

## ISO AMP Card - Four channel analog isolation amplifier Safety isolation

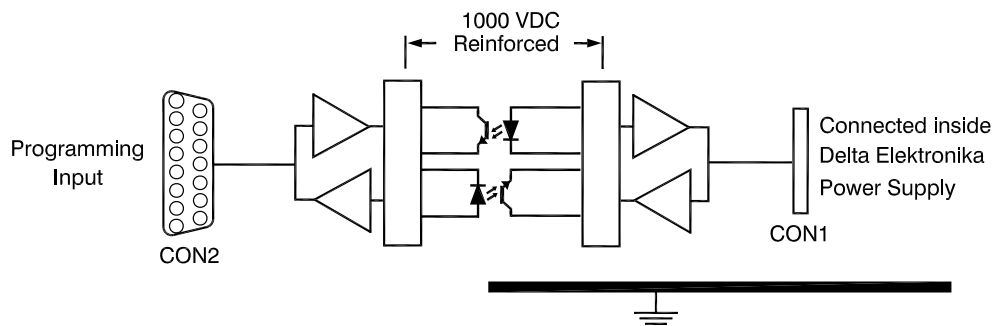
### Features

- 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

### Specifications

- Programming and monitoring offset : +/- 60  $\mu$ V typical
- Full scale error : 0.1% calibrated
- 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 $\Omega$
CON 2	: 200 k $\Omega$ for 5 V input, 400 k $\Omega$ for 10 V input.
- Output impedance
 

CON 1	: 100 $\Omega$ / max. 4 mA
CON 2	: 1 $\Omega$ / max. 4 mA
- Reference voltage : 5.114 V  $\pm$  15 mV (Ro = 10  $\Omega$  / max. 4 mA), TC = 20 ppm/ $^{\circ}\text{C}$
- Auxiliary supply voltage : 11.4 - 12.7 V / Ri = 470  $\Omega$

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

- Output voltage CON 2 : + 5 V / max. 2 mA
- Output impedance CON 2 : 5  $\Omega$

## Digital input : Remote shutdown

- Input voltage CON 2 : 3 - 15 V
- Input impedance CON 2 : 1.8 k $\Omega$

## 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

**Specifications are measured at an ambient temperature of 25 C  $\pm$  5 C unless otherwise noted.**

**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:** Reinforced isolation is available only when the ISO AMP is built inside a Delta Elektronika power supply.

## Ordering information

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