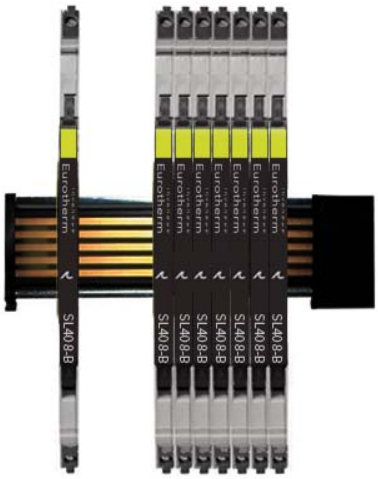
SL408-B OmniSLIM

MODEL



invensys Eurotherm

Bi-Polar Isolated Converter

Specification Sheet

- Conversion of voltage and current bipolar process signals to unipolar signals
- Multiple signal ranges are selectable via DIP-switches
- Fast response time < 7 ms and high output load stability
- Excellent accuracy, better than 0.05 % of selected range
- Slimline 6 mm housing

Applications

- The SL408-B is an isolating converter which can be used for signal conversion of standard bipolar analogue process signals into a unipolar analogue signal.
- The unit offers 3-port isolation and provides surge suppression and protects control systems from transients and noise.
- The SL408-B also eliminates ground loops and can be used for measuring floating signals.
- Mounting of the SL408–B can be in Safe area or in Zone 2 and Cl. 1 Div 2 area.

Technical characteristics

- Flexible 24 VDC (±30%) supply via power rail or connectors.
- Excellent conversion accuracy, better than 0.05% of selected range.
- Inputs and outputs are floating and galvanically separated.
- A green front LED indicates operation status for the device.
- All terminals are protected against overvoltage and polarity error.
- Meeting the NAMUR NE21 recommendations, the SL408-B ensures top measurement performance in harsh EMC environments.
- High galvanic isolation of 2.5 kVAC.
- Fast input to output response time < 7 ms / > 100 Hz – 10 Hz bandwidth damping possible via DIP-switch.
- Excellent signal/noise ratio > 60 dB.

Mounting / installation / programming

- Fast and easy configuration of factory calibrated measurement ranges via DIP-switches.
- A very low power consumption allows DIN rail mounting without the need for any air gap.
- Wide temperature operation range: -25...+70°C.

ACTION INSTRUMENTS

FM APPROVED · c UL us LISTED · ATEX 2 Ex ZONE · CE

Specification

Environmental conditions

Specifications range:	–25°C to +70°C
Storage temperature:	–40°C to +85°C
Calibration temperature:	20...28°C
Relative humidity:	< 95% RH (non-cond.)
Protection degree:	IP20

Installation in pollution degree 2 and measurement / overvoltage category II.

Mechanical specifications

Dimensions (HxWxD):	113 x 6.1 x 115 mm
Weight approx:	70 g
DIN rail type:	DIN EN 60715 - 35 mm
Wire size:	0.13...2.5 mm² / AWG 26...12 stranded wire
Screw terminal torque:	0.5 Nm

Common electrical specifications

Supply voltage, DC:	16.8...31.2 VDC
Internal consumption, typ./max:	0.4 W / 0.65 W
Power consumption, max:	0.8 W
Isolation voltage, test:	2.5 kVAC
Working isolation voltage:	300 VAC / 250 VAC (Ex)
MTBF, acc. to IEC 61709 (SN29500):	> 241 years
Signal / noise ratio:	> 60 dB
Cut-off frequency (3 dB):	> 100 Hz or 10 Hz (selectable via DIP-switch)
Response time (0...90%, 100...10%):	< 7 ms or < 44 ms

Accuracy values

Input type	Absolute accuracy	Temperature coefficient
All	≤ ± 0.05% of span*	≤ ± 0.01% of span* / °C

EMC immunity influence:	< ±0.5% of span*
Extended EMC immunity:	
NAMUR NE 21, A criterion, burst:	< ±1% of span*

*(of span = of the selected range)

Input specifications

Current input:

Programmable ranges:	± 10 and ± 20 mA
Functional range:	–23 ... +23 mA
Input voltage drop:	< 1 VDC @ 23 mA

Voltage input:

Programmable ranges:	± 5 and ± 10 V
Functional range:	–11.5 ... +11.5 V
Input resistance:	≥ 1 MΩ

Output specifications

Current output:

Programmable ranges:	0...20 and 4...20 mA
Functional range:	0...23 mA
Load (max.):	23 mA / 600 Ω
Load stability:	≤ 0.002% of span* / 100 Ω
Current limit:	≤ 28 mA

Voltage output:

Programmable ranges:	0...5, 1...5, 0...10, 2...10 V
Functional range:	0...11.5 V
Load:	> 10 kΩ

Approvals

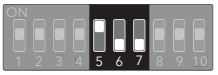
EMC 2004/108/EC:	EN 61326-1
LVD 2006/95/EC:	EN 61010-1
UL, Standard for Safety:	UL 61010-1
Safe Isolation:	EN 61140

Ex /I.S.

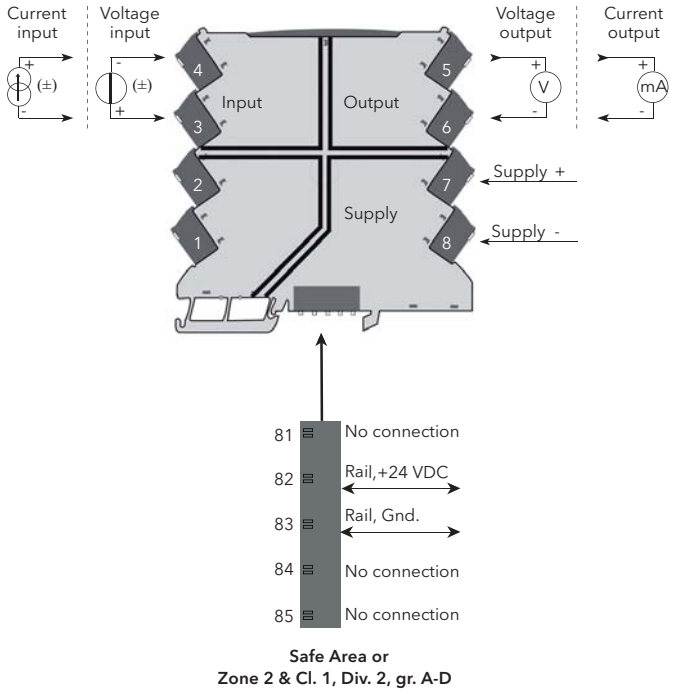
ATEX 94/9/EC:	DEKRA 13ATEX 0137X
c FM us:	3049859-2

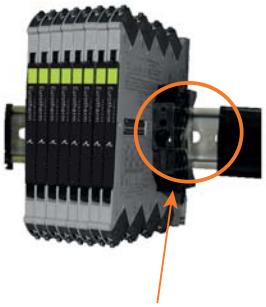
DIP-switch configuration

(DIP-switch positions are only read at power up)

Filter ON Bandwidth 10 Hz		**Output** Current **0...20 mA**	
Filter OFF Bandwidth > 100 Hz		**Output** Current **4...20 mA**	
Input Current **-10...+10 mA**		**Output** Voltage **0...10 V**	
Input Current **-20...+20 mA**		**Output** Voltage **2...10 V**	
Input Voltage **-5...+5 V**		**Output** Voltage **0...5 V**	
Input Voltage **-10...+10 V**		**Output** Voltage **1...5 V**	

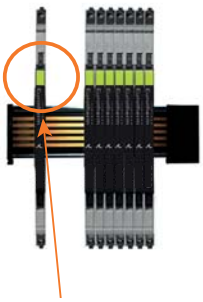
Connections





Installation on a 35mm DIN rail

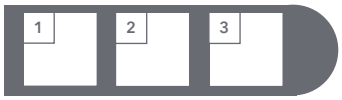
The OmniSLIM devices must be supported by module stops - part number MOD-STOP.



Marking

The front cover of the OmniSLIM units has been designed with an area for affixation of a click-on marker. The area assigned to the marker measures 5 x 7.5 mm.

Order codes



1	Type
OMNISLIM	OmniSLIM Voltage/Current Conditioner

2	OmniSLIM
SL408-B	Single Channel Bi-Polar Isolated Converter

3	Accessories & Spares
PSR-750X	Power rail 750mm (35x7.5mm DIN Rail)
PSR-500X	Power rail 500mm (35x7.5mm DIN Rail)
PSR-250X	Power rail 250mm (35x7.5mm DIN Rail)
PSR-CVRX	End covers for Power Rail
MOD-STOP	Module Stop
PSC-100U	Power Connector Unit (Din Rail) 2.5A max, powering up to 100 units

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