

# 2-Channel Analog Input Module 0/4-20 mA

Differential inputs

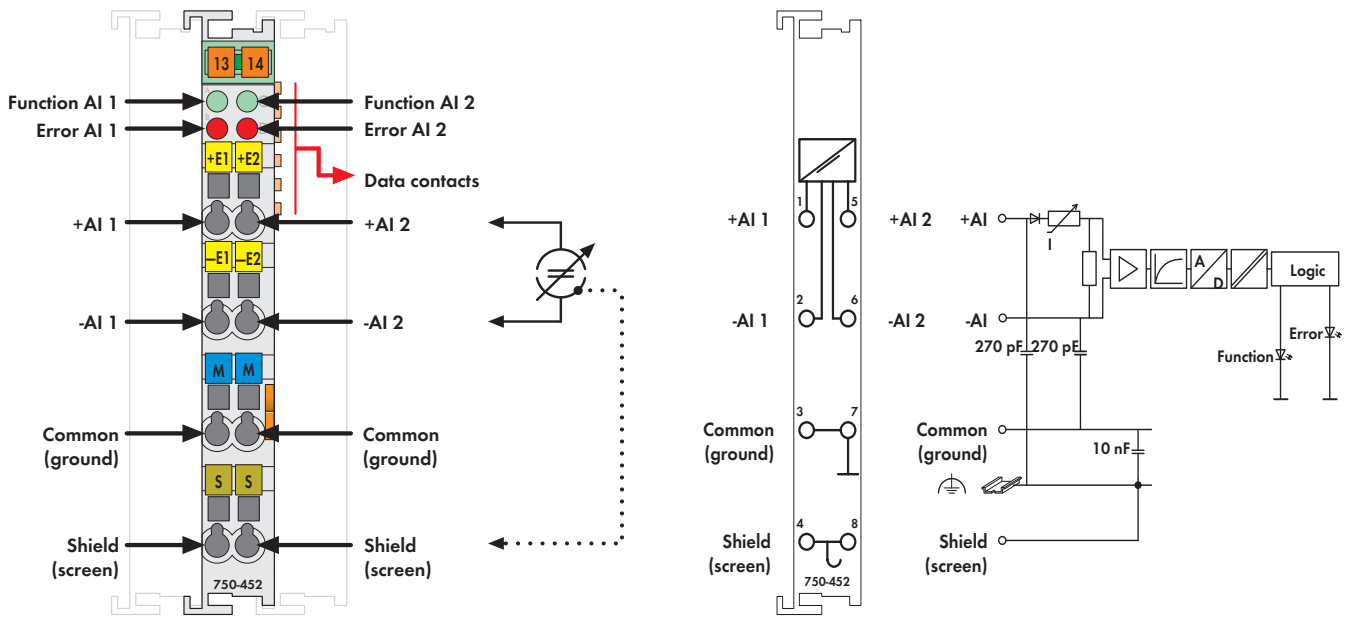


Fig. 750 Series  
Delivered without miniature WSB markers

The analog input module receives signals with standardized values of 0-20mA and 4-20mA.

The input channels are differential inputs.

The input signal is electrically isolated and will be transmitted with a resolution of 12 bits.

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

The internal system supply (via the data bus contacts) is used for the power supply of the module.

Description	Item No.	Pack. Unit
2AI 0-20mA Diff.	750-452	1
2AI 4-20mA Diff.	750-454	1
2AI 0-20mA Diff./S5 <sup>1)</sup>	750-452/000-200	1
2AI 4-20mA Diff./EM	750-454/000-003	1
2AI 4-20mA Diff./EM/T	750-454/025-003	1
Extended temperature range: -20 °C ... +60 °C		
2AI 4-20mA Diff./S5 <sup>1)</sup>	750-454/000-200	1
2AI 4-20mA Diff./T	750-454/025-000	1
2AI 0-20mA Diff. (without connector)	753-452	1
2AI 4-20mA Diff. (without connector)	753-454	1
Extended temperature range: -20 °C ... +60 °C		
<sup>1)</sup> Data format for S5 control with FB 251		
Accessories	Item No.	Pack. Unit
753 Series Connectors	753-110	25
Coding elements	753-150	100
<b>Miniature WSB Quick marking system</b>		
plain	248-501	5
with marking	see Section 11	
Approvals		
Conformity marking	CE	
Korea Certification	<sup>1)</sup>	
Marine applications (versions upon request)	ABS, BV, DNV, GL, KR, LR, NKK, PRS, RINA	
UL 508		
ANSI/ISA 12.12.01	Class I, Div. 2, Grp. ABCD, T4	
TÜV 07 ATEX 554086 X	I M2 Ex d I Mb, II 3 G Ex nA IIC T4 Gc, II 3 D Ex tc IIIC T135°C Dc	
IECEX TUN 09.0001 X	Ex d I Mb, Ex nA IIC T4 Gc, Ex tc IIIC T135°C Dc	
<sup>1)</sup> Does not apply to 750-454/000-003, .../025-003		

Technical Data	
Number of inputs	2
Power supply	via system voltage DC/DC
Current consumption typ. (internal)	70 mA
Common mode voltage (max.)	35 V DC
Signal current	0 - 20mA (750-452 / 753-452) 4 - 20mA (750-454 / 753-454)
	3.8 mA ... 20.5 mA (750-454/...003)
Input resistance	< 220 Ω / 20 mA
Resolution	12 bits
Conversion time (typ.)	2 ms
Measuring error (25 °C)	< ± 0.2 % of the full scale value
Temperature coefficient	< ± 0.01 % / K of the full scale value
Isolation	500 V system/supply
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
Strip lengths, 750/753 Series	8 ... 9 mm / 0.33 in 9 ... 10 mm / 0.37 in
Width	12 mm
Weight	51 g
EMC immunity of interference	acc. to EN 61000-6-2, marine applications
EMC emission of interference	acc. to EN 61000-6-4, marine applications

## Data Format

750-466/000-003, 750-454/000-003, 750-454/025-003

Input current	Process value		Status byte	Error LED
	dez	hex		
mA			hex	
< 3,8 - $\Delta$	3	0x0003	0x41	on
< 3,8	0	0x0000	0x00	off
3,8	0	0x0000	0x00	off
3,85	98	0x0062	0x00	off
4,0	392	0x0188	0x00	off
5,0	2354	0x0932	0x00	off
6,0	4316	0x10DC	0x00	off
7,0	6277	0x1885	0x00	off
8,0	8239	0x202F	0x00	off
9,0	10201	0x27D9	0x00	off
10,0	12162	0x2F82	0x00	off
11,0	14124	0x372C	0x00	off
12,0	16086	0x3ED6	0x00	off
13,0	18047	0x467F	0x00	off
14,0	20009	0x4E29	0x00	off
15,0	21971	0x55D3	0x00	off
16,0	23932	0x5D7C	0x00	off
17,0	25894	0x6526	0x00	off
18,0	27856	0x6CD0	0x00	off
19,0	29817	0x7479	0x00	off
20,0	31779	0x7C23	0x00	off
20,5	32760	0x7FF8	0x00	off
> 20,5	32761	0x7FF9	0x42	off
> 20,5 + $\Delta$	32761	0x7FF9	0x42	on

$\Delta = 0,05..1,8$  mA