

ProSeries Component HD Video Switch Manual

(Rev B Manual)

67-141-112-A	2X1 Switch, BNC connectors, 12 VAC
67-141-114-A	4X1 Switch, BNC connectors, 12 VAC
67-541-112-A	2X1 Switch, BNC connectors, FlexPwr (VAC & VDC)
67-541-114-A	2X1 Switch, BNC connectors, FlexPwr (VAC & VDC)
67-141-212-A	2X1 Switch, RCA connectors, 12 VAC
67-141-214-A	4X1 Switch, RCA connectors, 12 VAC
67-541-212-A	2X1 Switch, RCA connectors, FlexPwr (VAC & VDC)
67-541-214-A	2X1 Switch, RCA connectors, FlexPwr (VAC & VDC)

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Two Year Limited Warranty

All Video Accessory Corporation (VAC) products have a full two year limited warranty. Exclusions to the warranty include but are not limited to damage to external components, power LED failure where the product continues to function, and electrical damage due to lightning. The warranty shall be void if any alteration or repair of a VAC product is attempted by anyone not authorized by VAC. This warranty is expressly in lieu of all other warranties express or implied, including warranties of merchantability and fitness for use, and of all other obligations or liabilities on the part of VAC, and it neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of this product. This warranty shall not apply to the product or any part thereof subjected to accident, negligence, alteration, abuse, or misuse. No warranty whatsoever is made with respect to accessories or parts supplied by anyone other than VAC, and this warranty shall extend only to the original purchaser of this product. The warranty provided in this article is exclusive and in lieu of, and buyer hereby waives, all other remedies, express or implied, arising by law or otherwise, including consequential damages, whether or not occasioned by negligence of VAC. This warranty shall not be extended, altered or varied except by written instrument signed by VAC and buyer, and shall only apply within the boundaries of the continental United States. Liability of VAC is limited to repair or replacement at the option of VAC. Warranty work is to be sent to VAC. Freight charges will be the responsibility of the purchaser.

Document History

REV	Date	Action
A	April 4, 2004	Original document (old document format)
B	Dec. 28, 2017	Manual re-written in Word and .pdf formats

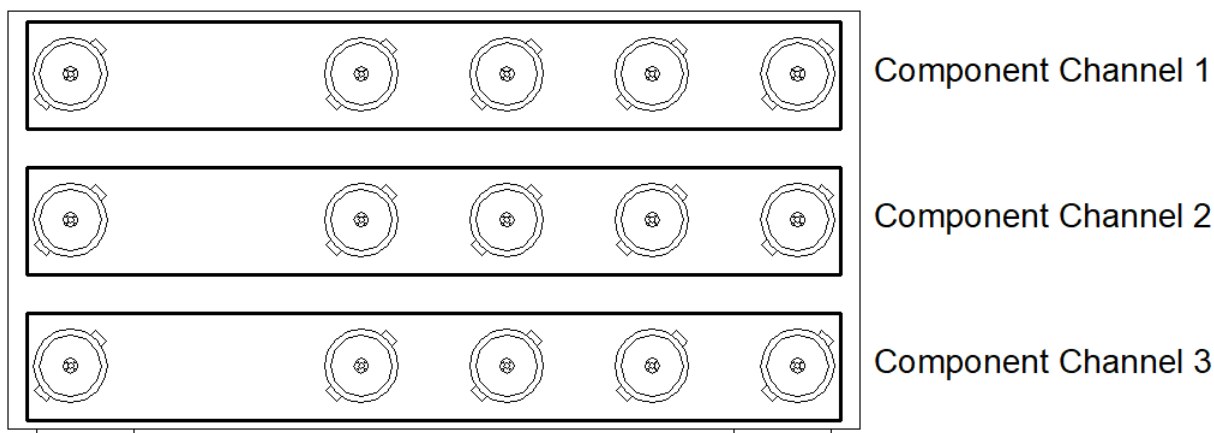
1.0 Basic Operation

The 67-141-XXX and 67-541-XXX products are analog component video switches. The switch routing can be selected using the on-board DIP switch or the 6-pin DIN control port. A status output port provides feedback on which input is selected and can also be used to control a ProSeries audio switch for audio-follow-video applications.

All of the functions are controlled by a RISK processor. These units have a Power-Fail option where an RF relay provides a loop-thru path between Input 1 and the Output during no power situations.

All of the units are shipped with two (VAC #78119) 6 pin DIN plugs. The 12 VAC units ship with a 12 VAC (VAC #55560) wall transformer with a P5 power plug. The FlexPwr units also ship with a 12 VAC (VAC #55564) wall transformer with the 2.5mm power plug.

Each of these units has three PCB's, one for each component signal. The three component video signals can be connected to any of the three channels.



2.0 Product Configurations

The following table shows the eight different configuration available for the ProSeries Component HD switch line.

Part Number	Configuration	Input Power	Video Connectors
67-141-112	2X1	12 VAC	BNC
67-141-114	4X1	12 VAC	BNC

67-141-212	2X1	12 VAC	RCA
67-141-214	4X1	12 VAC	RCA
67-541-112	2X1	FlexPwr (VAC & VDC)	BNC
67-541-114	4X1	FlexPwr (VAC & VDC)	BNC
67-541-212	2X1	FlexPwr (VAC & VDC)	RCA
67-541-214	4X1	FlexPwr (VAC & VDC)	RCA

3.0 Power Requirements

These units have two power options, 12 VAC and FlexPwr.

12 VAC

These units have a P5 barrel power connector. Half wave rectifiers are used to provide the internal positive and negative voltage rails. These units are shipped with a 12 VAC wall transformer, the transformers provide ground isolation between the input power and the vide ground. The units will operate correctly on 11-13 VAC.

FlexPwr

These units have an internal switcher power supply. The input has a full wave bridge rectifier to protect the unit if DC power is applied backwards. The power connector is a 2-pin 2.5mm header. Units with FlexPwr will operate correctly on 12-32 VDC or 10-28 VAC.

4.0 Control Configurations

These unit can be controlled in two different modes, Local (DIP switch) and Remote (6-pin control port)

Local Control

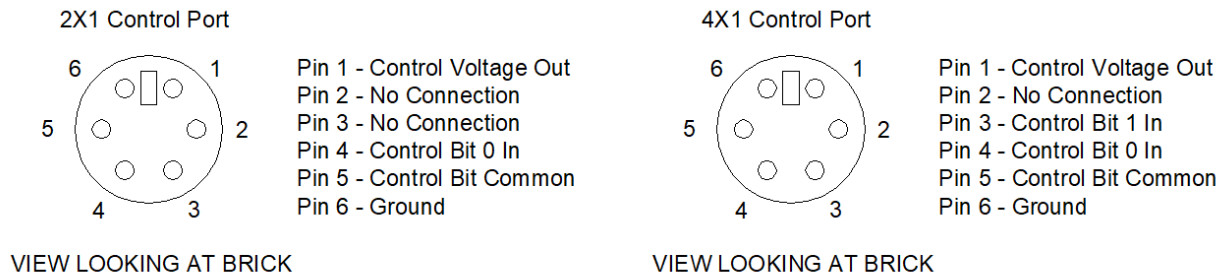
The following shows the DIP switch functions for the two configurations.

<u>2X1</u>	S1	OFF - Remote mode (6-pin DIN port) ON - Local Mode
	S2	Off - Input 1 selected ON - Input 2 selected

4X1	S1		OFF - Remote mode (6-pin DIN port) ON - Local Mode
	S3	S2	
	OFF	OFF	Input 1 selected
	OFF	ON	Input 2 selected
	ON	OFF	Input 3 selected
	ON	ON	Input 4 selected

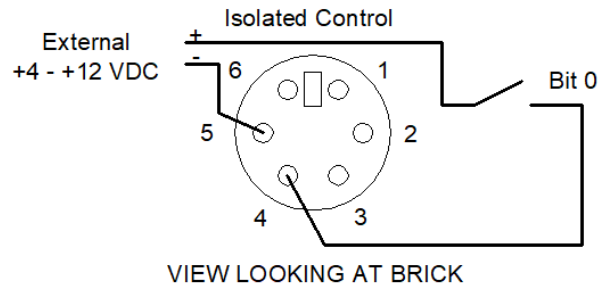
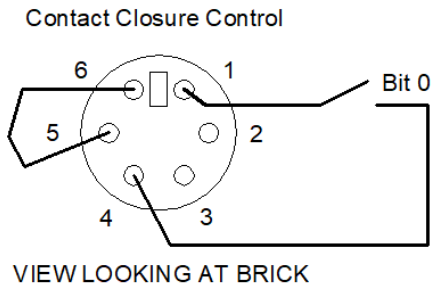
Remote Control

The following shows the control ports for the 2X1 and 4X1 units.

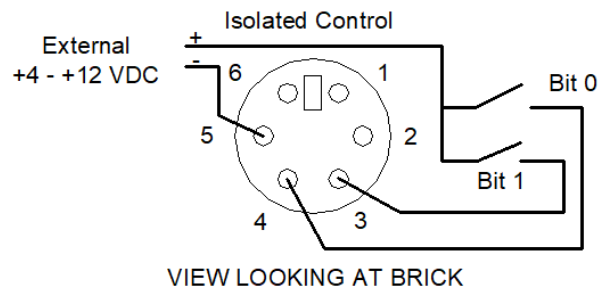
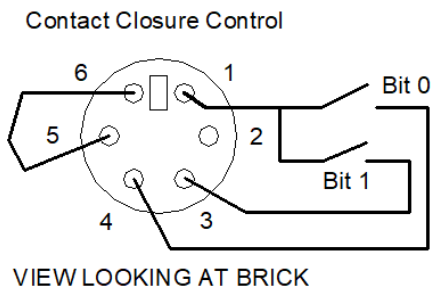


The control bits are optically isolated so these units can be controlled by and external device without creating ground loops. A voltage of +4 - +12 VDC can be applied to each control bit. An external voltage source can be used or the internal voltage provided on the control port can be used. The following shows the needed connections for the 2X1 and the 4x1 units.

2X1 Units



4X1 Units



5.0 Status LEDs

These units have bi-color LEDs to indicate which Input is selected. The following shows the LED colors for both configurations.

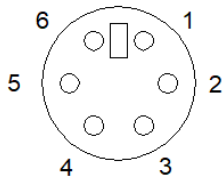
2X1	LED1	Yellow - Input 1 selected
		Green - Input 2 selected
	LED2	not present

4X1	LED1	Yellow	LED2	OFF	Input 1 selected
	LED1	Green	LED2	OFF	Input 2 selected
	LED1	OFF	LED2	Yellow	Input 3 selected
	LED1	OFF	LED2	Green	Input 4 selected

6.0 Status Port

The status Port can be used to control external LEDs or provide logic level signals to an external device. The following shows the Status Ports for the two configurations. The status Bits are either a ground level or a +5 VDC level. The bits can drive up to 20 ma each.

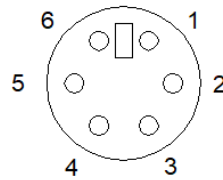
2X1 Status Port



- Pin 1 - No Connection
- Pin 2 - No Connection
- Pin 3 - No Connection
- Pin 4 - Status Bit 0 Out
- Pin 5 - Ground
- Pin 6 - No Connection

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4X1 Status Port



- Pin 1 - No Connection
- Pin 2 - No Connection
- Pin 3 - Status Bit 1 Out
- Pin 4 - Status Bit 0 Out
- Pin 5 - Ground
- Pin 6 - No Connection

VIEW LOOKING AT BRICK

The following tables show the status of the bits for the two configurations.

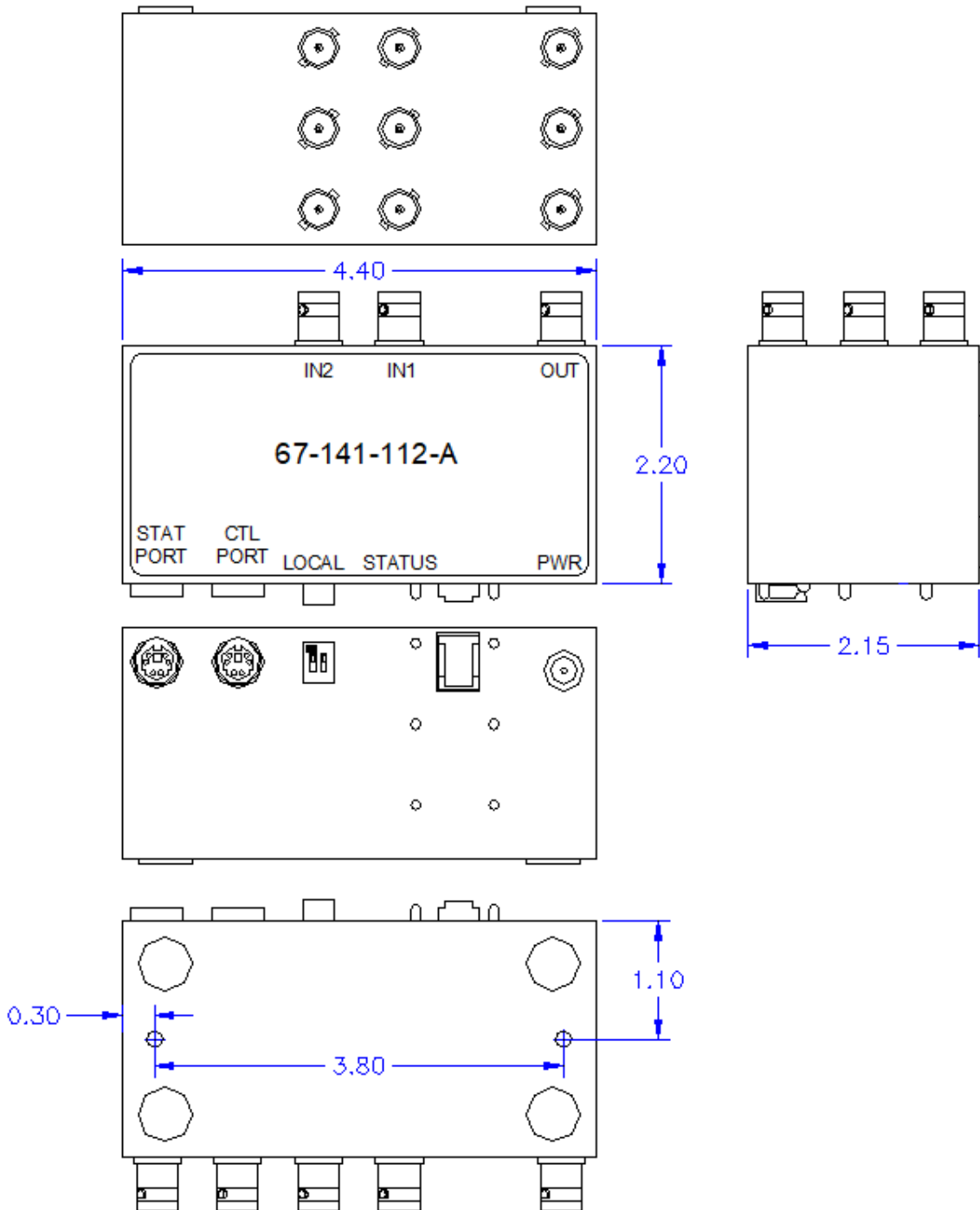
2X1	Status Bit 0 = Ground Status Bit 0 = 5 VDC	Input 1 selected Input 2 selected
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4X1	Status Bit 1 Ground Ground +5 VDC +5 VDC	Status Bit 0 Ground +5 VDC Ground +5 VDC	Input 1 selected Input 2 selected Input 3 selected Input 4 selected
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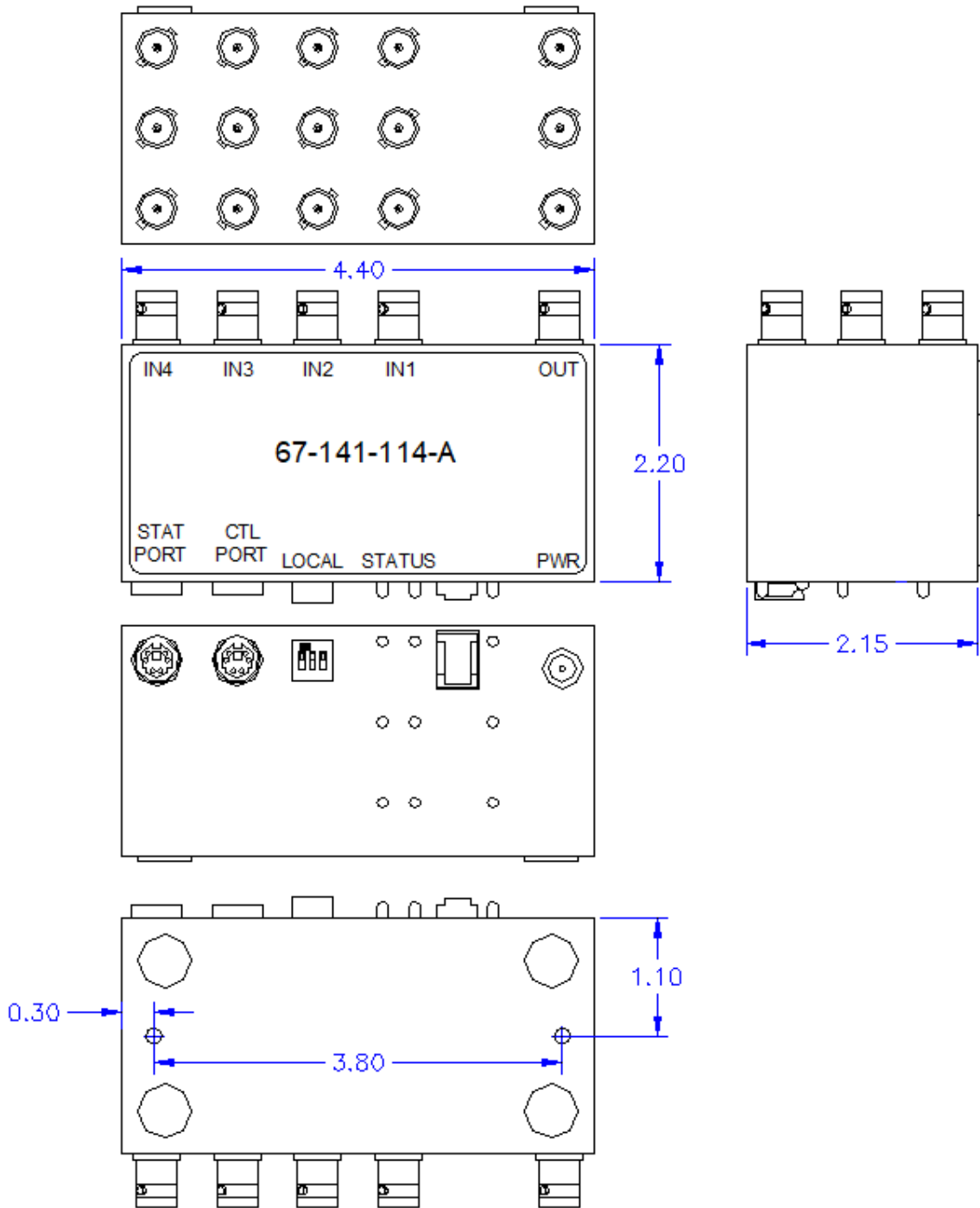
7.0 Overall Specifications

Video Formats:	Component analog video		
Bandwidth	DC - 200 MHz (1Vpp input)		
Input/Output Coupling	DC		
Input Impedance	75 Ohms		
Input Connectors	67-X41-112	Six BNCs	
	67-X41-212	Six RCAs	
	67-X41-114	Twelve BNCs	
	67-X41-214	Twelve RCAs	
Output Connectors:	67-X41-11X	Three BNCs	
	67-X41-21X	Three RCAs	
Power LED:	Three Green LEDS (One per channel)		
Operating Temperature Range:	67-141-X1X	-40C to +50C	
	67-541-X1X	-40C to +80C	
Humidity	0-95%		
Power:	67-141-X1X	12 VAC	<200 ma
	67-541-X1X	12-32 VDC	<250 ma
		10-28 VAC	<200 ma
Power Connector:	67-141-X1X	2.1mm P5	
	67-541-X1X	2.5 mm 2-pin header	
	Mating connector	(Phoenix Contact #1881325)	
Control Port:	6 pin DIN		
Status Port	6 pin DIN		
Package:	4.4" X 2.2" X 2.15"	(Solid epoxy block)	
Mounting:	Two 6-32 threaded inserts		
Weight:	<1.5 lb.		

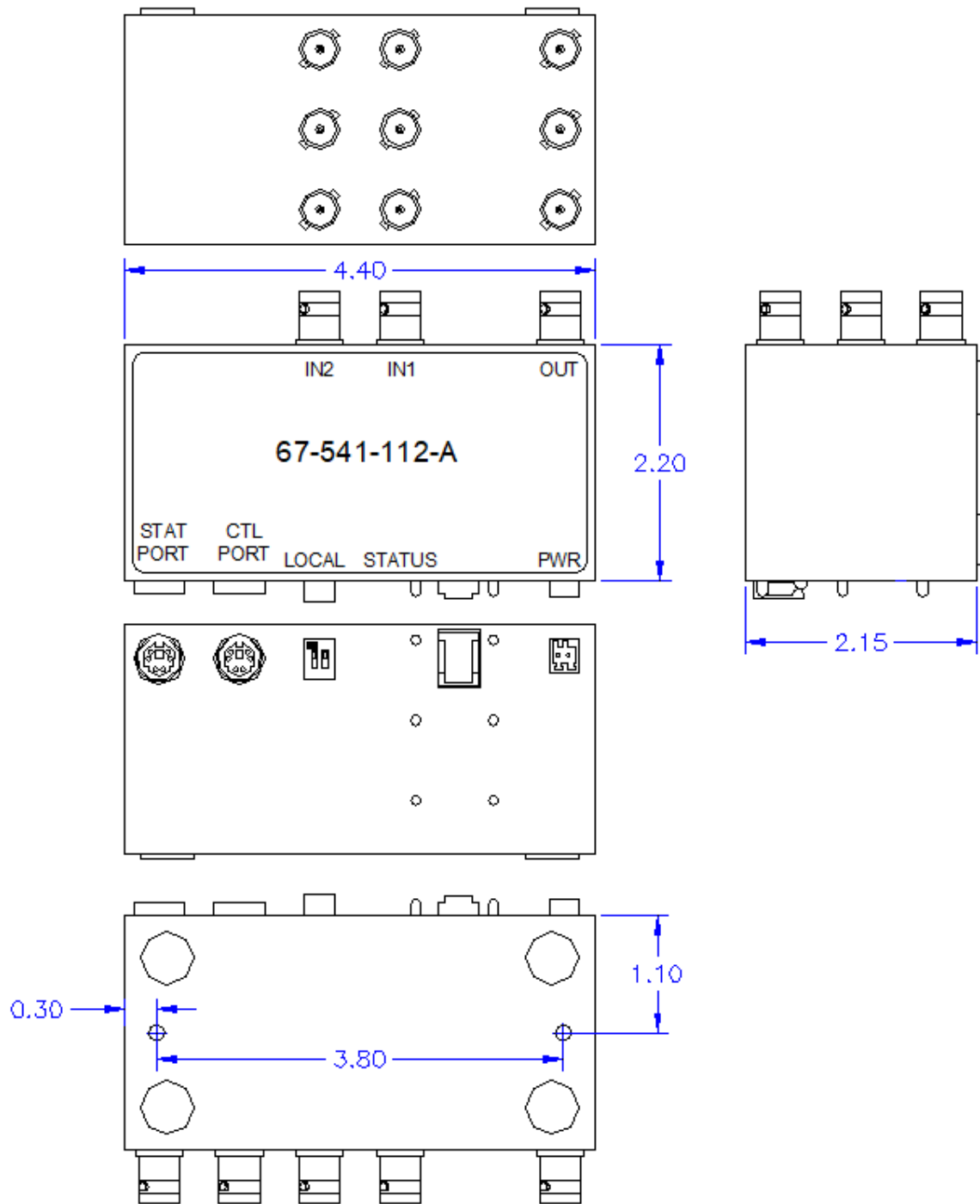
8.0 Package Drawings



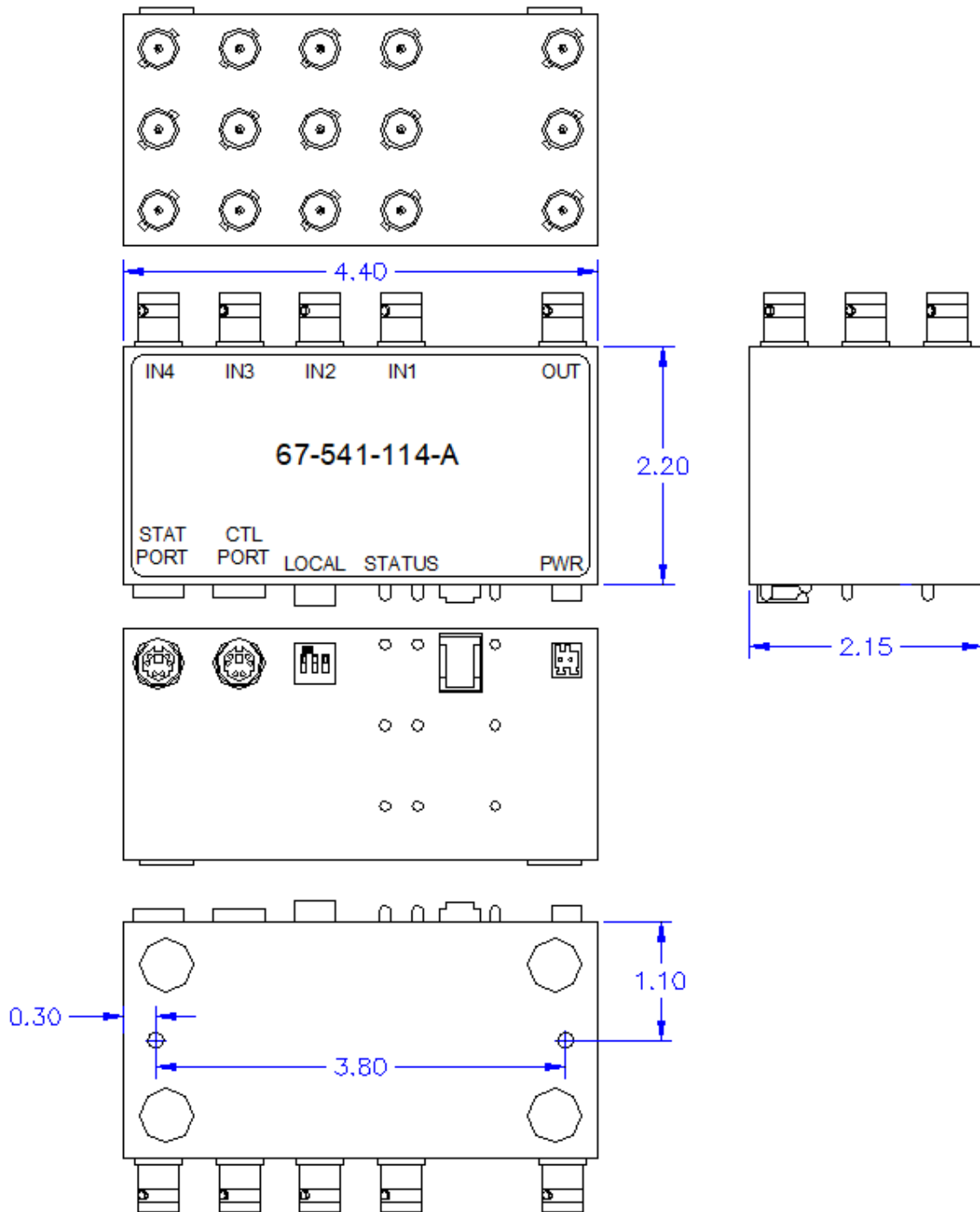
67-141-112-A Package



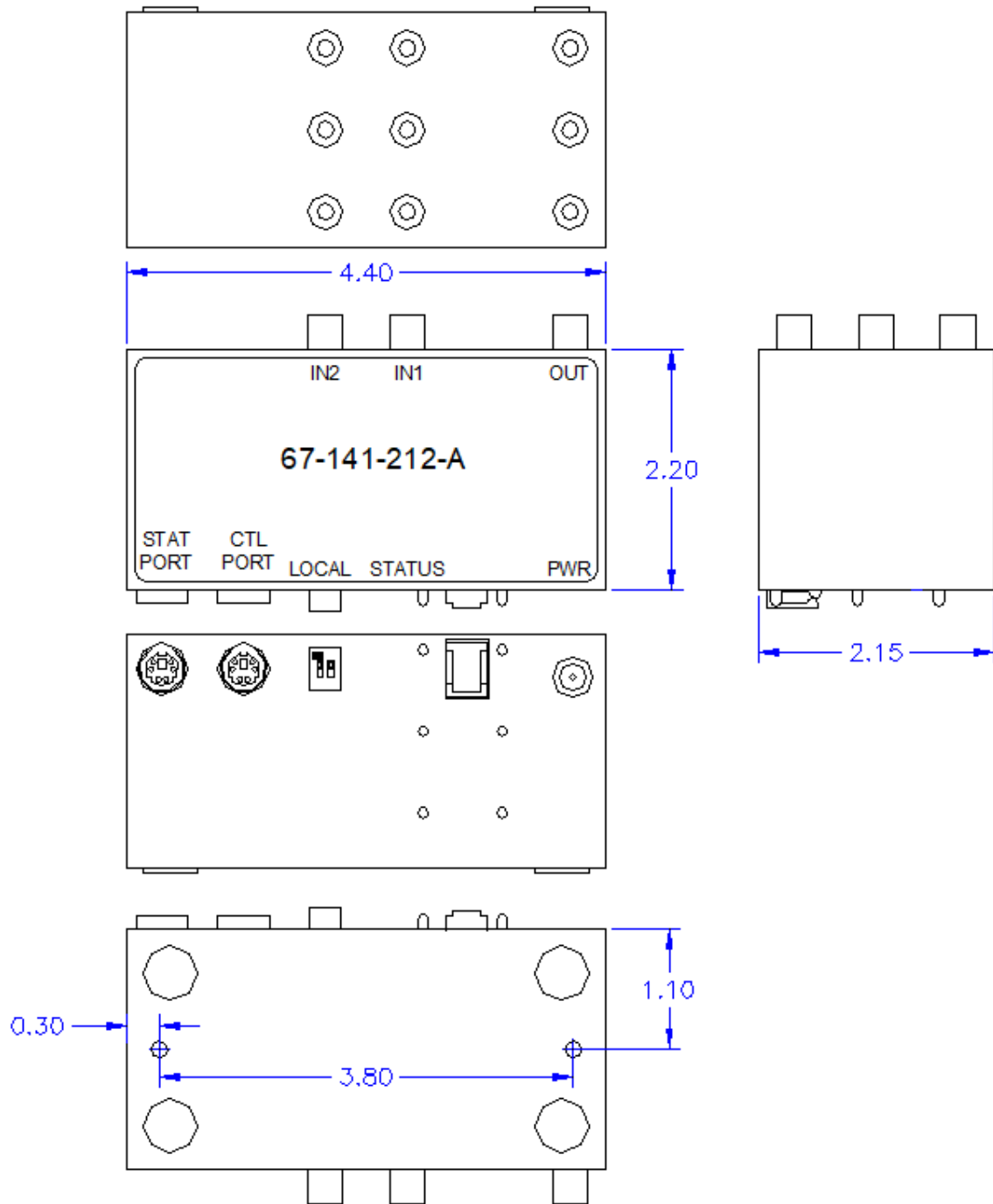
67-141-114-A Package



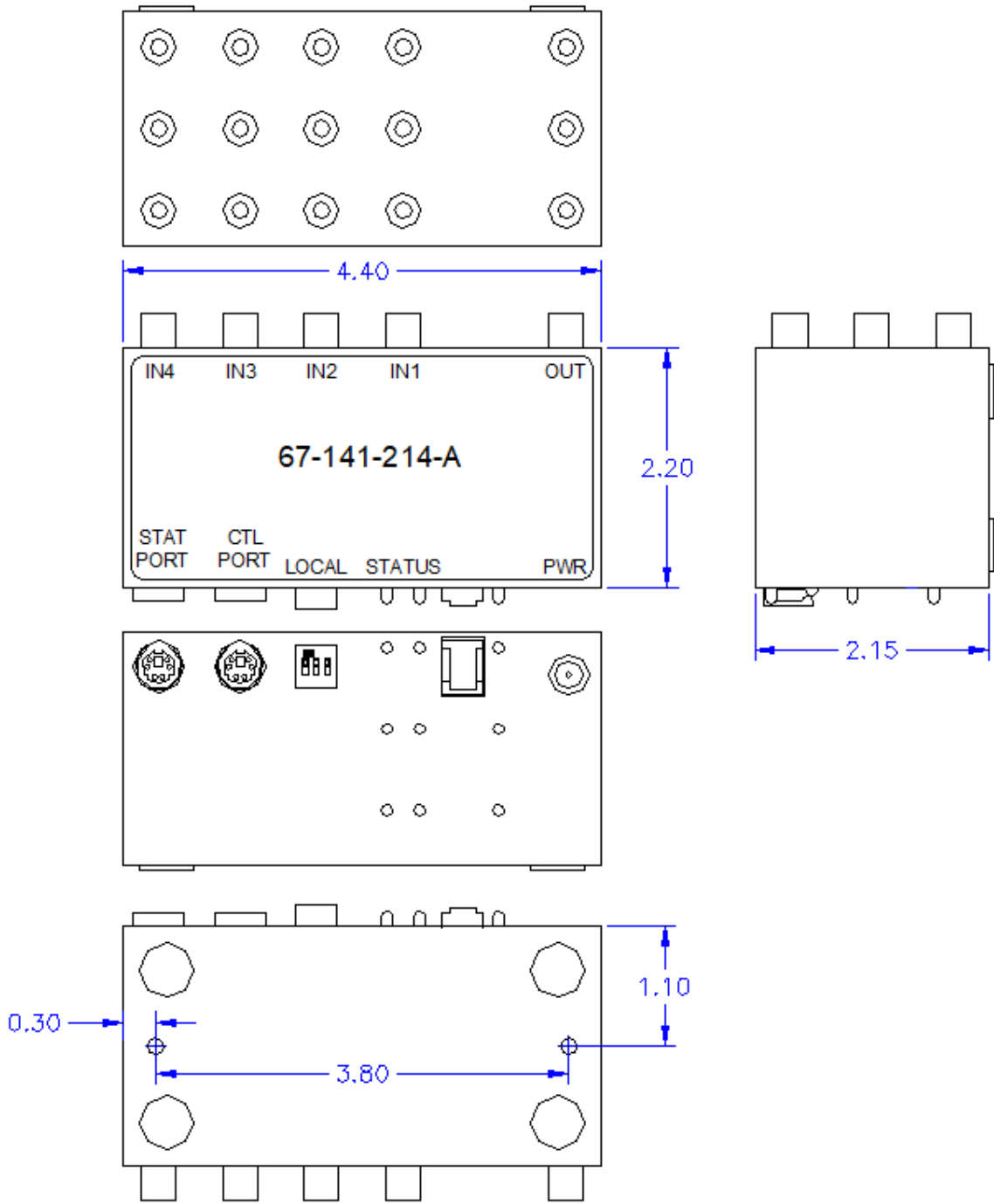
67-541-112-A Package



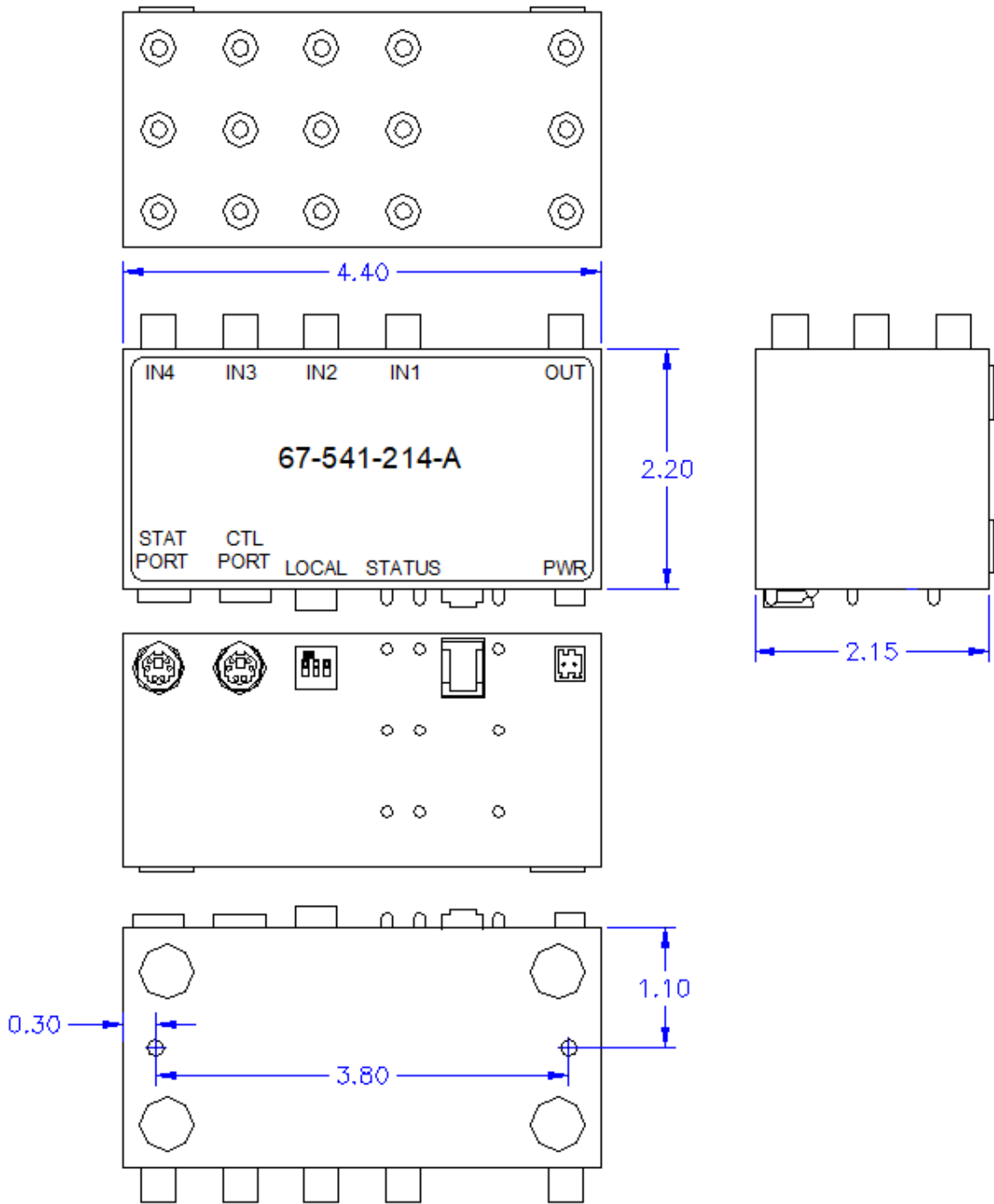
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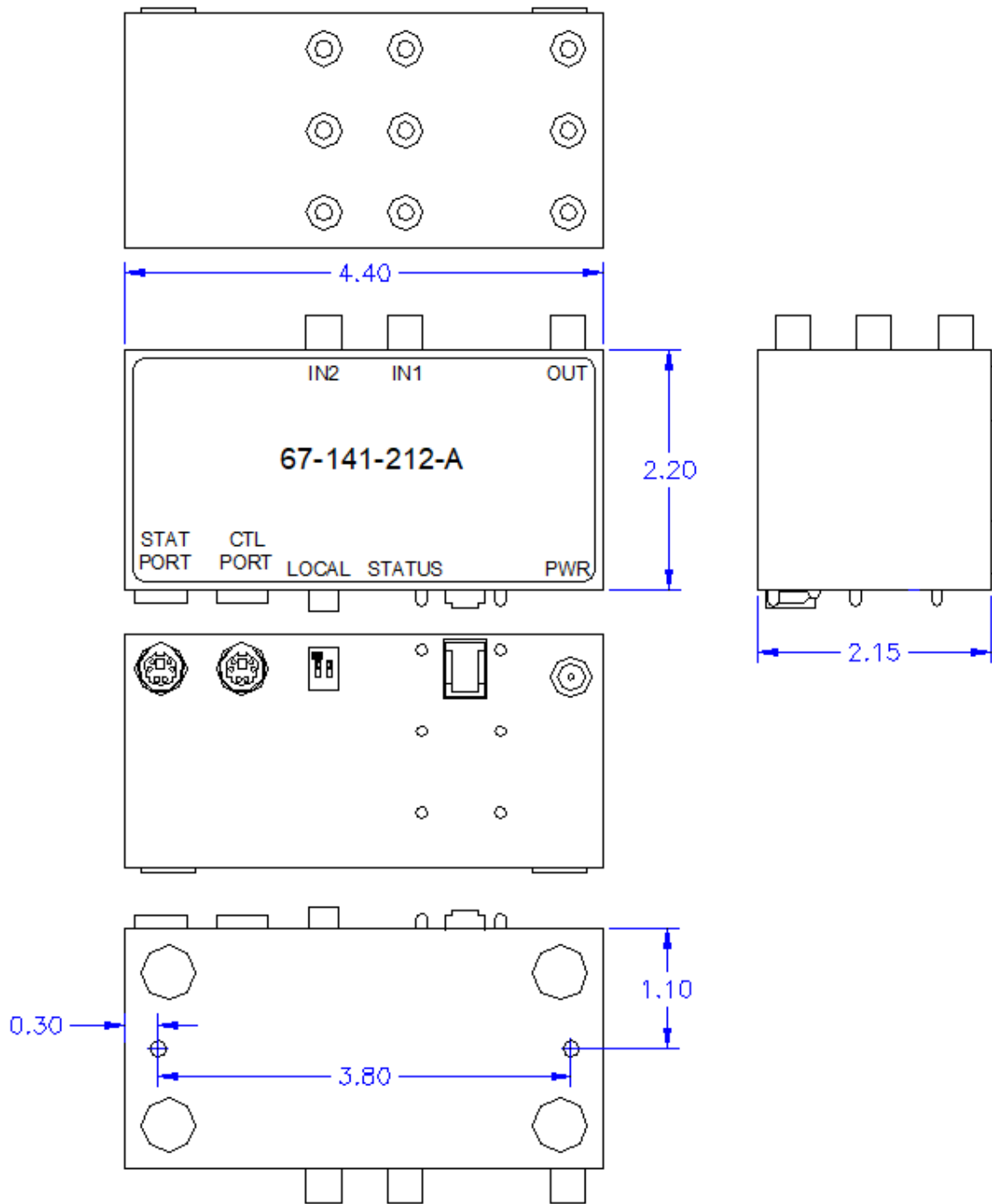
67-141-212-A Package



67-141-214-A Package



67-541-212-A Package



67-541-214-A Package