

Electronic Interface Modules

G408 Ultra SlimPak®

DC Input, Field Configurable Isolator



- field configurable via DIP switches for different input-output combinations
- eliminates ground loops and isolates to 1800Vdc between input, output and power
- field configurable input ranges 10mV to 100V, 1mA to 100mA
- field configurable output ranges 0-10V, 0-5V, 0-20mA, 4-20mA, 0-1mA
- ultra slim package 12.7mm
- 9 to 30Vdc powered
- CSA approved, UL recognized, CE marked

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ISO 9001 Registered

INPUT RANGES		SW1			
Voltage	Current	1	2	3	4
20mV	2mA			■	■
50mV	5mA		■		
100mV	10mA		■		■
200mV	20mA		■	■	
500mV	50mA		■	■	■
1V	100mA	■			
2V		■			■
5V		■		■	■
10V		■	■		
25V		■	■		■
50V		■	■	■	
100V		■	■	■	■

Table 1: G408 input range selector - switch settings

RANGE	SW2							
G408-0001	1	2	3	4	5	6	7	8
0 to 5V	■	■	■	■				
0 to 10V	■		■	■				
0 to 1mA		■	■	■				
4 to 20mA						■	■	■
0 to 20mA	■	■				■	■	■

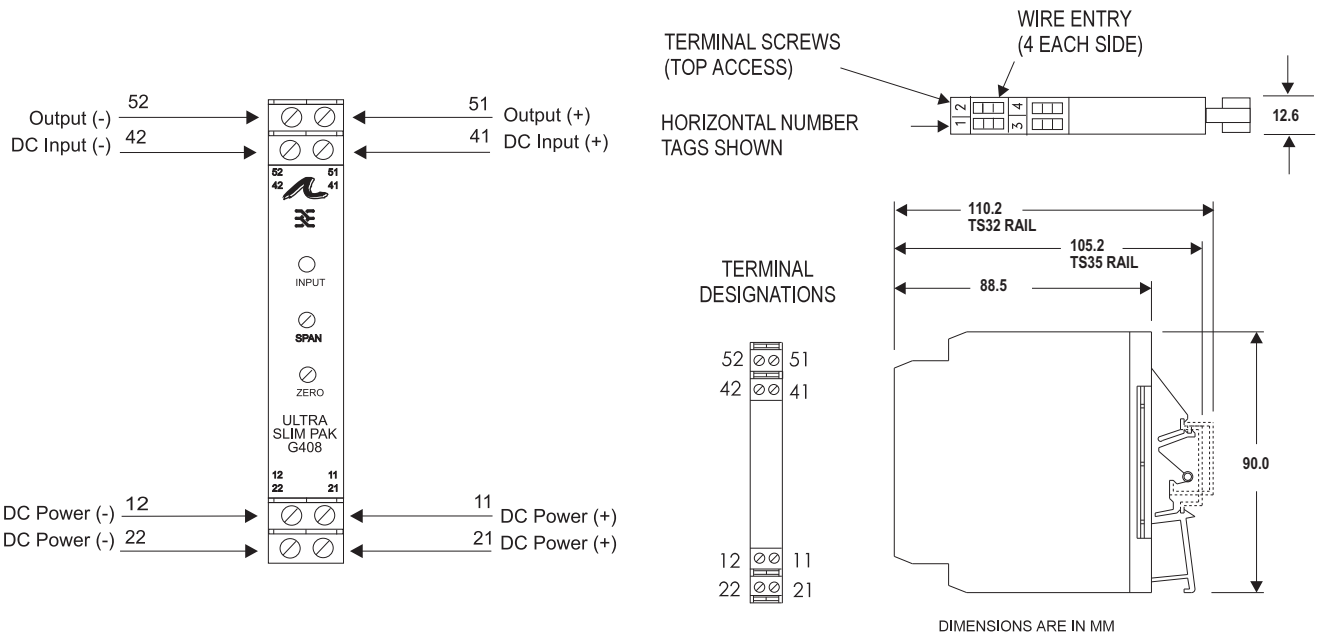
Table 3: Output range selector - switch settings

Key: ■ ON

TYPE	SW1			
	5	6	7	8
UNIPOLAR	■			
REVERSE		■		
CURRENT				■
VOLTAGE			■	

Table 2: Input range and function settings

Description	<p>The Ultra SlimPak G408 is a DIN rail mount, DC input signal conditioner with 1800Vdc isolation between input, output and power. The field configurable input and output offers flexible, wide ranging capability for DC current and voltage signals.</p> <p>The input of the G408 Ultra SlimPak can be configured for any one of 12 voltage ranges from 10mV to 100V or 6 current ranges from 1mA to 100mA (see table 1). The output is linear to the input and can be set for 0-5V, 0-10V, 0-1mA, 0-20mA or 4-20mA .</p> <p>Wide ranging, precision zero and span pots allow 50% adjustability of offset and span turn-down within each of the 18 switch selectable ranges. For example, the 0-2mA input range could be turned down to 0-1mA and provide a full scale output signal (e.g. 4-20mA), or turned down and offset to achieve a 1-2mA/4-20mA I/O combination.</p> <p>The G408 also accepts bipolar inputs (e.g. 10V range set to bipolar = -10 to +10V) and offers selectable normal, or reverse operation (e.g. 4-20mA/20-4mA). The ASIC based I/O channel is optically isolated to 1800Vdc and is transformer isolated from the power supply.</p>
Application	<p>The Ultra SlimPak G408 field configurable isolator is useful in eliminating ground loops, converting signal levels, and providing signal drive. The field configurable, wide ranging capability ensures maximum flexibility for most DC to DC applications, minimizing spare part requirements.</p>
Diagnostic LEDs	<p>The G408 is equipped with a dual function LED signal monitor. The green, front mounted LED indicates both DC power and input signal status. Active DC power is indicated by an illuminated LED. If the input signal is more than 110% of the full scale range, the LED will flash at 8Hz. Below -10%, the flash rate is 4Hz.</p>



Rated data	
Input	DC current or voltage
Range	$\pm 1\text{mA}$ to $\pm 100\text{mA}$ or $\pm 10\text{mVdc}$ to $\pm 100\text{Vdc}$, DIP switch selectable
Impedance	20Ω for current, $>100\text{k}\Omega$ for voltage
Maximum ratings / type of protection	170mA , 60Vdc for current, 264Vrms for voltage
Field device excitation	
Other input specification	
Other input specification	
Output	DC current or voltage
Range	$0\text{-}1\text{mA}$, $0\text{-}20\text{mA}$, $4\text{-}20\text{mA}$, $0\text{-}5\text{Vdc}$ or $0\text{-}10\text{Vdc}$, DIP switch selectable
Load	$<7.5\text{k}\Omega$ ($0\text{-}1\text{mA}$), $<600\Omega$ ($0/4\text{-}20\text{mA}$), $>500\Omega$ ($0\text{-}5\text{V}$), $>1000\Omega$ ($0\text{-}10\text{V}$)
Burnout level	
Zero / Span adjustment	0 to 50% of full scale input / 50 to 100% of full scale input
Protection	
Other output specification	
Other output specification	
Supply	DC voltage
Range	9 to 30Vdc , inverter isolated
Consumption	1.5W typ., 2.5W max. (200mA inrush at 9Vdc)
Other supply specification	
General	
Accuracy	$\pm 0.35\%$ of full typ., 0.5% max (span $<2\text{mA}$ or $<20\text{mA}$) or $\pm 0.1\%$ of full scale typ., 0.2% max. (span $>2\text{mA}$ or $>20\text{mV}$)
Temperature coefficient (drift)	$\pm 0.025\%$ of full scale/ $^{\circ}\text{C}$ typical, $\pm 0.05\%$ / $^{\circ}\text{C}$ maximum
Transmission frequency	
Response time. 90% span	$<200\text{mS}$ typical
Other general specification	Mean Time Before Failure: 60kHours
Status LED	input green ($>110\%$ of input: 8Hz , $<-10\%$ of input: 4Hz)
Isolation (# of ports)	1800V (3 port) between input, output and power
Operating / Storage temperature	0 to 55°C / -25 to 70°C
Housing (mounting)	EG8 (TS32 and TS35)
Dimensions (L x W x H)	90mm x 12.7mm x 112.7mm max.
Wire range (conductor size)	22-12AWG ($0.5\text{-}4.0\text{mm}^2$)
Insulation stripping length	7mm
Tightening torque	$0.4\text{-}0.8\text{Nm}$
Approvals	CSA (file LR-42272), UL (file E99775), CE marked (EMC dir. 89/336/EEC, LV dir. 73/23/EEC: Input $<75\text{Vdc}$ only)
Ordering data	Cat. No.
Ultra SlimPak	G408 (factory calibration: $4\text{-}20\text{mA}$ In, $4\text{-}20\text{mA}$ Out)
Heat sink (width)	HS01-A (1.6mm) (conditionally required depending on installation, see heat sink data)
Shunt resistor	C006 (0.1Ω , 1%, 5W for use with external DC current source)
Note: G408-000X where X is the revision level	