SmartRail

0-10V or 4-20mA Analog Output Modules

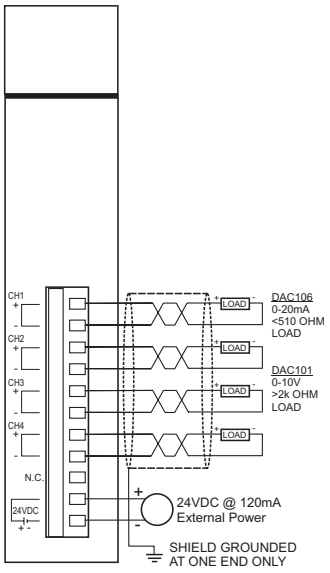
HE599DAC101 (voltage) & HE599DAC106 (current)

12-Bit Resolution

1 Specifications

Specifications		
	DAC101	DAC106
Number of Channels	4	
Output Range(s)	0-10V	0-20mA, 4-20mA
Absolute Maximum Output	DC ±15V	DC ±25mA
Resolution	12-Bit (2.5mV)	12-bit (5uA, 4uA)
Maximum Load	>2kΩ	<510Ω
Accuracy	< +/-0.5%	
Isolation	500V (backplane)	
Conversion Time	1mS/ch	
Backplane Power Consumed	110mA @ 5V	
External Power Required	62mA @ 24V	120mA @ 24V
	CLASS 2 POWER SUPPLY ONLY	
Terminal Type	M2 Screw Type, Removable 11-posn	
Optional Spring-Clamp Terminal Strip	**HE599TRM011, 11 position**	
Terminal Torque Rating	0.22 to 0.25 N-m 1.95 to 2.21 in-lb	
Accepted Wire Size	16-28AWG (use copper)	
Wire Stripping Length	7mm	
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	64g (2.3 oz.)	70g (2.5oz.)
CE & UL Compliance	CE, UL & C-UL Class I, Div 2 Groups A, B, C & D	

2 Wiring – I/O



DAC LED Status Indication	
LED	Meaning
RUN	ON = Normal Operation
	FLASH = I/O Error
	OFF = No Power or I/O Error

3 Configuration DATA

The SmartRail Analog Output modules have a variety of parameters configured on a channel-by-channel basis. These parameters are set using Cscape (9.1 or later), and are listed below:

Cscape Configuration Data – Selectable per channel		
Parameter	**DAC101**	**DAC106**
Hold Last State	Hold Last State	
	Go to Minimum	
	Go to Mid-range	
	Go to Maximum	
Analog Output Range	0-10V	4-20mA
		0-20mA

3.1 Output Scaling

The SmartRail Analog Outputs scale digital values from 0-4000, to the analog value (0-10V, 0-20mA, or 4-20mA). For every digital count the output is incremented, the analog output value will increment an appropriate amount (2.5mV for 0-10V, 5uA for 0-20mA, 4uA for 4-20mA).

4 Installation / safety

This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D or Non-hazardous locations only

WARNING - EXPLOSION HAZARD -
Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous

WARNING - EXPLOSION HAZARD -
Substitution of any component may impair suitability for Class I, Division 2

WARNING – POSSIBLE EQUIPMENT DAMAGE
Remove power from the I/O Base and any peripheral equipment connected to this local system before adding or replacing this or any module.

a. All applicable codes and standards should be followed in the installation of this product.
b. Shielded, twisted-pair wiring should be used for best performance.
c. Shields should be grounded at one end only, preferably at the end providing the best noise shunting.
d. 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:

Warning: Electrical Shock Hazard.

Warning: Consult user documentation.

5 Technical Support

Technical Support at the following locations:

North America:
Tel: 317 916-4274
Fax: 317 639-4279
Web: http://www.heapg.com
Email: techsppt@heapg.com

Europe:
Tel: +353-21-4321266
Fax: +353-21-4321826
Web: http://www.horner-apg.com
Email: tech.support@horner-apg.com