Days: ± 0.8%	
Operating Temp.	-40 °C. to + 50 °C.			
Environment	Altitude: 0-6562 ft (0-2000 m) Humidity: 0-95% RH non-condensing			

1) ⚠ CAUTION To be powered by a class 2 source. (Maximum Signal Input 30VAC or 60VDC or 5Amps) (Maximum Signal Output 30VDC or 50mA)

ITC-XXX-XX-DC

Connection:



Model Designation:

ITC-XXX-XX-DC

Output 1

2: 4-20 mA (1000 Ohm Drive)
5: 1-5 VDC (Zout=250 Ohm)
6: 0-10 VDC (Zout=500 Ohm)
7: Special Output

Output 2

2: 4-20 mA (1000 Ohm Drive)
5: 1-5 VDC (Zout=250 Ohm)
6: 0-10 VDC (Zout=500 Ohm)
7: Special Output

Power [1)]

12: 12 VDC (10.5 to 15VDC)
24: 24 VDC (19 to 30VDC)
40: 40 VDC (36 to 43VDC)

[1)] To be powered by class 2 source.

Input

1: 1-5 mA (Zin=200 Ohm)
2: 4-20 mA(Zin=50 Ohm)
3: 0-1mA (Zin=1K Ohm)
4: 10-50 mA (Zin=20 Ohm)
5: 1-5 VDC (Zin=1Meg Ohm)
6: 0-10 VDC (Zin=1Meg Ohm)
7: Special Input (see Note 1)
SL: Slide-Wire (1K-10K)
MVX: Millivolt
TXX: Thermocouple

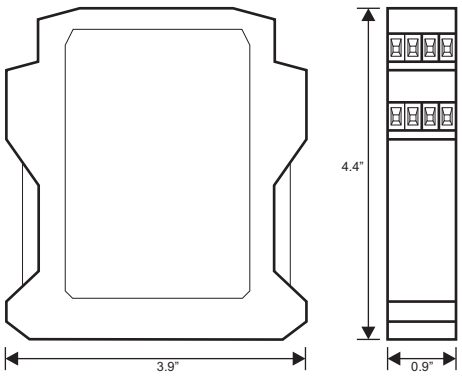
MVX: Millivolt Input

MV1: 0-5 mV
MV2: 0-10 mV
MV3: 0-20 mV
MV4: 0-50 mV
MV5: 0-100mV
MV7: Special mV

TXX: Thermocouple Input

Range \ Type	J	K	E	T	R	S
0 to 300F -18 to 150C	TJ1		TE1	TT1		
0 to 400F -18 to 204C	TJ2	TK1	TE2	TT2		
0 to 500F -18 to 260C	TJ3	TK2	TE3	TT3		
0 to 750F -18 to 400C	TJ4	TK3	TE4		TR1	TS1
0 to 1000F -18 to 538C	TJ5	TK4			TR2	TS2
0 to 1500F -18 to 816C		TK5			TR3	TS3
0 to 2000F -18 to 1093C		TK6			TR4	TS4
0 to 3200F -18 to 1760C					TR5	TS5
-350 to 1100F -200 to 600C	TJ6		TE5			

Dimensions:



Model Designation Examples:

1. Isolator with 4-20mA input, 4-20mA output and 0-10VDC output, powered by 24VDC is: ***ITC-226-24-DC***
2. Isolator with 0-50mV input and two 0-10VDC outputs, powered by 12VDC is: ***ITC-MV466-12-DC***
3. Isolator with type 'K' thermocouple input for 0-750°F and two 4-20mA outputs, powered by 24VDC is: ***ITC-TK322-24-DC***

(Note 1. Maximum Signal Input 30VAC or 60VDC or 5Amps)

Manufactured By:

Pribusin Inc.

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CANADA:

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Concord, Ontario, L4K 1R9
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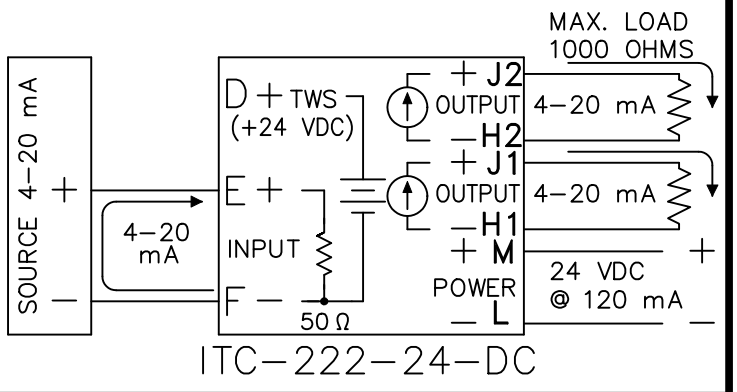
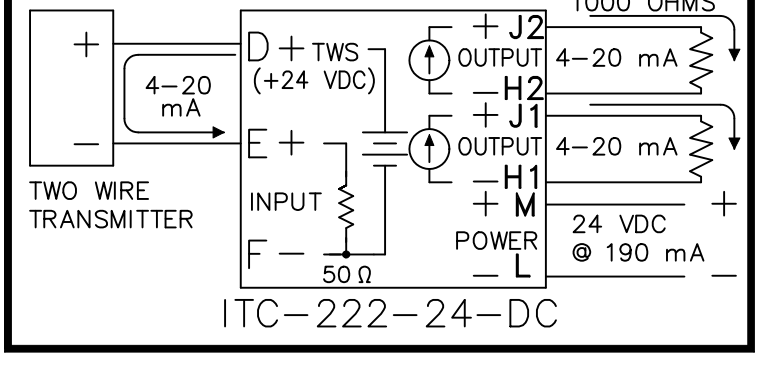
Fx: (905) 660-4068

NORMAL CONNECTION



ITC–222–24–DC

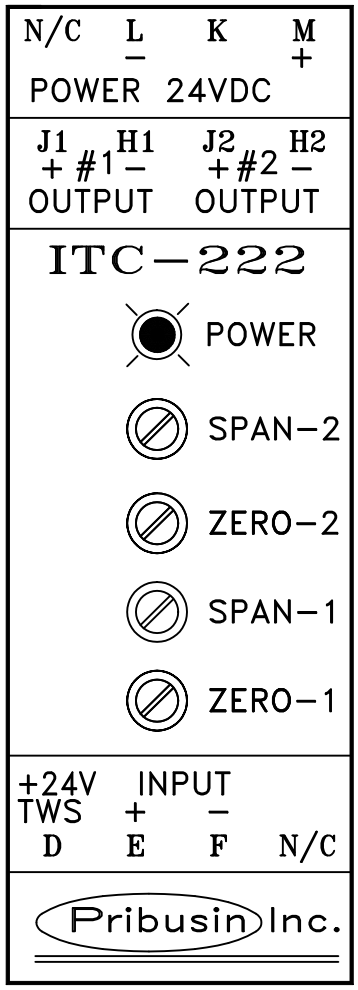
TWO WIRE INPUT CONNECTION

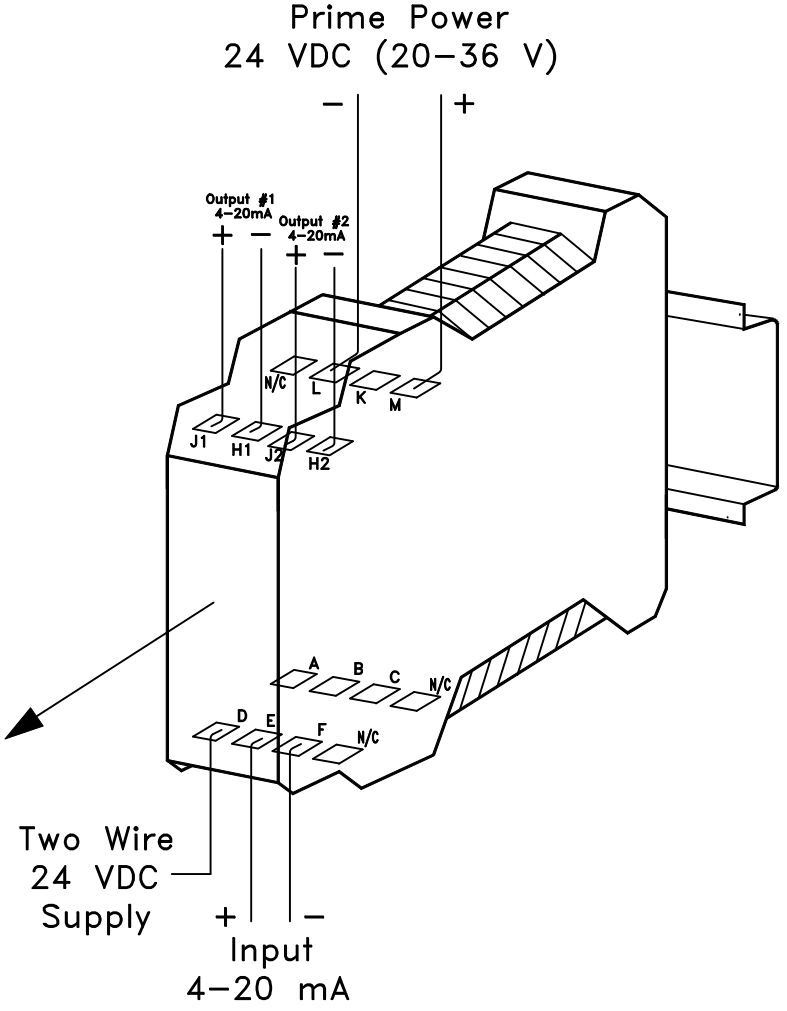


ITC–222–24–DC

Calibration Procedure:

1. Apply an input of 4mA to the input terminals.
2. Adjust ZERO1 pot. until output1 signal is 4mA.
3. Apply an input of 20mA to the input terminals.
4. Adjust SPAN1 pot. until output1 signal is 20mA.
5. Repeat procedure starting at 1. until output1 signal is correct.
6. Repeat for output2 adjusting Zero2 and Span2
7. Apply an input of 12 mA to the input terminals, and check that output1 and 2 are 12 mA.
8. Calibration is complete.





Notes:

1. For Enclosure Details See Dwg. 107320–1.

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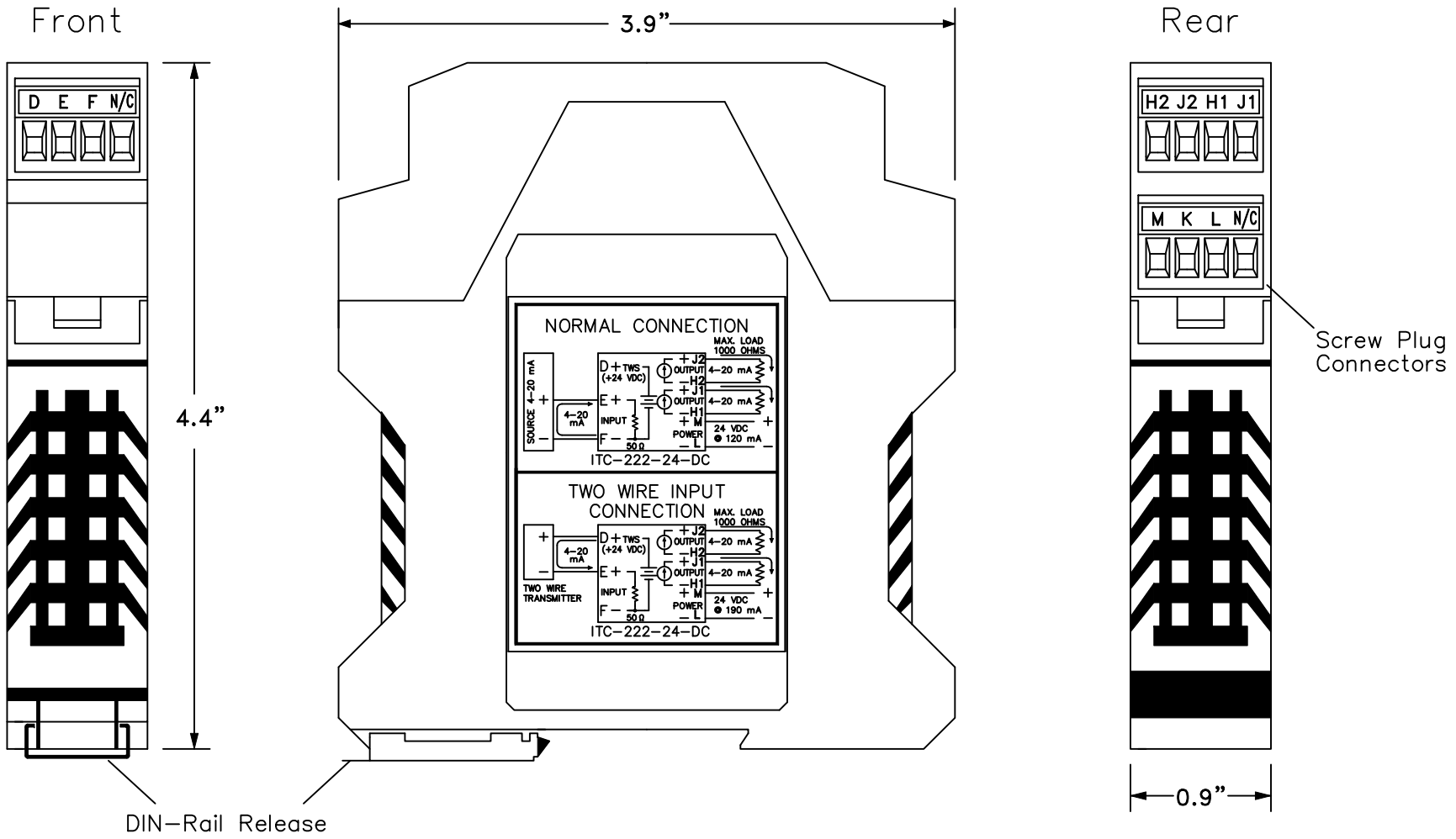
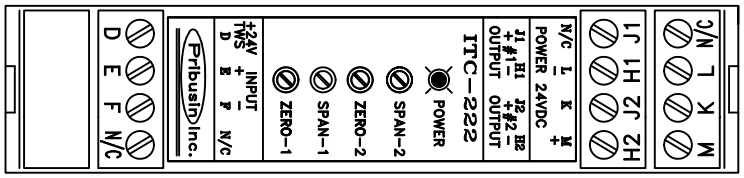
CHKD :	DATE : Dec.03/07	DRN: VB

Model: ITC–222–24–DC
Isolated Terminal Signal Conditioner
Connections/Calibration

DWG. NO.: 107321–1	REV. A



Top View

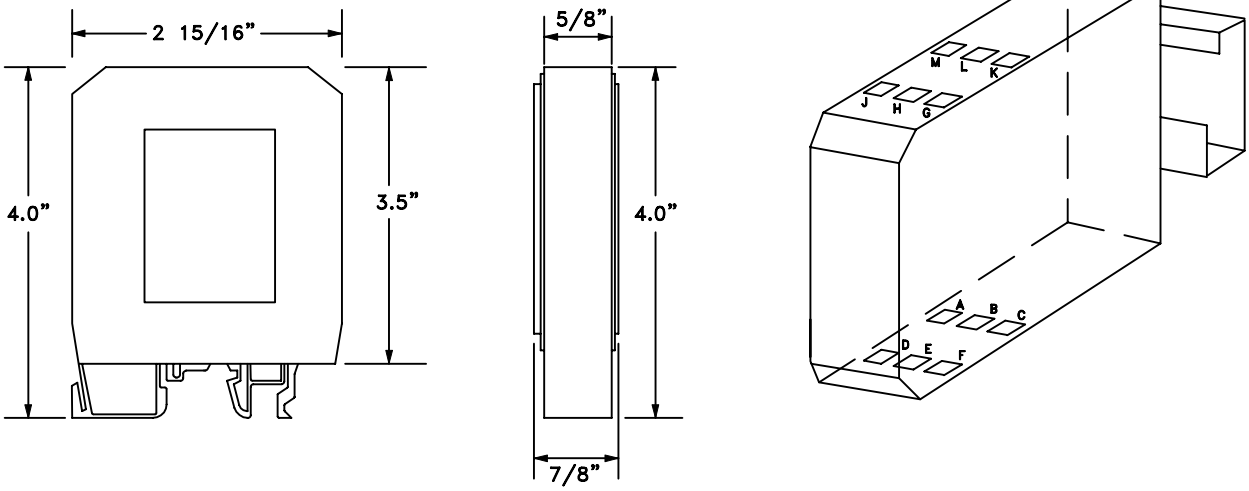


Notes:

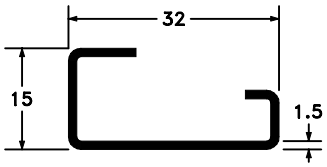
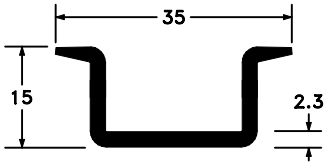
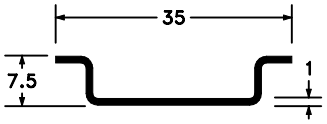
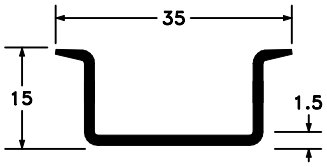
1. For Connections/Calibration Details See Dwg. 107321–1.

Pribusin Inc. ©		
CHKD:	DATE: Dec.03/07	DRN: VB
Model: ITC–222–24–DC solated Terminal Signal Conditioner Enclosure(/w Screw Plug Connectors)		
DWG. NO.: 107320–1		REV. A

Enclosure Detail :



Din Rail Detail :

	A	Rail Standard EN 50 035 Dimensions: 32 x 15 x 1.5 mm
	B	Rail Standard DIN EN 50 022 Dimensions: 35 x 15 x 2.3 mm
	C	Rail Standard DIN EN 50 022 Dimensions: 35 x 7.5 x 1 mm
	D	Rail Standard DIN EN 50 022 Dimensions: 35 x 15 x 1.5 mm

Pribusin Inc. ©		
CHKD:	DATE: APR. 26/93	DRN: KS
Terminal Block Enclosure/ Din Rail Detail		
DWG. NO. : 104384		REV. A