



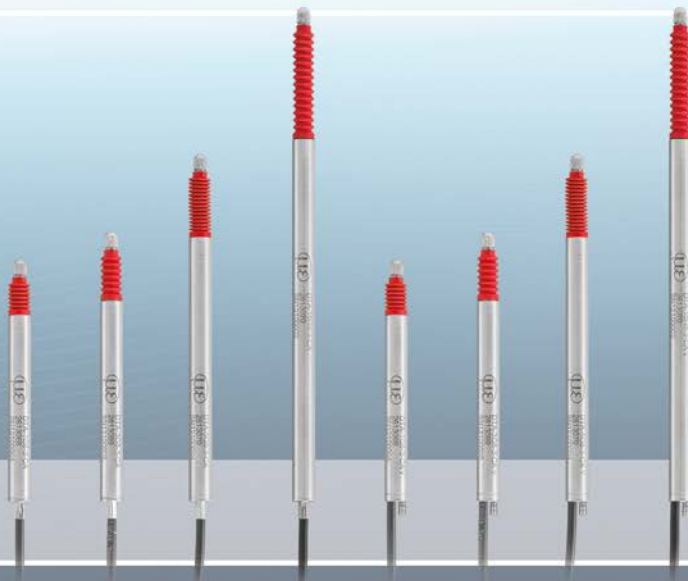
More Precision.

induSENSOR

Linear inductive displacement sensors



LVDT series - gauges with external controller



Proven LVDT technology
Measuring ranges $\pm 1 \dots \pm 10\text{mm}$
Excellent price/performance ratio, especially for high volume applications
Sensor diameter $\varnothing 8\text{mm}$
Version with pneumatic push

LVDT gauging sensors DTA-xG8 are primarily used for the measurement and inspection of work-piece geometry (length, width, diameter, thickness, depth, height). These new gauges are available in two basic versions: feather or pneumatic. The entire housing has a diameter of 8mm. All gauges include a cable that extends axially from the housing. Due to its special design, this series offers a very attractive price/performance ratio, especially for high volumes.

Article

DTA - 5 G8 - 3 - CA - V

Principle: differential transformer (LVDT) — points to '5'

Excitation AC — points to '5'

Measuring range \pm mm — points to '3'

Function: gauging sensor — points to 'G8'

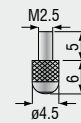
Linearity 3 ($\pm 0.3\%$) — points to '3'

Connection (axial): CA integral cable (3m) — points to 'CA'

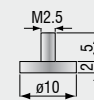
Gauging sensor option: V pneumatic push — points to 'V'

Probe tips

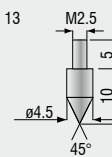
Standard: type 2



Option: type 11



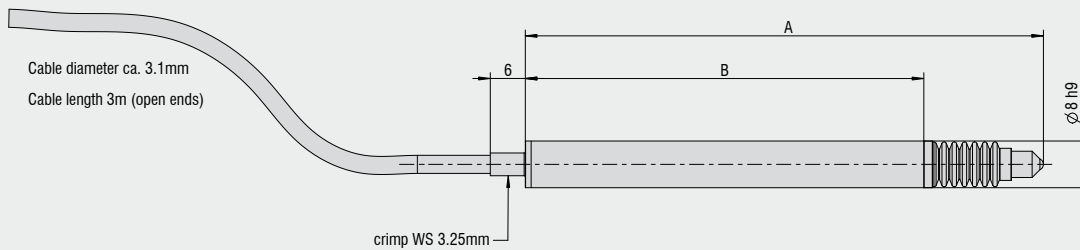
Option: type 13



Model	DTA-1G8	DTA-3G8	DTA-5G8	DTA-10G8	DTA-1G8-V	DTA-3G8-V	DTA-5G8-V	DTA-10G8-V
Measuring range	±1mm	±3mm	±5mm	±10mm	±1mm	±3mm	±5mm	±10mm
Linearity	0.3 % FSO							
Repeatability	0.15µm	0.45µm	0.75µm	1.5µm	0.15µm	0.45µm	0.75µm	1.5µm
Temperature stability	250ppm/°C							
Temperature range	-20...+80 °C (without bellows) / 0...+80 °C (with bellows)							
Diameter	8h9mm							
Sensor material	stainless steel / FPM							
Connection / pin connector	open ends							
Protection class sensor	IP65 (with bellows) / IP54 (without bellows)							
Cable output	axial							
Sensor cable length	3m							
Life cycle MTBF	5 million cycles							
Sensitivity	133 mV/mm/V	85 mV/mm/V	53 mV/mm/V	44 mV/mm/V	133 mV/mm/V	85 mV/mm/V	53 mV/mm/V	44 mV/mm/V
Electronics	MSC710 (page 8 - 9)							

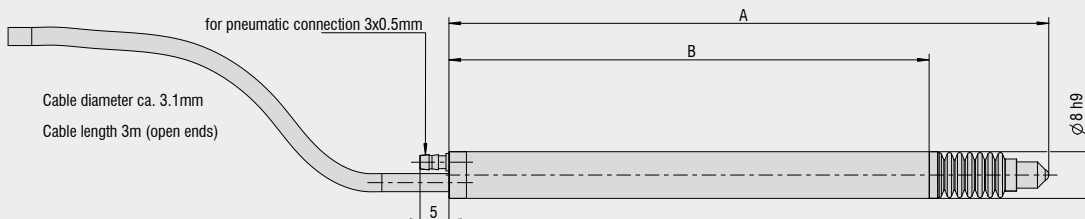
FSO = Full Scale Output

DTA-xG8-3-CA



Model	A (zero position)	B
DTA-1G8-3-CA	83mm	64.3mm
DTA-3G8-3-CA	89mm	68.3mm
DTA-5G8-3-CA	118mm	89.5mm
DTA-10G8-3-CA	155mm	121.7mm

DTA-xG8-3-CA-V



Model	A (zero position)	B
DTA-1G8-3-CA-V	95mm	76.3mm
DTA-3G8-3-CA-V	103mm	82.3mm
DTA-5G8-3-CA-V	134mm	105.3mm
DTA-10G8-3-CA-V	170.8mm	137.3mm

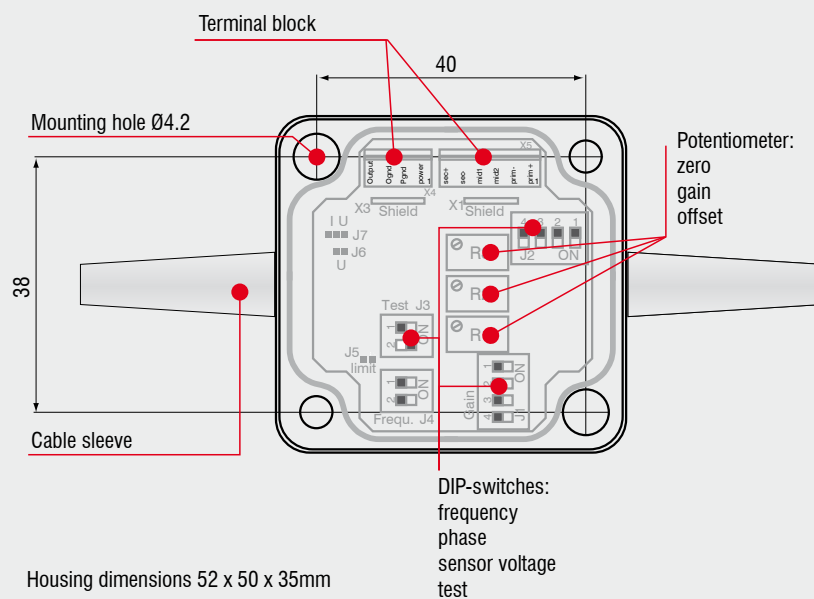
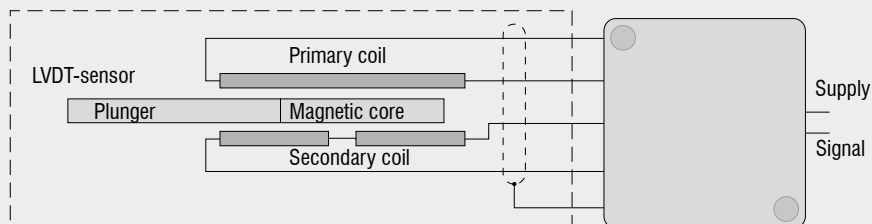
MSC710 Sensor controller for LVDT series



Excellent linearity and resolution
Zero and gain adjustable coarse/fine
Excitation frequency 1 ... 10kHz (selectable)
Compact and robust EMI-proofed housing

The MSC710 is a single-channel miniature sensor controller for the operation of inductive displacement sensors based on the LVDT principle (Linear Variable Differential Transformer). Its compact, but rugged design, makes it suitable for both industrial and laboratory applications.

Easily accessible and simple to operate, by using DIP-switches. The electronic unit can be matched to a wide range of sensors.



Model	MSC710-U	MSC710-I
Power supply	18 ... 30 VDC (18 ... 45mA)	
Protection	Reverse polarity protection, overvoltage protection	
Sensor principle	for LVDT sensors	
Sensor excitation	150 ... 400mV 1/2/5kHz (selectable by DIP-switches)	
Input impedance	sensor	10kOhm
Range	gain	-20 ... +350% (trimpot)
	zero	±50% (trimpot)
Output signal	2 ... 10 VDC ($R_a > 1k\Omega$)	4 ... 20mA (load <500Ohm)
Noise	$< 1.5mV_{eff}^*$ $< 15mV_{ss}$	$< 3\mu A_{eff}^*$ $< 30\mu A_{ss}$
Linearity	<0.02% FSO	
Frequency response	300Hz (-3dB)	
Temperature range	storage	-40°C ... +85°C
	operating	0°C ... +70°C
Temperature stability	±100ppm / °C	
Protection class	IP 65	
Weight	80g	
Housing material	ABS-plastic	
Electromagnetic compatibility (EMC)	EN 61326-1:2006 (spurious emission)	
	EN 61326-2-3:2006 (immunity to interference)	
Vibration	EN 60068-2-64 (noise)	
Shock	EN 60068-2-29 (continuous shock)	

FSO = Full Scale Output

* RMS AC-Measuring, Frequency 3 Hz ... 300 Hz

Accessories for VIP, LVP, LDR, EDS and LVDT series

Accessories

2960031	MC25D	digital micrometer calibration fixture
2420062	PS2020	power supply on DIN rail, input 100 - 240VAC, output 24VDC / 2.5A
2984026	certificate	function and linearity inspection certificate incl. protocol with listed measurement data of the linearity inspection and documentation



Linearity inspection certificate

Accessories VIP and LVP series

Connection cable

0157043	C703-5	VIP/LVP/EDS 7-pin connection cable, 5m
2902084	C703-5/U	VIP/LVP/EDS 7-pin connection cable, 5m for voltage output 1 - 5V
0157050	C703/90-5	VIP/LVP/EDS-7-pin connection cable, 5m with 90° cable connector
2962001	MBS 12/8	mounting set for VIP series with 3 mounting blocks and 2 adapting rings
0487087	MBS 12/8	mounting block VIP/LVP series

Plunger

0800114	LVP-50	plunger
0800115	LVP-100	plunger
0800116	LVP-200	plunger

Accessories LDR series

Connection cable

0157047	C7210-5/3	sensor cable, 5m, with cable connector
0157048	C7210/90-5/3	sensor cable, 5m, with 90° cable connector

Supply cable

2901087	PC710-6/4	supply/output cable, 6m
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Plunger

0800136	LDR-10	plunger
0800137	LDR-25	plunger
0800138	LDR-50	plunger

Accessories EDS series

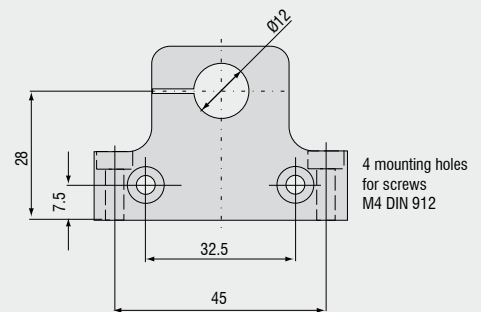
Service

2985001		Function and linearity inspection for EDS series incl. pressure inspection and documentation without recalibration
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Connection cable

0157043	C703-5	VIP/LVP/EDS 7-pin connection cable for S series, 5m
2902084	C703-5/U	VIP/LVP/EDS 7-pin connection cable for S series, 5m for voltage output 1 - 5V
0157050	C703/90-5	VIP/LVP/EDS 7-pin connection cable for S series, 5m with 90° cable connector
2901143	C705-5	VIP/LVP/EDS -pin connection cable for F series, 5m
2901160	C705-15	VIP/LVP/EDS -pin connection cable for F series, 15m

Mounting block VIP and LVP series



Accessories **LVDT series**

Sensor cable

2902004	C701-3	sensor cable 3m, with connector and tin-plated free ends
2902013	C701-6	sensor cable, 6m, with connector and tin-plated free ends
2902009	C701/90-3	sensor cable, 3m, with 90° connector and tin-plated free ends
2966002		MSC710 connector set for supply/output cable
2981010		connector mounting and calibration of MSC710

Connection cable

2901087	PC710-6/4	supply/output cable, 6 m
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Plunger

0800001	DTA-1D	plunger
0800002	DTA-3D	plunger
0800003	DTA-5D	plunger
0800004	DTA-10D	plunger
0800005	DTA-15D	plunger
0800006	DTA-25D	plunger

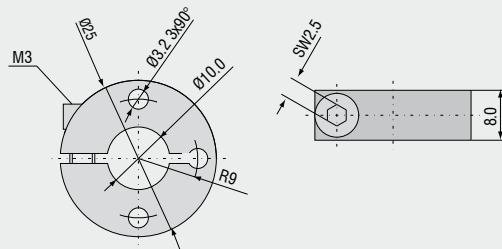
Flange

0483090.01	DTA-F10	mounting flange, slotted for DTA-1D, DTA-3D, DTA-5D, DTA-10D
0483083.02	DTA-F20	mounting flange, slotted for DTA-15D, DTA-25D

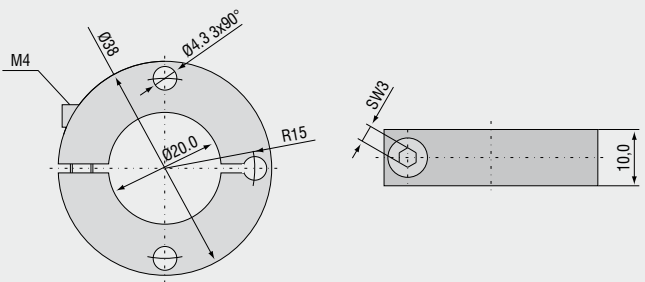
Probe tips

0459002	type 2
0459001	type 2 hard metall
0459003	type 11
0459004	type 13

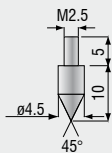
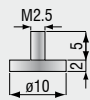
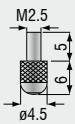
Flange DTA-F10



Flange DTA-F20



Standard probe tip: type 2 Option: type 11 Option: type 13



High performance sensors made by Micro-Epsilon



Sensors and systems for displacement and position



Sensors and measurement devices for non-contact temperature measurement



2D/3D profile sensors (laser scanner)



Measurement and inspection systems for quality assurance



Optical micrometers, fibre optic sensors and fiber optics



Colour recognition sensors, LED analyzers and colour online spectrometer