MICRO-EPSILON

SCIENCE GATE
Your Automation Partner

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More Precision

induSENSOR MSC7802 // 2-channel controller for inductive displacement sensors

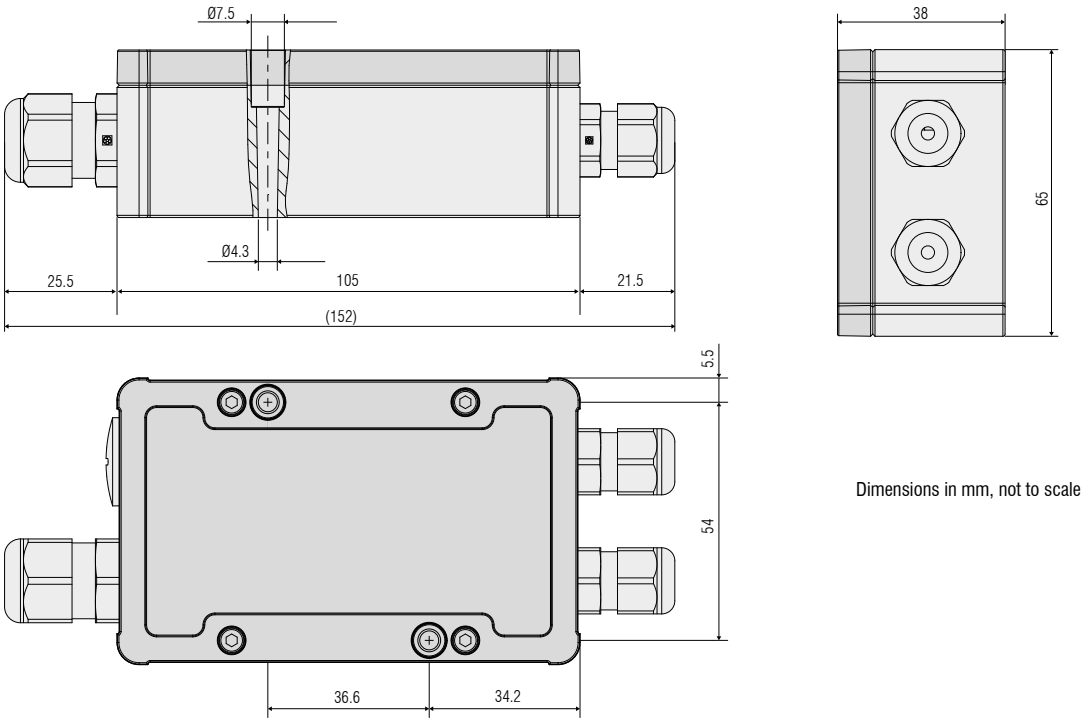
2-channel controller for inductive displacement sensors

induSENSOR MSC7802

- *Compact and robust aluminum housing (IP67)*
- *High resolution and linearity*
- *Universal application - compatible with LVDT and half-bridge sensors*
- *Ideal for serial applications in machine building and automation*
- *User-friendly set up and configuration via buttons or software*

The new MSC7802 controller is designed to be operated with DTA (LVDT) and LDR measuring gauges and displacement sensors. Due to its robust aluminum housing protected to IP67, this 2-channel controller is predestined for industrial measurement tasks. A large variety of compatible, inductive displacement sensors and gauges from Micro-Epsilon combined with an optimized price/performance ratio opens up numerous fields of applications in automation technology and machine building. The controller is ideally suited to multi-channel applications and can be easily set via buttons or software.

MSC7802



Dimensions in mm, not to scale

Model		MSC7802
Resolution [1]	DTA series	13 bits (0.012 % FSO) at 50 Hz 12 bits (0.024 % FSO) at 300 Hz
	LDR series	12 bits (0.024 % FSO) at 50 Hz 11 bits (0.048 % FSO) at 300 Hz
Frequency response (-3dB)		300 Hz (adjustable only via software)
Linearity		≤ ± 0.02 % FSO
Temperature stability	DTA series	≤ 100 ppm FSO/K
	LDR series	≤ 125 ppm FSO/K
Supply voltage		14 … 30 VDC (5 … 30 VDC [2])
Max. current consumption		80 mA
Input impedance [3]		> 100 kOhm
Analog output [4]		(0)2 … 10 V; 0.5 … 4.5 V; 0 … 5 V (Ra > 1 kOhm) or 0(4) … 20 mA (load < 500 Ohm)
Connection		Sensor: screw terminal AWG 16 up to AWG 24; with ferrule up to AWG 28 or 5-pin M9 connector Supply/signal: screw terminal AWG 16 up to AWG 24; with ferrule up to AWG 28 or 5-pin M12 connector
Installation		2x mounting holes for M4
Temperature range	Storage	-40 … +85 °C
	Operation	-40 … +85 °C
Shock (DIN-EN 60068-2-27)		40 g / 6 ms in 3 axes, 2 directions and 1000 shocks each 100 g / 5 ms in 3 axes, 2 directions and 9 shocks each
Vibration (DIN-EN 60068-2-6)		± 1.5 mm / 5 … 57 Hz in 3 axes, 10 cycles each ± 20 g / 57 … 500 Hz in 3 axes, 10 cycles each
Protection class (DIN-EN 60529)		IP67 (plugged)
Material		Aluminum die casting
Weight		approx. 280 g
Compatibility		full-bridge sensor/LVDT (DTA series) and half-bridge sensor (LDR series)
No. of measurement channels		2

FSO = Full Scale Output

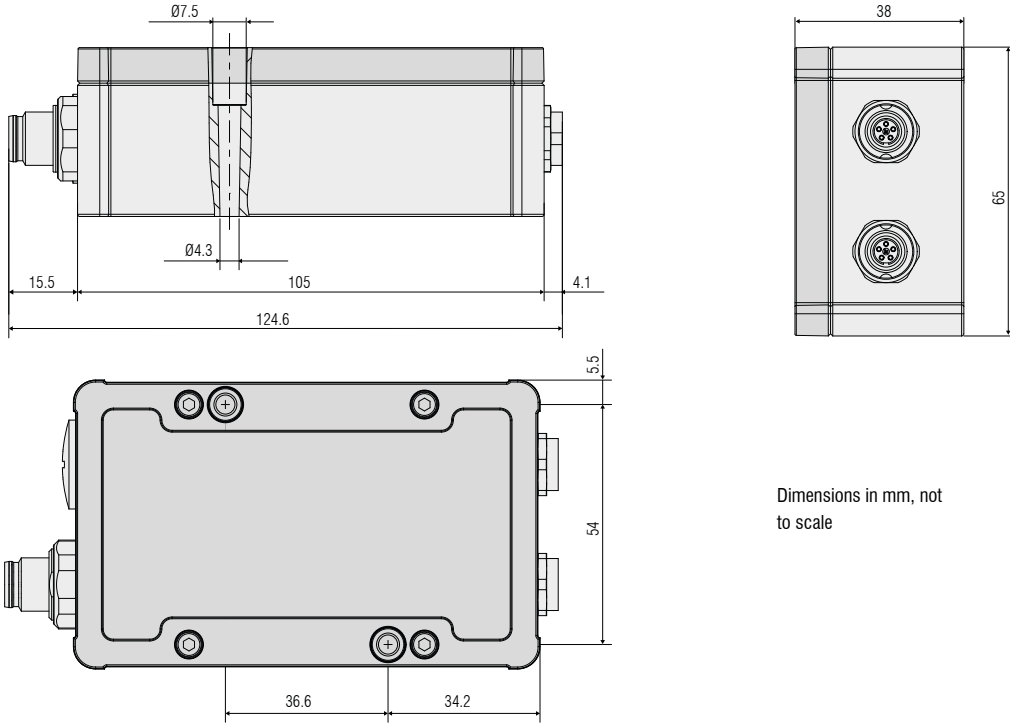
[1] Noise: AC RMS measurement via RC low-pass filter of the 1st order with fc = 5 kHz

[2] With technical restrictions of the output signal (load and signal span)

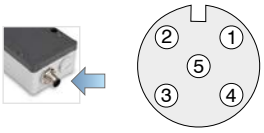
[3] Sensor side

[4] With controllers including a current output, the output signal is limited to approx. 21 mA

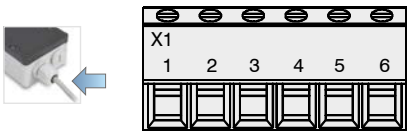
MSC7802(010)



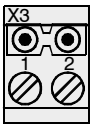
Dimensions in mm, not to scale



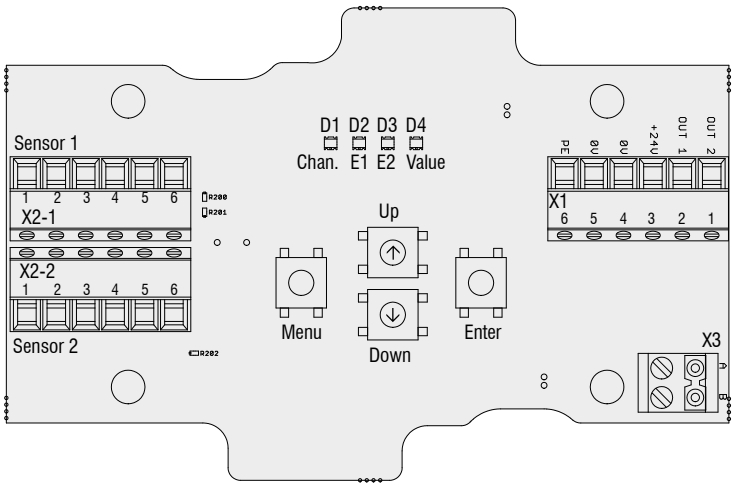
5-pin M12x1 (A-coded)
housing connector
View on pin side

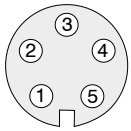


Pin assignment of supply and analog output	Connector variant		Cable gland	
Assignment	**5-pin**	**Color (cable: PC5/5-IWT)**	**Pin X1**	**Color (cable: PC7400-6/4)**
Analog output for channel 2	2	White	1	Green
Analog output for channel 1	4	Black	2	Yellow
Supply voltage	1	Brown	3	White
GND (supply and signal mass)	3	Blue	4	Brown
Not assigned	5	Gray	5	-
Shield (housing)	-	Cable shield via connector	6	Cable shield

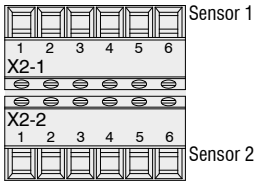


Pin assignment digital interface RS485	
Assignment	**Pin X3**
RS485 A	1
RS485 B	2

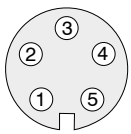




5-pin housing socket M9
(Binder, Series 712)
View on pin side



Pin assignment Sensors 1 & 2 (LVDT)	Connector	Cable gland			
Assignment	**Pin 5-pin**	**Pin X2-x**	**DTA-x-CA-x DTA-x-CR-x Cable C701-x**	**DTA-x-CA-x**	**DTA-xG8-x**
Shield	Housing	1	Shield	-	Shield
Secondary center tap	5	2	Gray	Gray	Gray
Secondary +	1	3	White	White	Black
Secondary -	2	4	Brown	Black	White
Primary +	3	5	Green	Green	Blue
Primary -	4	6	Yellow	Yellow	Brown



5-pin housing socket M9
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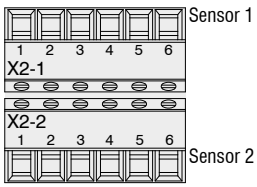

Pin assignment Sensors 1 & 2 (LDR)	Connector	Cable gland		
Assignment	**5-pin**	**Pin X2-x**	**LDR-x-CA**	**Cable C7210-x**
Shield	Housing	1	-	-
Secondary center tap	5	2	Green	Black
Secondary +	1	3	White	Brown
Secondary -	2	4	Brown	Blue
Primary +	3	5	-	-
Primary -	4	6	-	-

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