



Card for inserting in power supply



External Module



ISO AMP - Four channel analog isolation amplifier

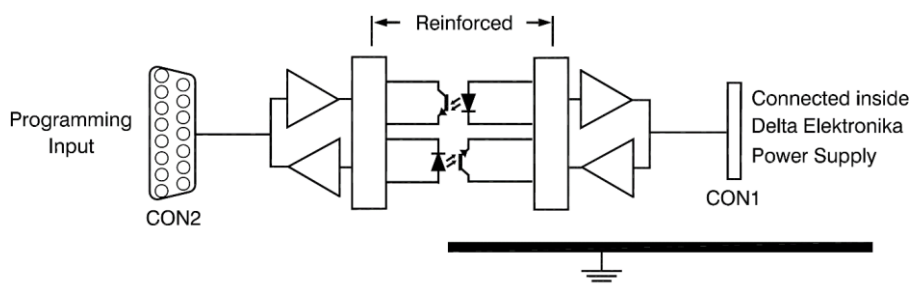
Features

- 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

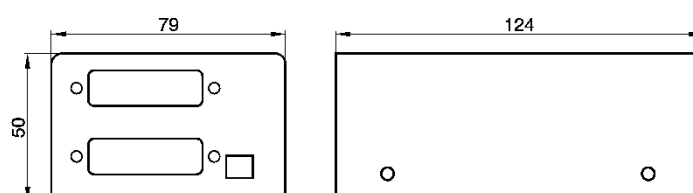
Specifications

- Programming and monitoring offset : $\pm 60 \mu\text{V}$ typical
- Full scale error : 0.1% calibrated (10% for negative signals)
- Non-linearity : 0.01% typical, $\text{TC} = 65\text{ppm}/^\circ\text{C}$
- Common mode rejection : 80 dB @ 50 Hz

Block diagram



Dimensions External Module



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 | | : $\pm 60 \mu\text{V}$ typical, $\pm 180 \mu\text{V}$ 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 |
| Voltage range : | CON 1 | : 0 - 5 V |
| | CON 2 | : 0 - 5 V or 0 - 10 V selectable |
| Input impedance | CON 1 | : 200 k Ω |
| | CON 2 | : 200 k Ω for 5 V input, 400 k Ω for 10 V input. |
| Output impedance | CON 1 | : 100 Ω / max. 4 mA |
| | CON 2 | : 1 Ω / max. 4 mA |
| Reference voltage | | : 5.114 V ± 15 mV (Ro = 10 Ω / max. 4 mA), TC = 20 ppm/°C |
| 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

| | | |
|-----------------|-------|------------------|
| Input voltage | CON 2 | : 3 - 15 V |
| Input impedance | CON 2 | : 1.8 k Ω |

General

| | |
|--------------------------|--|
| Temperature: | Operating temperature -20 to +50 °C, Storage temperature -40 to +70 °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

Dimensions (h x w x d) = 50 x 79 x 124 mm
Weight 0.5 kg
Degree of protection: IP20

Insulation

Analog in- and outputs to case: 60 VDC
Logic in- and outputs to case: 60 VDC
Line input to case: n.a.

Input Power

Rated voltage 24 VDC. Wide range 15 - 30 VDC
Power consumption 3 W
Uses 2pole terminal block for DC input power.
Uses 15P male & female connectors for prog. signals.

EMC

Emission : EN 61326-1, class B equipment (for use in domestic establishments)
Immunity : EN 61326-1, equipment for use in industrial and domestic 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 re-calibrating 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 \pm 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 |