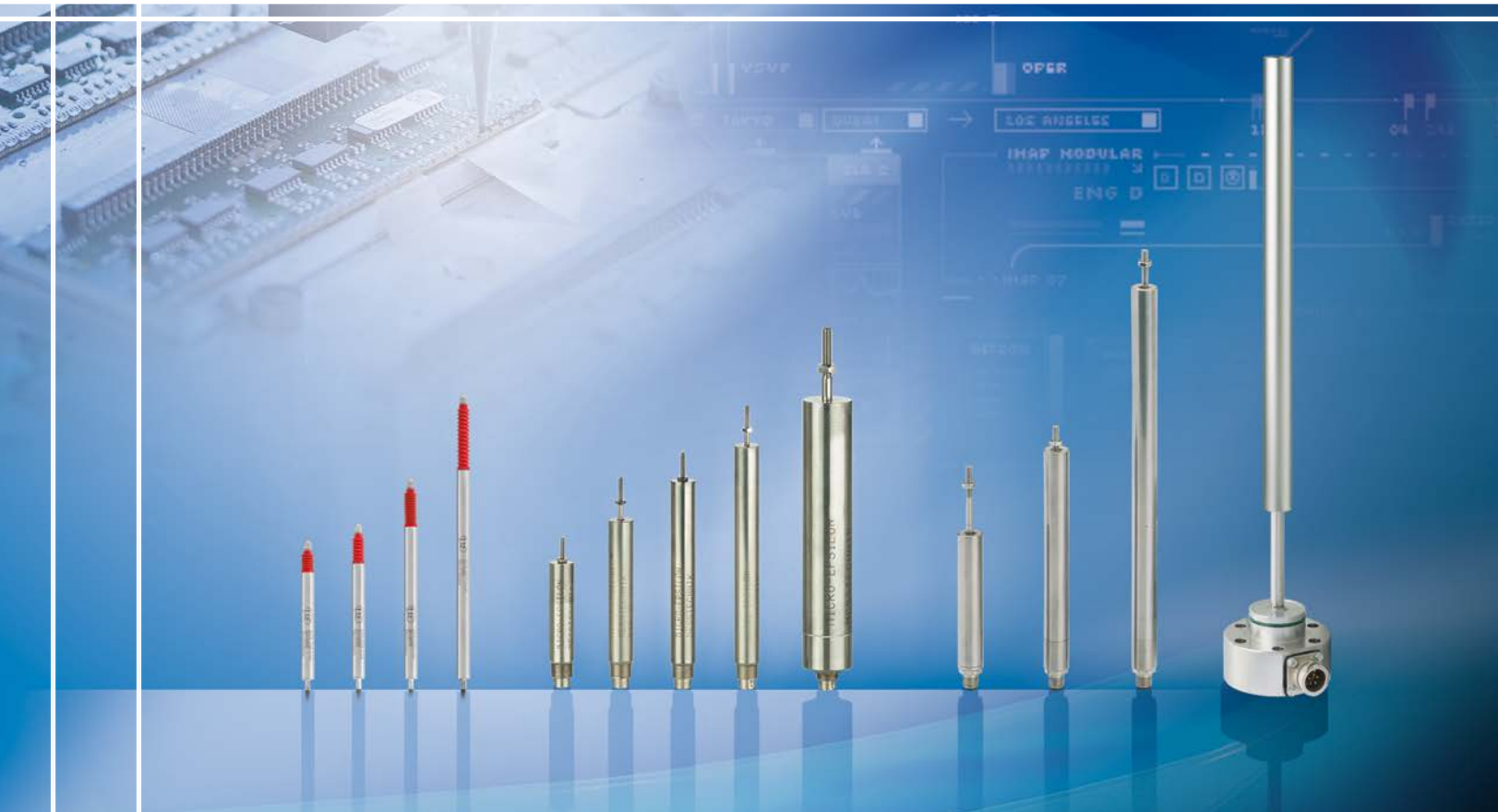




More Precision

induSENSOR // Linear inductive displacement sensors





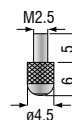
- Proven LVDT technology
- Measuring ranges $\pm 1 \dots \pm 10\text{mm}$
- Excellent price/performance ratio, especially for high volume applications
- Sensor diameter $\varnothing 8\text{mm}$
- Version with pneumatic push

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.

Probe tips

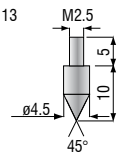
Standard: type 2



Option: type 11



Option: type 13



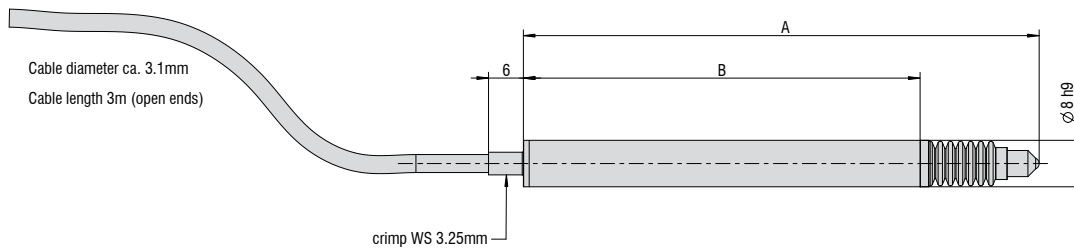
Article

| DT | A- | 5- | G8- | 3- | CA- | V |
|----|----|----|-----|----|-----|---|
| | | | | | | Gauging sensor option: pneumatic push |
| | | | | | | Connection (axial): CA integral cable (3m) |
| | | | | | | Linearity: 3 ($\pm 0.3\%$) |
| | | | | | | Function: gauging sensor |
| | | | | | | Measuring range \pm mm |
| | | | | | | Excitation AC |
| | | | | | | Principle: differential transformer (LVDT) |

| 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) | | | | | | | |

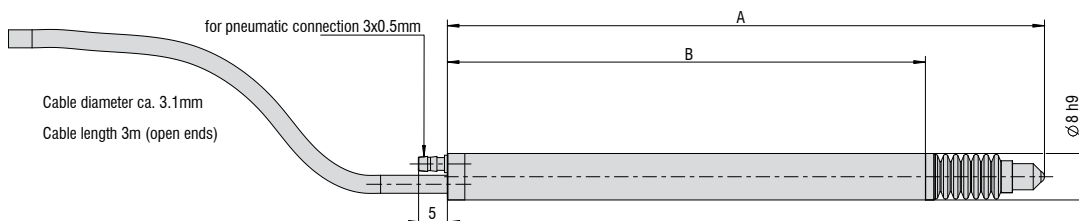
FSO = Full Scale Output

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 |

| 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} * | < 3μA _{eff} * |
| | | < 15mV _{ss} | < 30μA _{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

General 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 |

AccessoriesLDR 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 |
|---------|-----------|-------------------------|

Plunger

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

AccessoriesEDS series**Service**

| | | |
|---------|--|---|
| 2985001 | | Function and linearity inspection for EDS series incl. pressure inspection and documentation without recalibration |
|---------|--|---|

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 |



Linearity inspection certificate

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 |
|---------|-----------|--------------------------|

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 |

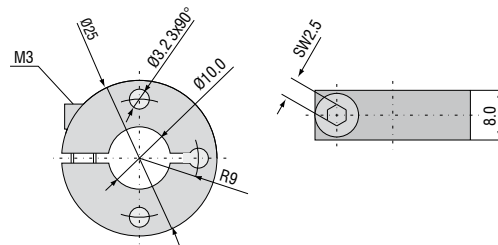
Flange

| | | |
|------------|---------|--|
| 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 |

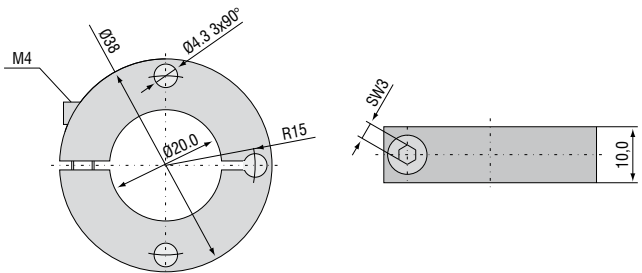
Probe tips

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

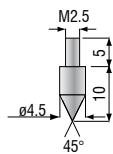
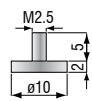
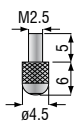
Flange DTA-F10



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)



Optical micrometers, fiber optic sensors and fiber optics



Color recognition sensors, LED analyzers and color online spectrometer



Measurement and inspection systems