

ISO AMP Card - Four channel analog isolation amplifier Safety isolation

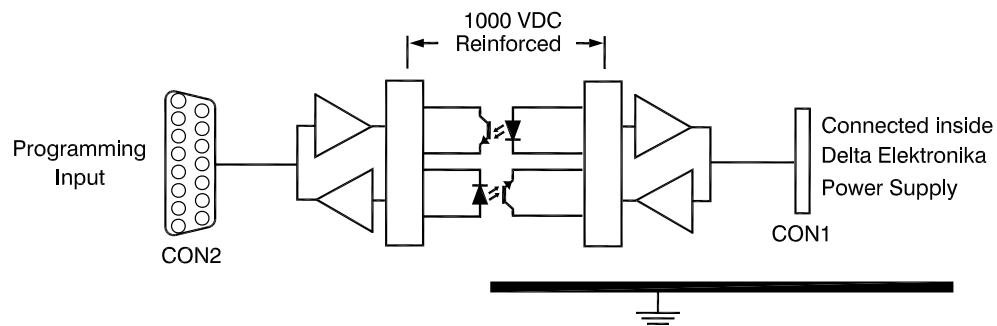
Features

- 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
- Factory installed
- Negative current programming and monitoring in case of optional power sink

Specifications

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

Block diagram



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 \pm 15 mV (Ro = 10 Ω / max. 4 mA), TC = 20 ppm/ $^{\circ}\text{C}$
- 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

- Capacitance input / case : 3.2 nF
- Operating temperature : - 20 to + 50 $^{\circ}\text{C}$
- Storage temperature : - 40 to + 85 $^{\circ}\text{C}$
- Humidity : max. 95% RH, non condensing, up to 40 $^{\circ}\text{C}$
: max. 75% RH, non condensing, up to 50 $^{\circ}\text{C}$
- Isolation voltage : CON2 - CON1, 1000 VDC reinforced isolation acc. EN60950-1 / EN61010-1
: CON2 - Case 1000 VDC Basic isolation
- Isolation test voltages : 4250 VDC
- Minimum creepage distance : 10 mm

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 $^{\circ}\text{C} \pm 5 \text{ }^{\circ}\text{C}$ unless otherwise noted.

Ordering information

Models	Order Code :
SM 800	P249
SM 1500	P218
SM 3000	P145
SM 6000	P154