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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 µV typical
- Full scale error
- : 0.1% calibrated
- Non-linearity
- Common mode rejection
- : 0.01% typical, TC = 65ppm/°C
- : 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 μ V typical, \pm 180 μ 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 kΩ 200 kΩ for 5 V input, 400 kΩ 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 (Ro = 10 Ω / max. 4 mA), TC = 20 ppm/°C	
Auxiliary supply voltage		11.4 - 12.7 V / R _i = 470 Ω	
Digital status outputs: CC, LIM, OT, ACF and DCF			
Output voltage CON2		+ 5 V / max. 2 mA	
Output impedance CON2 5 Ω		5 Ω	

Digital input: Remote ShutDown.		
Input voltage CON2	3 - 15 V	
Input impedance CON2	1.8 kΩ	
General		
Capacitance CON2 - Case	3.2 nF	
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	
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	
Specifications are measured at an ambient temperature of 25 $^\circ C$ \pm 5 $^\circ C$ 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