



SmartRail

0-10V, 4-20mA Analog Input/Output Module

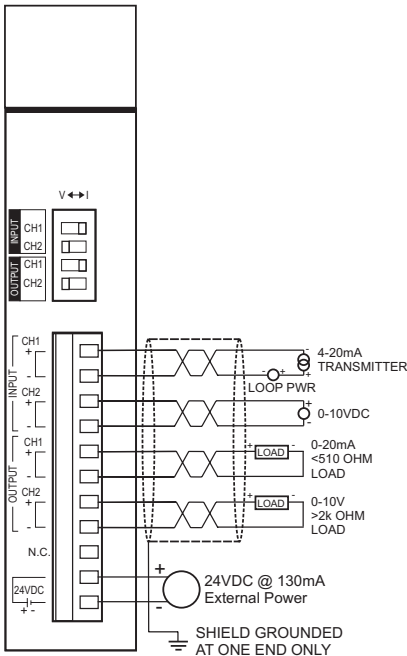
HE599MIX116

12-Bit Resolution

1 Specifications

Specifications	
INPUTS	
Number of Channels	2
Input Ranges	4-20mA, 0-20mA, 0-5V, 0-10V
Absolute Max. Inputs	±15V, ±25mA
Resolution	12-Bit (4µA, 5µA, 1.25mV, 2.5mV)
Input Impedance	1MΩ (voltage), 250Ω (current)
Accuracy	< ±0.5%
Conversion Time	1mS/ch
OUTPUTS	
Number of Channels	2
Output Ranges	0-10V, 4-20mA, 0-20mA
Absolute Max. Outputs	±15V, ±25mA
Resolution	12-Bit (2.5mV, 4µA, 5µA)
Maximum Load	>2kΩ (voltage), <510Ω (current)
Accuracy	< ±0.5%
Conversion Time	1mS/ch
General Specifications	
Isolation	Photocoupler (Input/Power)
Backplane Power Consumed	50mA @ 5V
External Power Required	62mA @ 24V (+/-10%)
Terminal Type	Screw Type, Removable 11-posn
Optional Spring-clamp Plug	HE599TRM011
Storage Temp.	-25° to 70° Celsius
Operating Temp.	-0° to 55° Celsius
Relative Humidity	5 to 95% Non-condensing
Dimensions WxHxD	20mm x 90mm x 60mm 0.79" x 3.54" x 2.36"
Weight	73g (2.6 oz.)
CE & UL Compliance	CE, UL & C-UL

2 Wiring – I/O



MIX116 LED Status Indication		
LED 1	LED 2	Meaning (same for both LEDs)
IN OK	OUT OK	ON = Normal Operation
		FLASH = I/O Error
		OFF = No Power or I/O Error

3 Configuration DATA

The SmartRail MIX116 features a dip switch on the front of the unit for selecting voltage (0-10V) or current (4-20mA or 0-20mA) on a per channel basis. In addition to the physical dip switch, Cscope (9.1 or later) must be used for software configuration as well. The following parameters are configurable in Cscope for the MIX116:

Cscope Configuration Data – Selectable per channel	
Parameter	Selections
Input/Output Range	4-20mA
	0-20mA
	0-5V
	0-10V
Hold Last State (Outputs)	Hold Last State
	Go to Minimum
	Go to Mid-range
	Go to Maximum

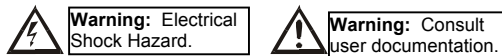
4 Installation / safety

Warning: Remove power from the OCS controller and any peripheral equipment connected to this local system before adding or replacing this or any module.

- All applicable codes and standards should be followed in the installation of this product.
- Shielded, twisted-pair wiring should be used for best performance.
- Shields should be grounded at one end only, preferably at the end providing the best noise shunting.
- Use the following wire type or equivalent: Belden 8441.

For detailed installation and a handy checklist that covers panel box layout requirements and minimum clearances, refer to the hardware manual of the controller you are using.

When found on the product, the following symbols specify:



7 Technical Support

Technical Support at the following locations:

<p>North America: Tel: 317 916-4274 Fax: 317 639-4279 Web: http://www.heapg.com Email: techspt@heapg.com</p>	<p>Europe: Tel: +353-21-4321266 Fax: +353-21-4321826 Web: http://www.horner-apg.com Email: tech.support@horner-apg.com</p>
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Prefer Spring-clamps?

Optional Spring-clamp style plugs are available as economical wiring accessories. See specification table for part number(s). Representative 10-position plug shown.