2-Channel Analog Input Module 0-30 V

Differential measurement input

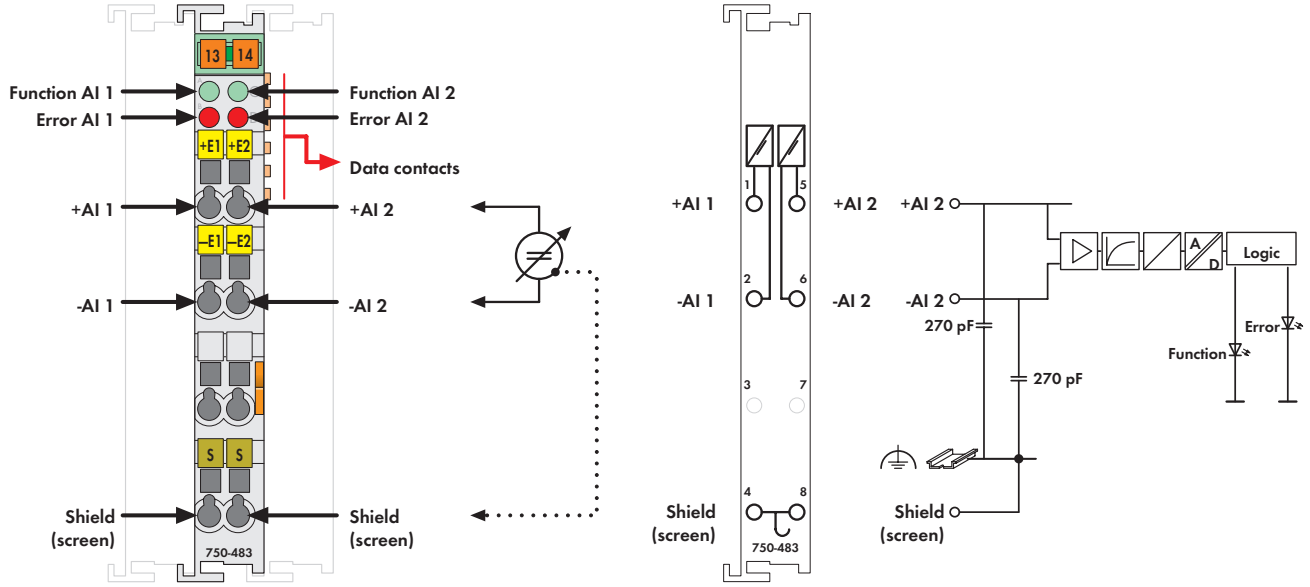

Fig. 750 Series/Technical data see page 24/Delivered without miniature WSB markers
750/753 Series marking see pages 10 ... 11 / 12 ... 13

The 2-channel analog input module processes differential signals of a standard magnitude 0–30VDC.

The input signal of each channel is electrically isolated and is transmitted with a resolution of 14 bits.

System voltage is used for voltage supply.

The shield (screen) is directly connected to the DIN rail.

- Measured-value acquisition: time synchronous (both inputs)
- Measuring range overflow/underflow: status byte and LED
- Method of conversion: SAR (Successive Approximation Register)
- Operating mode: continuously sampling (preset)
- Protection: RC circuit

Description	Item No.	Pack. Unit
2AI 0-30V DC Diff. Measur. Inp.	**750-483**	1
2AI 0-30V DC Diff. Measur. Inp. (without connector)	**753-483**	1

Accessories

	Item No.	Pack. Unit
753 Series Connectors	**753-110**	25
Coding elements	**753-150**	100
Miniature WSB Quick marking system		
plain	**248-501**	5
with marking	see pages 352 ... 353	

Approvals

Also see "Approvals Overview" in Section 1

Conformity marking	CE
Shipbuilding	ABS, BV, DNV, GL, KR, LR*, NKK*, PRS*, RINA*
	*753 Series, pending
UL 508	
ANSI/ISA 12.12.01	Class I, Div. 2, Grp. ABCD, T4
EN 60079-0, -15	I M2 / II 3 GD Ex nA IIC T4
EN 61241-0, -1	

Technical Data

Number of inputs	2, electrically isolated from each other
Power supply	via system voltage DC/DC
Current consumption typ. (internal)	80 mA
Signal voltage	0 - 30V
Internal resistance	1 MΩ
Input filter	low pass first order, f_G = 5 kHz
Resolution of the A/D converter	14 bits
Monotonicy without missing codes	yes
Resolution of measured value	14 bits
Value of a LSB (least significant bit)	1.8 mV
Measuring error (25 °C)	≤ ± 0.05 % of the full scale value
Temperature coefficient	< ± 0.01 % / K of the full scale value
Measuring error	≤ 0.4 % over whole temperature scale
	≤ 0.1 % of upper range value (non-linearity)
Crosstalk attenuation	≥ 80 dB
Sampling time of repetition	1 ms
Sampling delay (module)	1 ms
Sampling delay (channel/channel)	≤ 1 µs
Sampling duration	≤ 5 µs
Admissible continuous overload	60 V
Dielectric strength	500 V DC channel/channel or channel/system
Bit width	2 x 16 bits data
	2 x 8 bits control/status (optional)
Wire connection	CAGE CLAMP®
Cross sections	0.08 mm² ... 2.5 mm² / AWG 28 ... 14
Stripped lengths, 750/753 Series	8 ... 9 mm / 0.33 in; 9 ... 10 mm / 0.37 in
Width	12 mm
Weight	55 g
EMC: CE - immunity to interference	acc. to EN 61000-6-2 (2005)
EMC: CE - emission of interference	acc. to EN 61000-6-4 (2007)
EMC: marine app. - immunity to interference	acc. to Germanischer Lloyd (2003)
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