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Card for inserting in power supply

External Module

ISO AMP - Four channel analog isolation amplifier

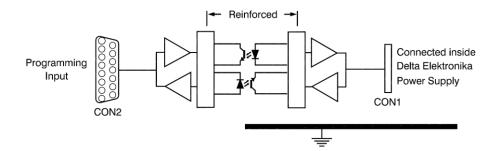
Features

- Selectable 0-5 V and 0-10 V signal levels
- Isolated programming and monitoring of U, I and status signals
- Prevents problems with earth loops and CM-voltages
- Pin compatible with ES-series, SM800, SM1500 and SM6000
- Factory installed
- Negative current programming and monitoring in case of optional power sink

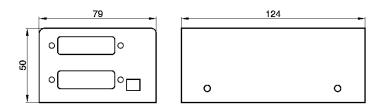
Specifications

- \bullet Programming and monitoring offset : +/- 60 μV typical
- Full scale error: 0.1% calibrated (10% for negative signals)
- Non-linearity : 0.01% typical, TC = 65ppm/°C
- Common mode rejection: 80 dB @ 50 Hz

Block diagram



Dimensions External Module



SPECIFICATIONS ISO AMP

Specifications

CON 1 - internal circuitry : To plug the card inside the power supply (20P header connector) CON 2 - external connections: To connect the card to a programming source (15P female D-connector)

Analog inputs / outputs: CV, CC programming and CV, CC monitoring

Offset : ±60 μV typical, ±180 μV max.

Full scale error : 0.1% calibrated.

Non-linearity : 0.01% typical, 0.05 % max.

Temperature coefficient : -65ppm typical Common mode rejection : 80 dB @ 50 Hz

CON 1 :0-5V Voltage rage:

> CON 2 : 0 - 5 V or 0 - 10 V selectable

CON 1 Input impedance

> CON 2 : 200 k Ω for 5 V input, 400 k Ω for 10 V input.

CON 1 : $100 \Omega / max. 4 mA$ Output impedance CON 2 : 1 Ω / max. 4 mA

: 5.114 V \pm 15 mV (Ro = 10 Ω / max. 4 mA), TC = 20 ppm/°C Reference voltage

Auxiliary supply voltage : 11.4 - 12.7 V / Ri = 470 Ω

Digital status outputs: CV, LIM, OT, ACF, DCF

Output voltage CON 2 : + 5 V / max. 2 mA

Output impedance CON 2 : 5 Ω

Digital input: Remote shutdown

CON 2 : 3 - 15 V Input voltage CON 2 Input impedance : 1.8 kΩ

General

Temperature: Operating temperature -20 to +50 °C, Storage temperature -40 to +85 °C.

Humidity: Max. 95% RH, non condensing, up to 40 °C, max. 75% RH, non condensing, up to 50 °C.

Insulation: CON2 - CON1, 1000 VDC Reinforced insulation acc. IEC60950-1 / EN61010-1

CON2 - Case, 60 VDC Functional insulation

Insulation test voltage 4250 VDC Capacitance input / case 3.2nF

External ISO AMP MODULE

Enclosure Insulation

Dimensions (h x w x d) = $50 \times 79 \times 124 \text{ mm}$ Analog in- and outputs to case: 60 VDC Weight 0.5 kg Logic in- and outputs to case: 60 VDC

Degree of protection: IP20 Line input to case: n.a.

Input Power EMC

Rated voltage 24 VDC. Wide range 15 - 30 VDC Emission: EN 61326-1, class B equipment (for use in domestic

Power consumption 3 W establishments)

Uses 2pole terminal block for DC input power. Immunity: EN 61326-1, equipment for use in industrial and domestic Uses 15P male & female connectors for prog. signals.

establishments

Accessories

The following is supplied with the ISO AMP MODULE:

Rail adapter for 35mm rail mounting, Wall mounting adapter (7.5 * 8cm) and 60cm cable with 15 pole D-connectors.

Note1:

The four analog channels are factory-calibrated within 0.1 % for 5 V input and output voltages. Selecting a 10 V input and/or output without recalibrating can introduce an extra full scale error of 0.1 %. Offset, full scale error, non-linearity and temperature coefficient have to be added to the specifications of the power supply.

Note2:

Specifications are measured at an ambient temperature of 25 °C ± 5 °C unless otherwise noted.

Ordering Information

Models	Order Code	
SM800 with built-in card	Option P249	
SM1500 with built-in card	Option P218	
SM6000 with built-in card	Option P154	
External Module	ISO AMP Module	