







# More Precision.

indu**SENSOR** // Linear inductive displacement sensors





-  **Ideal for serial applications in machine building and automation**
-  **High resolution and linearity**
-  **User-friendly set up and configuration via buttons or software**
-  **Multi-channel capability & synchronous operation**
- INTER FACE** **Analog (U/I) / RS485 / PROFINET / EtherNet/IP**

The MSC7602 controller is designed to be operated with measuring gauges and displacement sensors of the DTA (LVDT) and LDR (half-bridge sensors) series. 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.

Users can either choose the symmetrical adjustment around the zero point in order to make optimum use of the specific advantages of differential sensors, or teach in two almost arbitrary points within the measuring range. If desired, these settings can be made at the factory and documented with a manufacturer test certificate.

The controller is ideally suited to multi-channel applications. The bus connector on the rear side significantly reduces wiring effort. The controller can be easily set up via buttons/LEDs or software.



Easy "click-fit" installation with DIN rail

#### Long measurement chains with up to 64 subscribers/bus



Model	MSC7602	
Resolution <sup>1)</sup>	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 <sup>2)</sup> )	
Max. current consumption	80 mA	
Input impedance <sup>3)</sup>	> 100 kOhm	
Digital interface	RS485 / PROFINET <sup>4)</sup> / EtherNet/IP <sup>4)</sup>	
Analog output <sup>4)</sup>	(0)2 ... 10 V; 0.5 ... 4.5 V; 0 ... 5 V (R <sub>a</sub> > 1 kOhm) or 0(4) ... 20 mA (load < 500 ohm)	
Connection	Sensor: screw terminal AWG 16 to AWG 28 Supply/signal: screw terminal AWG 16 to AWG 28 Supply/Sync/RS485: DIN rail bus connector	
Mounting	DIN rail 35 mm	
Temperature range	Storage	-40 ... +85 °C
	Operation	-40 ... +85 °C
Shock (DIN EN 60068-2-27)	5 g / 6 ms in 6 axes, 1000 shocks each 15 g / 11 ms in 6 axes, 10 shocks	
Vibration (DIN EN 60068-2-6)	±2 mm / 10 ... 15.77 Hz in 3 axes, 10 cycles each ±2 g / 15.77 ... 2000 Hz in 3 axes, 10 cycles each	
Protection class (DIN EN 60529)	IP20	
Material	Polyamide	
Weight	approx. 120 g	
Compatibility	full-bridge sensor/LVDT (DTA series) and half-bridge sensor (LDR series)	
No. of measurement channels	2	

FSO = Full Scale Output

<sup>1)</sup> Noise: AC RMS measurement via RC low-pass filter of the 1st order with  $f_c = 5$  kHz

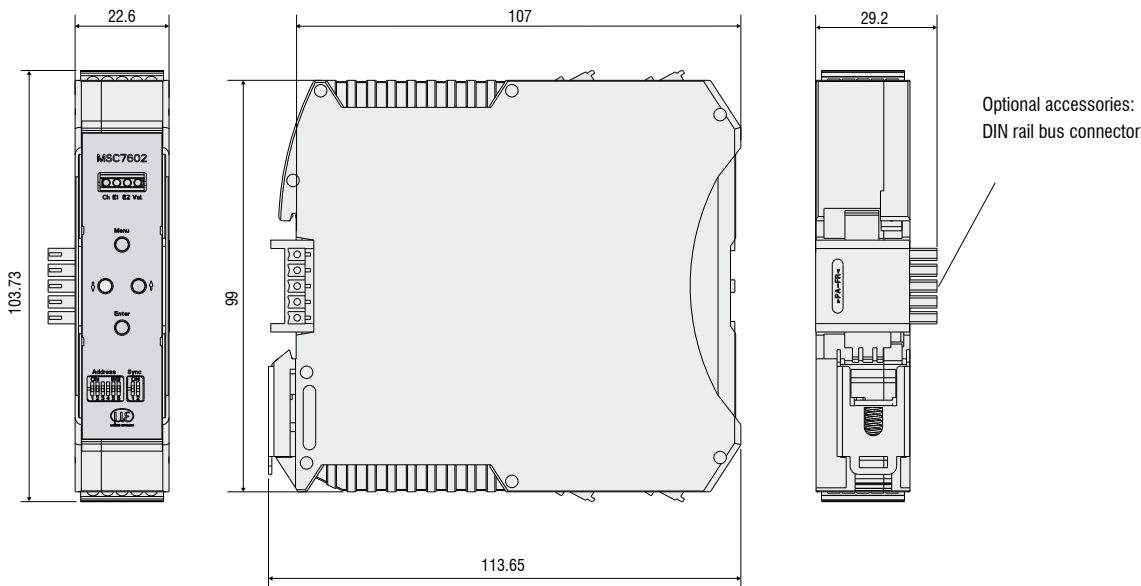
<sup>2)</sup> With technical restrictions of the output signal (load and signal span)

<sup>3)</sup> Sensor side

<sup>4)</sup> Connection via interface module (see accessories)

<sup>5)</sup>  $0 \text{ V} \triangleq < 30 \text{ mV}$ ,  $0 \text{ mA} \triangleq < 35 \mu\text{A}$ ; with controllers including a current output, the output signal is limited to approx. 21 mA

### MSC7602



Dimensions in mm, not to scale

**Accessories for MSC7401 / MSC7602 / MSC7802**

**Connection cables**

- PC7400-6/4     Supply and output cable, 6 m
- PC5/5-IWT     Supply and output cable, 5 m (only MSC7401 / MSC7802)
- IF7001         Single-channel USB/RS485 converter for MSC7xxx
- MSC7602 connector kit



MSC7602 connector kit

**Service**

Connection, adjustment and calibration including manufacturer certificate

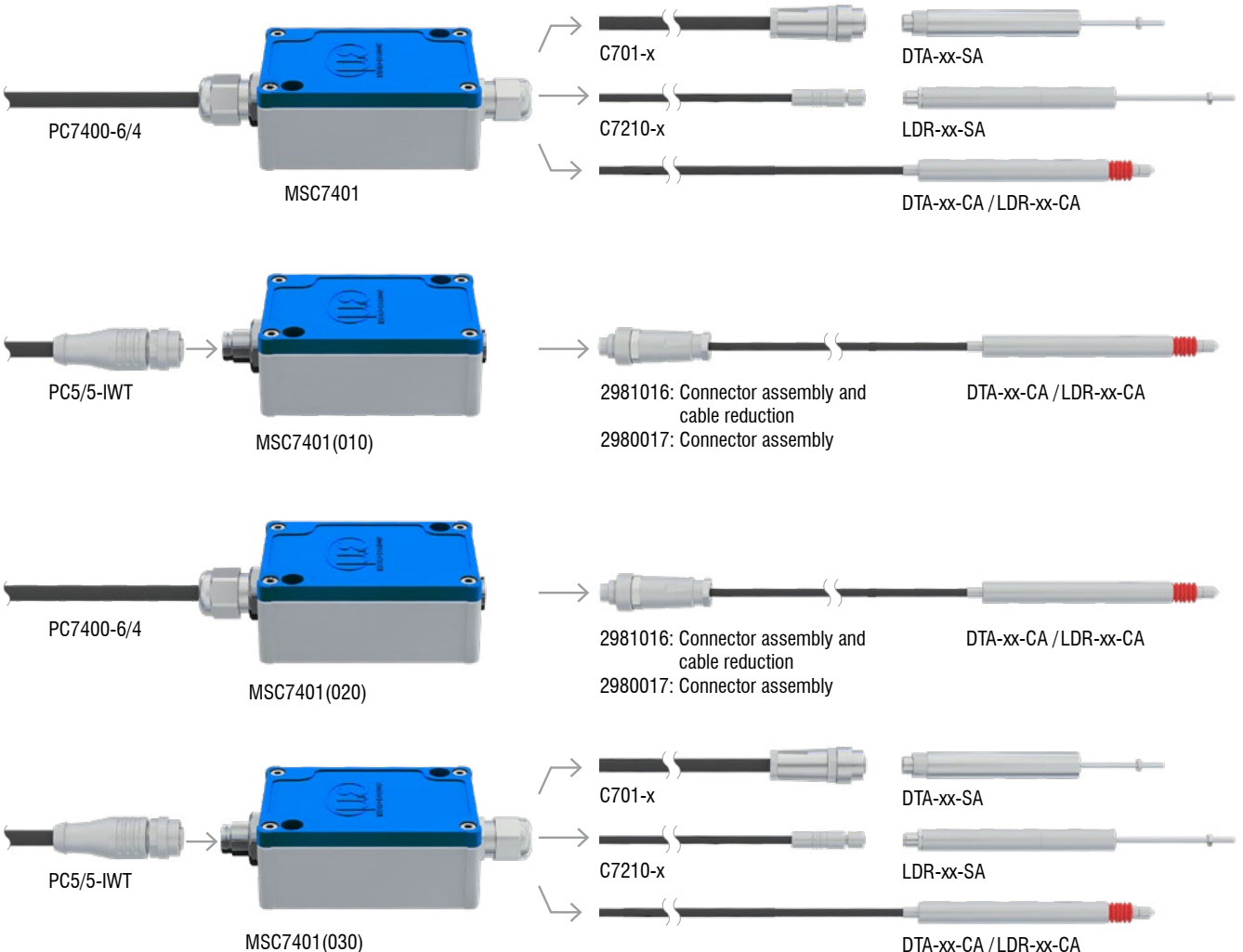
**Interface modules**

- IF2030/ENETIP     DIN rail interface module for Ethernet/IP (multi-channel)
- IF2030/PNET     DIN rail interface module for ProfiNet (multi-channel)
- IF1032/ETH     Interface module for Ethernet/EtherCAT (single channel) (only MSC7401 / MSC7802)

**Power supply units**

- PS2401/100-240/24V/1A     Universal power supply unit with open ends

**Connection options MSC7401**



## Sensors and Systems from Micro-Epsilon



Sensors and systems for displacement, distance and position



Sensors and measurement devices for non-contact temperature measurement



Measuring and inspection systems for metal strips, plastics and rubber



Optical micrometers and fiber optics, measuring and test amplifiers



Color recognition sensors, LED analyzers and inline color spectrometers



3D measurement technology for dimensional testing and surface inspection