



ISO AMP Card - Four channel analog isolation amplifier Safety isolation

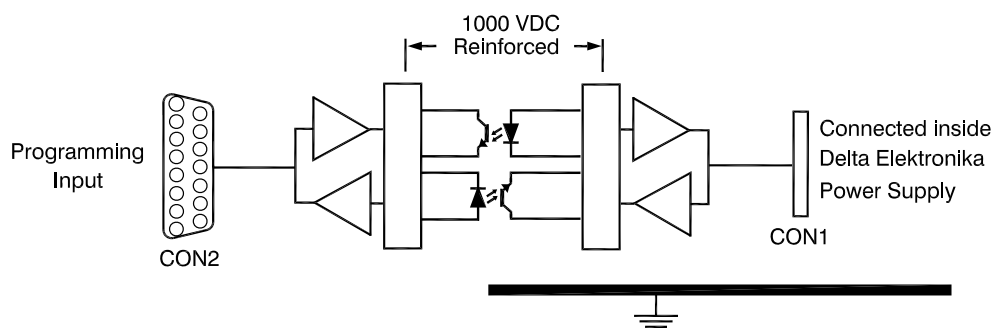
Features

- 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 μ 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

Connections ISO AMP CARD	
CON1 - internal circuitry	To plug the card inside the power supply (20P header connector).
CON2 - 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		- 65 ppm typical.
Common mode rejection		80 dB @ 50 Hz.
Voltage range	CON1 CON2	0 - 5 V 0 - 5 V or 0 - 10 V selectable
Input impedance	CON1 CON2	200 k Ω 200 k Ω for 5 V input, 400 k Ω for 10 V input
Output impedance	CON1 CON2	100 Ω / max. 4 mA 1 Ω / max. 4 mA
Reference voltage		5.114 V \pm 15 mV ($R_o = 10 \Omega$ / max. 4 mA), TC = 20 ppm/ $^{\circ}\text{C}$
Auxiliary supply voltage		11.4 - 12.7 V / $R_i = 470 \Omega$
Digital status outputs: CC, LIM, OT, ACF and DCF		
Output voltage CON2		+ 5 V / max. 2 mA
Output impedance CON2		5 Ω

Digital input: Remote ShutDown.	
Input voltage CON2	3 - 15 V
Input impedance CON2	1.8 k Ω
General	
Capacitance CON2 - 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 voltages	CON2 - CON1 1000 VDC Reinforced isolation acc. EN60950-1 / EN61010-1 CON2 - Case 1000 VDC Basic isolation
Isolation test voltage Minimum creepage distance	4250 VDC 10 mm
<i>Specifications are measured at an ambient temperature of 25 $^{\circ}\text{C}$ \pm 5 $^{\circ}\text{C}$ unless otherwise noted.</i>	

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