MICRO-EPSILON

More Precision

induSENSOR // Linear inductive displacement sensors

Controller for inductive displacement sensors
induSENSOR MSC7602

- Ideal for serial applications in machine building and automation
- High resolution and linearity
- User-friendly parameter setting 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 wide 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. The bus connector on the rear side significantly reduces wiring effort. The controller can be easily set up via buttons/LEDs or software.

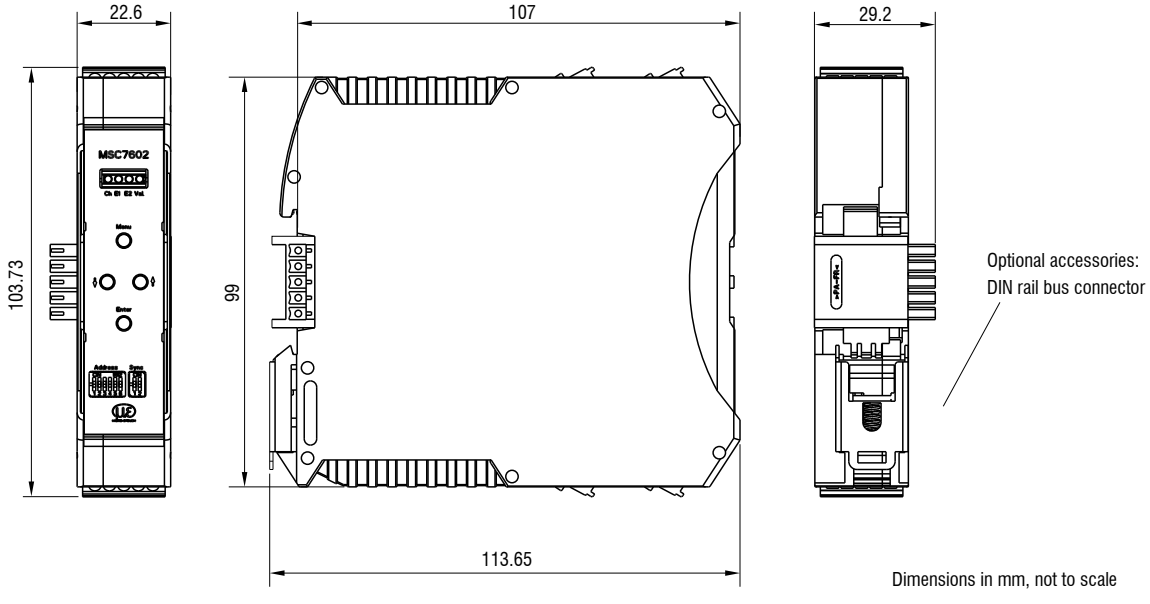
Users can either choose the symmetrical adjustment around the zero point in order to make optimum use of the specific advantages of differential sensors, or teach in two almost arbitrary points within the measuring range. If desired, these settings can be made at the factory and documented with a manufacturer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

Easy "click-fit" installation with DIN rail

Long measurement chains with up to 62 subscribers/bus

Model		MSC7602
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 [2]		14 … 30 VDC (5 … 30 VDC)
Max. current consumption		80 mA
Input impedance [3]		> 100 kOhm
Digital interface [4]		RS485 / PROFINET / EtherNet/IP
Analog output [3] [5]		(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 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

[1] Noise: AC RMS measurement via RC low-pass filter of the 1st order with fc = 5 kHz
[2] V+ = 5 V: no voltage output available; current output: max. load 100 Ω; V+ = 9 V: voltage output: 0.5 V ... 4.5 V or 0 V ... 5 V; current output: max. load 250 Ω
[3] Sensor side
[4] For PROFINET / EtherNet/IP / Ethernet / EtherCAT: Connection via interface module (see accessories)
[5] 0 V ≙ < 30 mV, 0 mA ≙ < 35 µA; for controllers with current output, the output signal is limited to approx. 21 mA



Dimensions in mm, not to scale

Accessories and connection possibilities
induSENSOR MSC

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

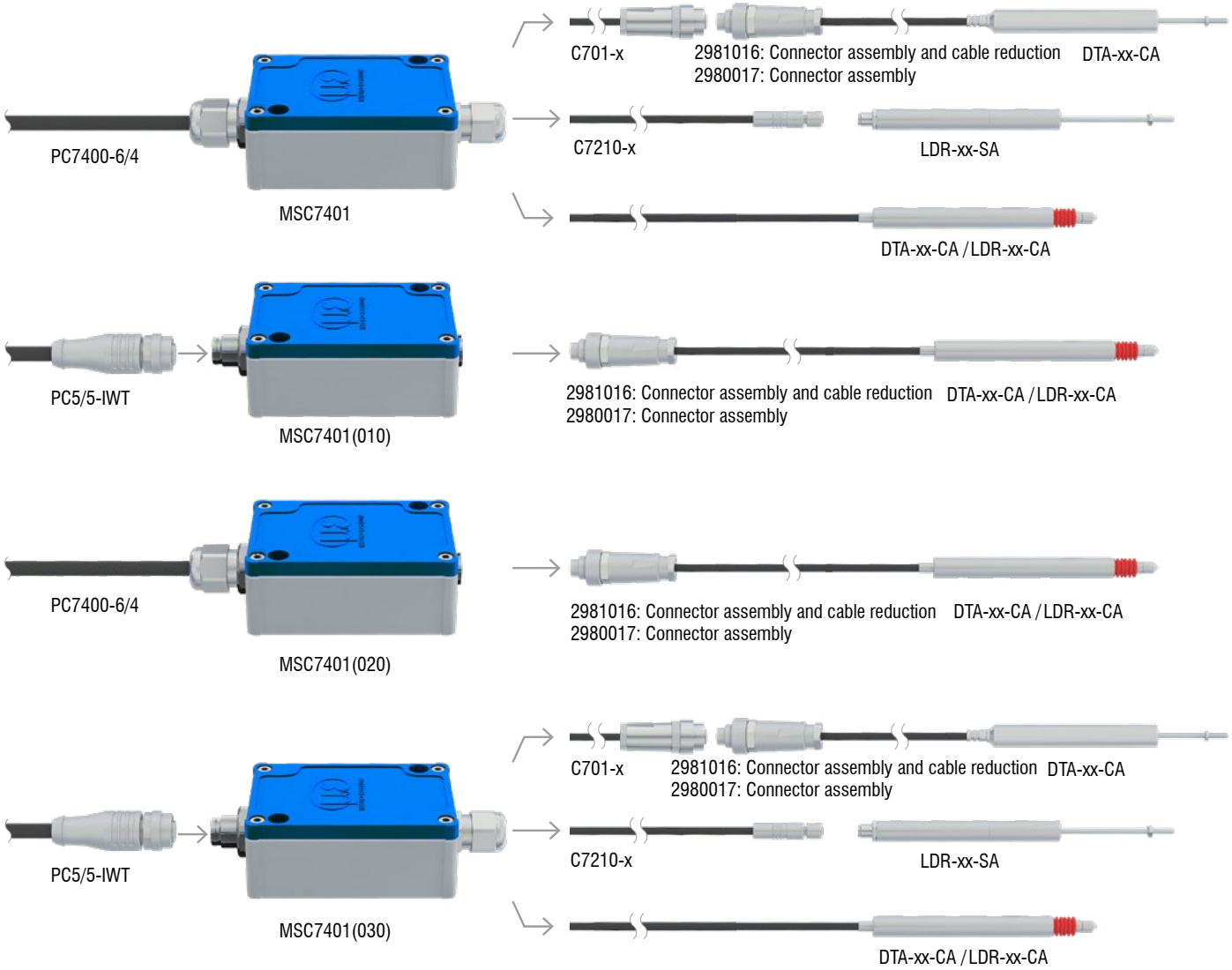
Interface modules

IF2035-EIP	DIN rail interface module for Ethernet/IP (multi-channel)
IF2035-PROFINET	DIN rail interface module for PROFINET (multi-channel)
IF2035-EtherCAT	DIN rail interface module for EtherCAT (multi-channel)
IF1032/ETH	Interface module for Ethernet/EtherCAT (single channel) (only MSC7401 / MSC7802)

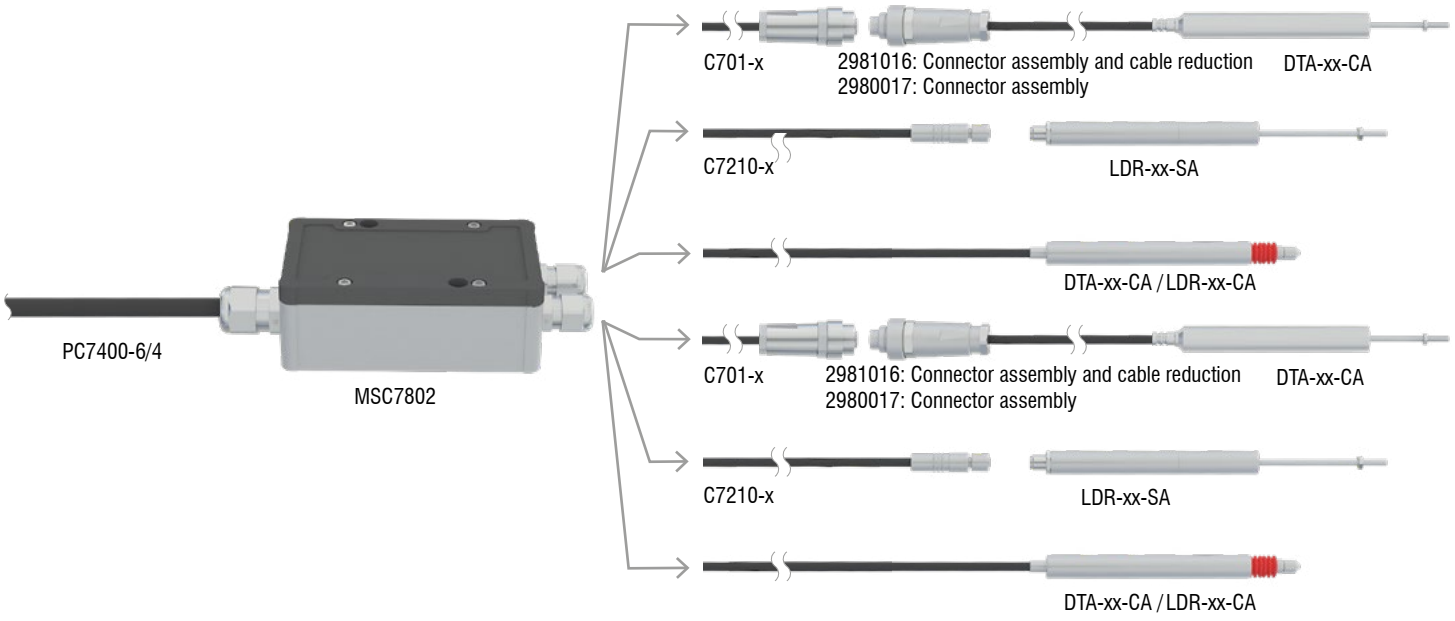
Power supply units

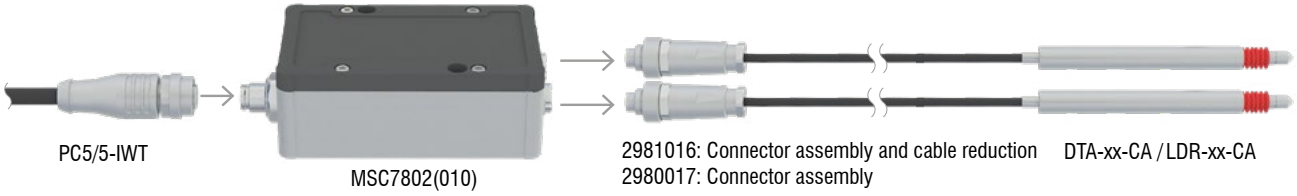
PS2401/100-240/24V/1A	Universal power supply unit with open ends

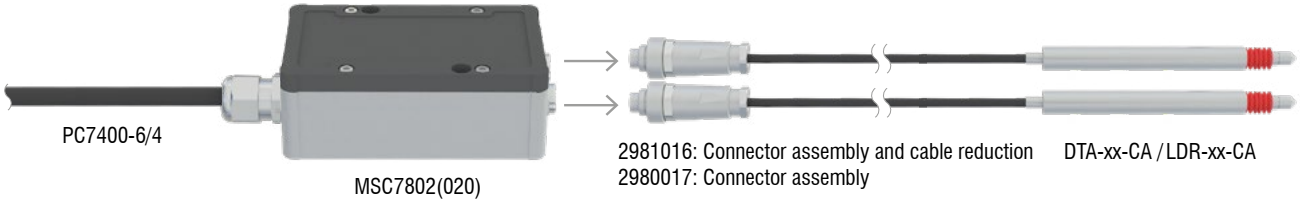
Connection options MSC7401

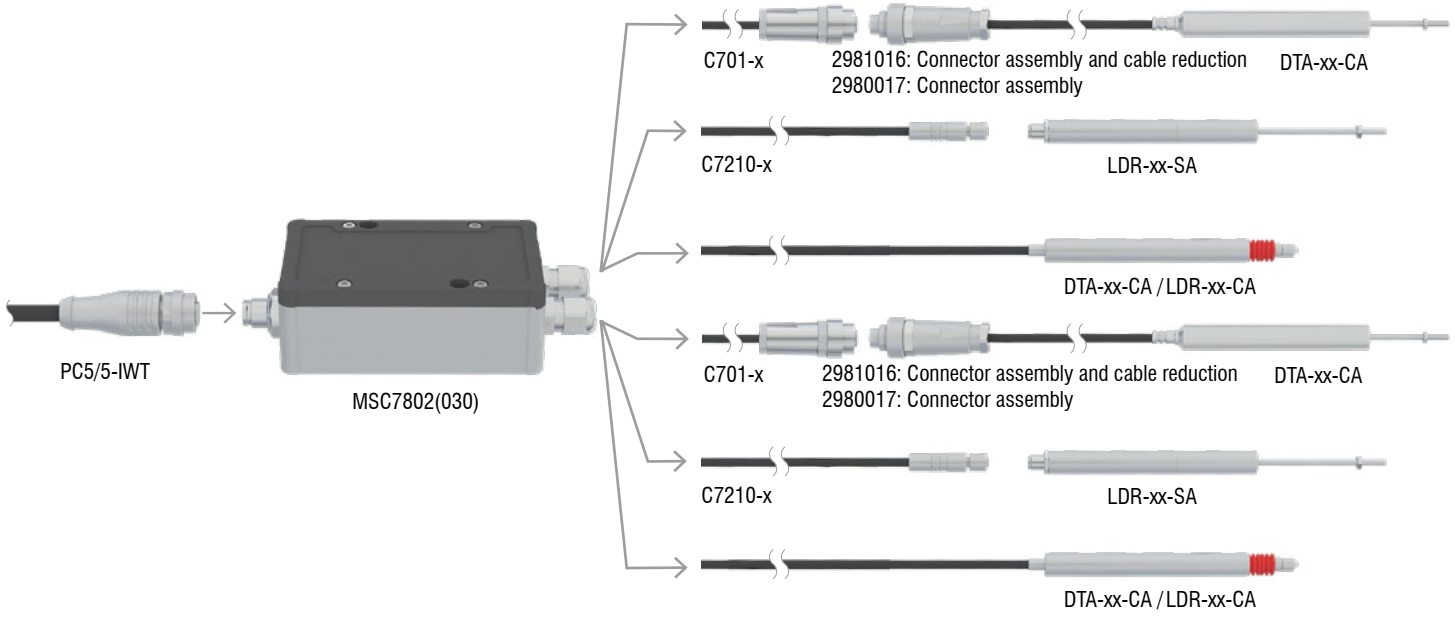


Connection options MSC7802





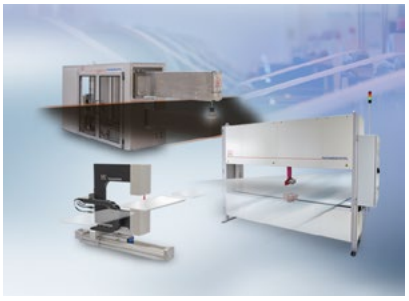




Sensors and Systems from Micro-Epsilon

Sensors and systems for displacement, distance and position

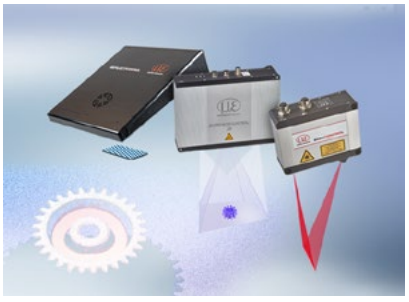
Sensors and measurement devices for non-contact temperature measurement



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

Modifications reserved / Y9766177-D022115GKE

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