

# POSITION SENSORS

We are a leading manufacturer of industrial linear and angular position, tilt and fluid level sensors. Both off-the-shelf and custom position sensing solutions are available featuring our core technologies, including inductive, potentiometric, magnetoresistive, hall effect, reed switch, electrolytic and capacitive sensing. Sophisticated designs and manufacturing techniques provide reliable and cost effective solutions for a broad range of harsh applications such as automotive, power generation, subsea, hydraulics, medical, HVACR, process controls, factory automation, security systems, military/aerospace and nuclear. TE position sensors are available with analog and digital outputs. Our comprehensive range of signal conditioning instrumentation enables us to meet the specific needs of OEMs and end users.



## ANISOTROPIC MAGNETORESISTIVE (AMR) SENSOR COMPONENTS

Magnetoresistive (MR)



### MEAS KMY, KMZ

Package	SOT-223, E-line 4 pin
Type	Linear low field sensor
Range	-2 to 2 kA/m magnetic field
Unique Features	<ul style="list-style-type: none"> <li>• High sensitivity</li> <li>• Low hysteresis</li> <li>• Linear to uniaxial field strength</li> </ul>
Output	Ratiometric with output voltage range 20 mV/V
Resolution	Typ. 0.1% of range
Accuracy	Typ. 1.0% of range
Operating Temp.	-40°C to 150°C
Dimensions (mm)	SOT: 6.6 x 7.0 x 1.6 E-line: 16 x 4.2 x 2.4
Typical Applications	Non-destructive material testing, spray arm detection in dish washers, magnetic imaging, brake pedal position



### MEAS MS32

Package	TDFN
Type	Low field switch sensor
Range	1 to 3 kA/m magnetic switching field
Unique Features	<ul style="list-style-type: none"> <li>• Linearized ratiometric output</li> <li>• Temperature compensated switching point</li> </ul>
Output	Ratiometric with output voltage range 10 mV/V
Resolution	Typ. 0.1 kA/m
Accuracy	Typ. 0.1 kA/m
Operating Temp.	-25°C to 85°C
Dimensions (mm)	TDFN: 2.5 x 2.5 x 0.8
Typical Applications	Piston position switch, reed switch replacement



### MEAS KMT32B, KMT37

Package	TDFN, SO-8
Type	Angle sensor
Range	180° angle
Unique Features	<ul style="list-style-type: none"> <li>• High accuracy</li> <li>• High resolution</li> </ul>
Output	Sine and cosine signals with output voltage range 20 mV/V
Resolution	Typ. 0.01° to 0.1°
Accuracy	Typ. 0.1° to 1.0°
Operating Temp.	-40°C to 150°C (175°C on request)
Dimensions (mm)	TDFN: 2.5 x 2.5 x 0.8 SO-8: 5 x 4 x 1.75
Typical Applications	Steering position, flow meters, rpm meters, rotary encoders



### MEAS KMT36H

Package	TDFN 2.5 x 2.5
Type	Angle sensor
Range	360° angle
Unique Features	<ul style="list-style-type: none"> <li>• High accuracy</li> <li>• High resolution</li> <li>• 360° full turn</li> </ul>
Output	Three 120° phase shifted output signals with output voltage range 20 mV/V
Resolution	Typ. 0.01° to 0.1°
Accuracy	Typ. 0.1° to 1°
Operating Temp.	-40°C to 150°C
Dimensions (mm)	TDFN: 2.5 x 2.5 x 0.8
Typical Applications	Steering position, gage readings, rotary encoders



### MEAS KMX Series

Package	DFN 2 x 6
Type	Linear displacement sensor
Range	Absolute within pole pitch, else incremental
Unique Features	<ul style="list-style-type: none"> <li>• For pole pitch</li> <li>• KMX 1000: p= 1 mm</li> <li>• KMX 2000: p= 2 mm</li> <li>• KMX 5000: p= 5 mm</li> </ul>
Output	Sine and cosine signals with output voltage range 20 mV/V
Resolution	0.01% to 0.1% of pole pitch
Accuracy	0.1% to 1.0% of pole pitch
Operating Temp.	-40°C to 125°C
Dimensions (mm)	DFN: 2 x 6 x 0.8
Typical Applications	Roller conveyors, circular saws, bending machines etc.



### MEAS KMA36

Package	TSSOP
Type	Angle sensor
Range	360° angle
Unique Features	<ul style="list-style-type: none"> <li>• Low cost MR encoder for rotational and incremental measurements</li> </ul>
Output	Voltage 0 - 5 V, I <sup>2</sup> C, customer specific
Resolution	Typ. 0.1°
Accuracy	Typ. 0.3°
Operating Temp.	-25°C to 85°C
Dimensions (mm)	TSSOP20: 6.5 x 6.4 x 1.2
Typical Applications	Knobs, small robotics, angular / linear position

## ANGULAR POSITION TRANSDUCERS—INDUCTIVE

Absolute



### MEAS RVIT-Z

<b>Package</b>	PCB for OEM volumes
<b>Resolution</b>	Infinite
<b>Excitation</b>	DC voltage
<b>Output</b>	DC voltage, DC current, digital
<b>Range</b>	Up to $\pm 75^\circ$
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Absolute position</li> </ul>
<b>Operating Temp.</b>	-25°C to 85°C
<b>Dimensions (mm)</b>	Custom
<b>Typical Applications</b>	Viscometers, valve position, robotics, HVACR vane position, ATM's, joysticks



### MEAS R60D

<b>Package</b>	Servo mount with ball bearing
<b>Resolution</b>	Infinite
<b>Excitation</b>	DC symmetrical $\pm 15$ VDC
<b>Output</b>	$\pm 7.5$ VDC
<b>Range</b>	$\pm 60^\circ$
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Absolute position</li> <li>• Low momentum of inertia</li> </ul>
<b>Operating Temp.</b>	-25°C to 85°C
<b>Dimensions (mm)</b>	Aluminum case size 11 ( $\varnothing 27$ mm)
<b>Typical Applications</b>	Dancer arm position, rotary actuator position feedback, throttle lever position feedback, ball valve position, textile manufacturing equipment, printing presses



### MEAS R30A

<b>Package</b>	Servo mount with ball bearing
<b>Resolution</b>	Infinite
<b>Excitation</b>	AC operated
<b>Output</b>	AC voltage
<b>Range</b>	$\pm 30^\circ$ to $\pm 60^\circ$
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Absolute position</li> </ul>
<b>Operating Temp.</b>	-55°C to 150°C
<b>Dimensions (mm)</b>	Aluminum case size 11 ( $\varnothing 27$ mm)
<b>Typical Applications</b>	Machine tool equipment, rotary actuator feedback, valve positioning, power generation valve position

## ANGULAR POSITION—ENCODERS

Absolute



### MEAS ED-18

<b>Package</b>	Medium duty with sleeve or ball bearing
<b>Resolution</b>	Analog $1.4^\circ$
<b>Max. Speed</b>	300 RPM (Sleeve bearing) 3000 RPM (Ball bearing)
<b>Excitation</b>	5 VDC
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Low profile</li> <li>• Excellent stability</li> <li>• No optical degradation</li> </ul>
<b>Output</b>	Voltage or current
<b>Range</b>	$360^\circ$
<b>Operating Temp.</b>	-40°C to 85°C
<b>Dimensions (mm)</b>	25.4 x 25.4 x 33.78
<b>Typical Applications</b>	Feedback sensor or human machine interface device, servomotor position and speed control



### MEAS ED-22

<b>Package</b>	Medium duty with sleeve bearing
<b>Resolution</b>	Analog $1.4^\circ$
<b>Max. Speed</b>	300 RPM
<b>Excitation</b>	5 VDC
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Encapsulated electronics, sealed unit</li> <li>• Highly resistant to vibration</li> <li>• No optical degradation</li> </ul>
<b>Output</b>	Voltage
<b>Range</b>	$270^\circ$
<b>Operating Temp.</b>	-40°C to 85°C
<b>Dimensions (mm)</b>	$\varnothing 19.1 \times 37.1$
<b>Typical Applications</b>	Low-cost, non-contact human machine interface potentiometer replacement



### MEAS R36

<b>Package</b>	Heavy duty shaftless
<b>Resolution</b>	Analog $1.4^\circ$
<b>Max. Speed</b>	—
<b>Excitation</b>	5 VDC
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Rugged housing</li> <li>• Shaftless</li> <li>• No optical degradation</li> </ul>
<b>Output</b>	Voltage
<b>Range</b>	$180^\circ$
<b>Operating Temp.</b>	-40°C to 85°C
<b>Dimensions (mm)</b>	37.36 x 25.4 x 7.62
<b>Typical Applications</b>	Feedback sensor or human machine interface device, rudder control, servomotor position and speed control

## ANGULAR POSITION—ENCODERS

Absolute



### MEAS H005, H009 Series

<b>Package</b>	<ul style="list-style-type: none"> <li>• 12.7 mm - 22.19 mm / .500 in - .875 in housing diameter</li> <li>• 3.170 mm / .1248 in shaft diameter</li> <li>• 16.9 mm - 17.4 mm / .670 in - .680 in housing length</li> </ul>
<b>Range</b>	Up to 359 degrees
<b>Output Options</b>	Analog / PWM / Serial
<b>Resolution</b>	12-bit analog / PWM 14-bit serial (SPI)
<b>Absolute Linearity</b>	±0.2%
<b>Nominal Supply</b>	5 volts
<b>Operating Temp.</b>	-40°C to 150°C
<b>Rotational Life</b>	> 100 million cycles (Bearing life)
<b>Typical Applications</b>	Critical position feedback applications in commercial, industrial, medical, aircraft and military markets



### MEAS H009, 1200 Series

Dual Output

<ul style="list-style-type: none"> <li>• 22.23 mm / .875 in housing diameter</li> <li>• 3.170 mm / .1248 in shaft diameter</li> <li>• 26.1 mm / 1.03 in housing length</li> </ul>	<ul style="list-style-type: none"> <li>• 22.23 mm / .875 in housing diameter</li> <li>• 3.170 mm / .1248 in shaft diameter</li> <li>• 26.1 mm / 1.03 in housing length</li> </ul>
<b>Range</b>	Up to 359 degrees (Dual output)
<b>Output Options</b>	Analog / PWM / Serial
<b>Resolution</b>	12-bit analog / PWM 14-bit serial (SPI)
<b>Absolute Linearity</b>	± 0.2% (Dual output)
<b>Nominal Supply</b>	5 volts (Dual output)
<b>Operating Temp.</b>	-40°C to 150°C
<b>Rotational Life</b>	> 100 million cycles (Bearing life)
<b>Typical Applications</b>	Critical position feedback applications in commercial, industrial, medical, aircraft and military markets

Incremental



### MEAS ED-19

<b>Package</b>	Medium duty with sleeve or ball bearing
<b>Resolution/Accuracy</b>	1024, 400, 256 CPR (Others on request)
<b>Max. Speed</b>	300 RPM (Sleeve bearing) 3000 RPM (Ball bearing)
<b>Excitation</b>	5 VDC
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Sleeve or ball bearing</li> <li>• No optical degradation</li> </ul>
<b>Output</b>	Quadrature (TTL level, open collector)
<b>Range</b>	360°
<b>Operating Temp.</b>	-40°C to 85°C
<b>Dimensions (mm)</b>	25.4 x 25.4 x 33.78
<b>Typical Applications</b>	Feedback sensor or human machine interface device, servo / stepper motor position and speed control



### MEAS ED-20

Medium duty with ball bearing	Medium duty with ball bearing
1024, 400, 256 CPR (Others on request)	1024, 400, 256 CPR (Others on request)
3000 RPM	3000 RPM
5 VDC (NPN and LVD), 12 - 32 VDC (HVD)	5 VDC (NPN and LVD), 12 - 32 VDC (HVD)
<ul style="list-style-type: none"> <li>• Resistant to contamination</li> <li>• Metallic threaded bushing mounting</li> <li>• No optical degradation</li> </ul>	<ul style="list-style-type: none"> <li>• Resistant to contamination</li> <li>• Metallic threaded bushing mounting</li> <li>• No optical degradation</li> </ul>
Quadrature (NPN, LVD and HVD)	Quadrature (NPN, LVD and HVD)
360°	360°
-40°C to 85°C	-40°C to 85°C
Ø31.75 x 33.24	Ø31.75 x 33.24
Feedback sensor or human machine interface device, servo / stepper motor position and speed control	Feedback sensor or human machine interface device, servo / stepper motor position and speed control

## TILT SENSORS

Single Axis



### MEAS E-Series

Package	Ceramic housing
Type	Inclination sensor module
Range	±5°, ±15°
Output	Voltage
Unique Features	<ul style="list-style-type: none"> <li>• Easy to handle</li> <li>• Minimal temperature drift</li> <li>• Good long term stability</li> </ul>
Accuracy	±0.2° to ±0.5°
Operating Temp.	-25°C to 85°C
Dimensions (mm)	29 x 17 x 16.5
Typical Applications	Road construction, building monitoring, weighing systems, mobile and stationary cranes, platform leveling



### MEAS AccuStar EA

Package	LCP housing
Type	Inclinometer sensor module
Range	±45° to ±60°
Output	Voltage
Unique Features	<ul style="list-style-type: none"> <li>• Compact</li> <li>• Low power</li> <li>• Vertical and horizontal mount</li> </ul>
Accuracy	0° to 10° ±0.1% accuracy 10° to 60° ±0.75% reading
Operating Temp.	-30°C to 65°C
Dimensions (mm)	65.91 x 51.56 x 30.5
Typical Applications	Wheel alignment, construction, equipment, antenna positioning, robotics, crane / boom angle



### MEAS APS System

Package	Plastic housing
Type	Inclination system
Range	±45°, ±90°
Output	Analog / digital
Unique Features	<ul style="list-style-type: none"> <li>• Stand alone system</li> <li>• Separate system and sensor</li> </ul>
Accuracy	0° to 10° ±0.1% accuracy 10° to 45° ±0.75% of reading
Operating Temp.	-25°C to 65°C
Dimensions (mm)	127.5 x 88 x 32.2
Typical Applications	Tower crane safety, RV and mobile trailer leveling, water and oil well drilling rigs, mining equipment



### MEAS G-Series

Package	Aluminum housing IP67
Type	Inclinometer
Range	±10°
Output	Switch
Unique Features	<ul style="list-style-type: none"> <li>• Programmable</li> <li>• EMC standard</li> <li>• High switch accuracy</li> </ul>
Accuracy	±0.25°
Operating Temp.	-25°C to 85°C
Dimensions (mm)	80 x 75 x 57.5
Typical Applications	Lift platforms, building device control, train inclination monitoring, position switch



### MEAS IT9000

Package	Aluminum or stainless
Type	Inclinometer
Range	±45° to ±240°
Output	Voltage divider, 4 - 20 mA
Unique Features	<ul style="list-style-type: none"> <li>• Rugged industrial design, IP67 / 68</li> <li>• Submersible</li> <li>• Designed for brutal environments</li> <li>• CSA, CENELEC certification for hazardous area applications</li> </ul>
Accuracy	±1%
Operating Temp.	-34°C to 90°C
Dimensions (mm)	Ø130 x 100
Typical Applications	Waste water control, tainter gates, draw bridges, heavy industrial applications



### MEAS AccuStar IP66

Package	Aluminum housing IP66
Type	Inclinometer
Range	±3° to ±45°
Output	Current
Unique Features	<ul style="list-style-type: none"> <li>• EMI and RFI rated</li> <li>• CE pending</li> <li>• Water tight enclosure</li> </ul>
Accuracy	0° to 10° ±0.1% linearity 10° to 45° ±1% linearity
Operating Temp.	-25°C to 60°C
Dimensions (mm)	98.04 x 63 x 35.05
Typical Applications	Tower crane safety, RV and mobile trailer leveling, water and oil well drilling rigs, mining equipment

## TILT SENSORS

Dual Axis



### MEAS DPL, DPN Series

<b>Package</b>	PCB board
<b>Type</b>	Inclination board module
<b>Range</b>	±2° to ±30°
<b>Output</b>	Voltage / RS 232 / SPI
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• High resolution</li> <li>• Minimal temperature drift</li> <li>• User configurable</li> </ul>
<b>Accuracy</b>	±0.05° to ±0.8°
<b>Operating Temp.</b>	-40°C to 85°C
<b>Dimensions (mm)</b>	45 x 45 x 20
<b>Typical Applications</b>	Laser leveling, weighing systems, mobile and stationary cranes, hydraulic leveling, building monitoring, wind power



### MEAS DOG2 Series

<b>Package</b>	Plastic PA 6.6 housing, IP67
<b>Type</b>	Inclinometer
<b>Range</b>	±25°, ±45°, ±90°
<b>Output</b>	Voltage / Current / J1939 / CANopen®
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Plug and play</li> <li>• Wide measurement range</li> <li>• Cost-efficient</li> <li>• Cable with connector</li> <li>• Fast MEMS sensor</li> </ul>
<b>Accuracy</b>	< ± 0.5° (Full temp. range)
<b>Operating Temp.</b>	-40°C to 85°C
<b>Dimensions (mm)</b>	70.5 x 45 x 15
<b>Typical Applications</b>	Off road vehicle, fork lift, truck leveling, man lift, harvester, farm machine, tip over protection, solar panel control



### MEAS DPG Series

<b>Package</b>	Aluminum housing IP67
<b>Type</b>	Inclinometer
<b>Range</b>	±5° to ±30°
<b>Output</b>	RS232 / Voltage
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• CE approved</li> <li>• Rugged housing</li> <li>• Easy to use</li> <li>• User configurable</li> </ul>
<b>Accuracy</b>	±0.05° to ±0.3°
<b>Operating Temp.</b>	-40°C to 85°C
<b>Dimensions (mm)</b>	84 x 70 x 34.2
<b>Typical Applications</b>	Platform leveling, road construction machines, tunnel drilling, mobile leveling



### MEAS D Series

<b>Package</b>	Aluminum housing IP67
<b>Type</b>	Inclinometer
<b>Range</b>	±5° to ±30°
<b>Output</b>	RS232 / Voltage / Current / Switch / PWM / CANopen®
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• High accuracy</li> <li>• Rugged housing</li> <li>• Programmable</li> <li>• CE approved</li> </ul>
<b>Accuracy</b>	±0.04° to ±0.8°
<b>Operating Temp.</b>	-40°C to 85°C
<b>Dimensions (mm)</b>	84 x 70 x 46
<b>Typical Applications</b>	Drilling machines, mobile and stationary cranes, wind power, antenna / radar leveling

## PROXIMITY SENSORS



### MEAS PS801

<b>Package</b>	Stainless steel
<b>Type</b>	<ul style="list-style-type: none"> <li>• Proximity sensor</li> <li>• Used with proximity magnet</li> </ul>
<b>Unique Features</b>	SPST reed switch, normally open
<b>Operating Temp.</b>	-30°C to 120°C
<b>Dimensions (mm)</b>	Ø12 x 65
<b>Typical Applications</b>	Door interlocks, hook switches, security systems, safety interlocks, position indication



### MEAS PS811

<b>Package</b>	Nylon 6.6
<b>Type</b>	<ul style="list-style-type: none"> <li>• Proximity sensor</li> <li>• Used with proximity magnet</li> </ul>
<b>Unique Features</b>	SPST reed switch, normally open
<b>Operating Temp.</b>	-30°C to 110°C
<b>Dimensions (mm)</b>	Ø10 x 38
<b>Typical Applications</b>	Door interlocks, hook switches, security systems, safety interlocks, position indication



### MEAS PS831

<b>Package</b>	Stainless steel
<b>Type</b>	<ul style="list-style-type: none"> <li>• Proximity sensor</li> <li>• Used with proximity magnet</li> </ul>
<b>Unique Features</b>	SPST reed switch, normally open
<b>Operating Temp.</b>	-30°C to 130°C
<b>Dimensions (mm)</b>	Ø12 x 32
<b>Typical Applications</b>	Door interlocks, hook switches, security systems, safety interlocks, position indication



### MEAS PS2011AB

<b>Package</b>	Glass filled nylon 6.6
<b>Type</b>	<ul style="list-style-type: none"> <li>• Proximity sensor</li> <li>• Used with proximity magnet</li> </ul>
<b>Unique Features</b>	SPST reed switch, normally open
<b>Operating Temp.</b>	-30°C to 105°C
<b>Dimensions (mm)</b>	29 x 7 x 20
<b>Typical Applications</b>	Door interlocks, hook switches, security systems, safety interlocks, position indication



### MEAS PS2021AB

<b>Package</b>	Glass filled nylon 6.6
<b>Type</b>	<ul style="list-style-type: none"> <li>• Proximity sensor</li> <li>• Used with proximity magnet</li> </ul>
<b>Unique Features</b>	SPST reed switch, normally closed
<b>Operating Temp.</b>	-30°C to 105°C
<b>Dimensions (mm)</b>	29 x 7 x 20
<b>Typical Applications</b>	Door interlocks, hook switches, security systems, safety interlocks, position indication



### MEAS PS2031AB

<b>Package</b>	Glass filled nylon 6.6
<b>Type</b>	<ul style="list-style-type: none"> <li>• Proximity sensor</li> <li>• Used with proximity magnet</li> </ul>
<b>Unique Features</b>	SPDT reed switch
<b>Operating Temp.</b>	-30°C to 105°C
<b>Dimensions (mm)</b>	29 x 7 x 20
<b>Typical Applications</b>	Door interlocks, hook switches, security systems, safety interlocks, position indication



### MEAS PS501

<b>Package</b>	Glass filled nylon 6.6
<b>Type</b>	<ul style="list-style-type: none"> <li>• Proximity sensor</li> <li>• Used with proximity magnet</li> </ul>
<b>Unique Features</b>	SPST reed switch, normally open
<b>Operating Temp.</b>	-30°C to 130°C
<b>Dimensions (mm)</b>	Ø6 x 32
<b>Typical Applications</b>	Door interlocks, hook switches, security systems, safety interlocks, position indication

## PROXIMITY MAGNET



**MEAS PM101**



**MEAS PM50**



**MEAS PM81**



**MEAS PM83**

<b>Package</b>	Glass filled nylon 6.6	Glass filled nylon 6.6	Nylon 6.6	Stainless steel
<b>Type</b>	<ul style="list-style-type: none"> <li>• Proximity magnet</li> <li>• Used with proximity sensor</li> </ul>	<ul style="list-style-type: none"> <li>• Proximity magnet</li> <li>• Used with proximity sensor</li> </ul>	<ul style="list-style-type: none"> <li>• Proximity magnet</li> <li>• Used with proximity sensor</li> </ul>	<ul style="list-style-type: none"> <li>• Proximity magnet</li> <li>• Used with proximity sensor</li> </ul>
<b>Unique Features</b>	Housed magnet	Housed magnet	Housed magnet	Housed magnet
<b>Operating Temp.</b>	-30°C to 105°C	-30°C to 70°C	-30°C to 120°C	-30°C to 120°C
<b>Dimensions (mm)</b>	29 x 7 x 20	Ø6 x 32	Ø10 x 38	Ø12 x 32
<b>Typical Applications</b>	Door interlocks, hook switches, security systems, safety interlocks, position indication	Door interlocks, hook switches, security systems, safety interlocks, position indication	Door interlocks, hook switches, security systems, safety interlocks, position indication	Door interlocks, hook switches, security systems, safety interlocks, position indication

## LINEAR POSITION TRANSDUCERS

### Cable Extension Transducers



**MEAS PT1, PT5**



**MEAS PT8000**



**MEAS PT9000**

<b>Range</b>	0 - 2 to 0 - 250 inches	0 - 2 to 0 - 60 inches	0 - 75 to 0 - 1700 inches
<b>Output</b>	Voltage divider, 0 - 5 VDC, 0 - 10 VDC, 4 - 20 mA, incremental encoder, CANbus, DeviceNet™, RS-232	Voltage divider, 0 - 5 VDC, 0 - 10 VDC, 4 - 20 mA, incremental / absolute encoder, CANbus, DeviceNet™, RS-232	Voltage divider, 0 - 5 VDC, 0 - 10 VDC, 4 - 20 mA, incremental / absolute encoder, CANbus, DeviceNet™, RS-232
<b>IP Rating</b>	IP65, IP67 (PT5)	IP67, IP68	IP67, IP68
<b>Enclosure</b>	Aluminum and abs plastic (PT1)	Aluminum or stainless	Aluminum or stainless
<b>Accuracy</b>	±0.04% to ±0.25%	±0.04% to ±0.25%	±0.04% to ±0.25%
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Designed for most factory environments</li> <li>• Industry standard output signals</li> <li>• User serviceable</li> <li>• Compact design (PT1)</li> </ul>	<ul style="list-style-type: none"> <li>• Heavy duty, submersible</li> <li>• Designed for extreme industrial and marine environments</li> <li>• CSA, CENELEC certification for hazardous area applications</li> <li>• High accuracy, high acceleration</li> <li>• Free-release proof with VLS option</li> <li>• M12 and DEUTSCH connector options</li> </ul>	<ul style="list-style-type: none"> <li>• Heavy duty, submersible</li> <li>• Proven workhorse for long stroke applications</li> <li>• Designed for extreme industrial and marine environments</li> <li>• CSA, CENELEC certification for hazardous area applications</li> <li>• Free-release proof with VLS option</li> <li>• M12 and DEUTSCH connector options</li> </ul>
<b>Operating Temp.</b>	-40°C to 90°C	-40°C to 90°C	-40°C to 90°C
<b>Dimensions (mm)</b>	85 x 100 x 70 (PT1) 100 x 175 x 80 (PT5)	90 x 140 x 135	200 x 135 x 125
<b>Typical Applications</b>	Factory automation, industrial, die casting, injection molding	Steel mills, lumber and paper mills, factory automation, die-casting, injection molding, mobile construction and mining	Mobile hydraulic boom position, water resource management, mining and tunnel boring equipment, telescoping mechanism position, theatre stage control

## LINEAR POSITION TRANSDUCERS

### Cable Extension Transducers



#### MEAS M150, MTA

Range	0 - 1.5 to 0 - 5 inches
Output	Voltage divider
Environment / IP Rating	IP50
Enclosure	Aluminum
Accuracy	±0.4% to ±1%
Unique Features	<ul style="list-style-type: none"> <li>• M150: one of the world's smallest stringpots</li> <li>• Designed for space-critical and testing applications</li> </ul>
Operating Temp.	-40°C to 85°C (M150) -55°C to 100°C (MTA)
Dimensions (mm)	19 x 19 x 10 (M150)
Typical Applications	Aerospace, automotive instrumentation, automotive crash testing, automotive and motorcycle racing



#### MEAS MT2, MT3

Range	0 - 3 to 0 - 30 inches
Output	Voltage divider, incremental encoder
Environment / IP Rating	IP50, IP67 (MT3A)
Enclosure	Aluminum and polycarbonate
Accuracy	±0.25% to ±1.1%
Unique Features	<ul style="list-style-type: none"> <li>• Designed for test applications</li> <li>• Dual-axis measuring cable alignment</li> <li>• Tracks high-acceleration linear position up to 136g's</li> <li>• High-frequency response</li> <li>• GAM EG 13 certification</li> </ul>
Operating Temp.	-55°C to 125°C
Dimensions (mm)	55 x 45 x 55
Typical Applications	Automotive crash testing, aerospace and flight testing



#### MEAS SM, SP

Range	0 - 2.5 to 0 - 50 inches
Output	Voltage divider, 0 - 10 VDC, 4 - 20 mA
Environment / IP Rating	IP50, IP67 (SP)
Enclosure	Polycarbonate with stainless steel bracket
Accuracy	±0.25% to ±1%
Unique Features	<ul style="list-style-type: none"> <li>• In-stock</li> <li>• Compact design</li> <li>• M12 connection</li> <li>• Adjustable mounting bracket</li> <li>• Free-release tolerant</li> <li>• Custom configurations for OEMS</li> </ul>
Operating Temp.	-18 to 70°C (SM) -40°C to 85°C (SP)
Dimensions (mm)	120 x 140 x 140
Typical Applications	Factory automation, light industrial, seismic testing, racing instrumentation, medical imaging systems, fume hood position



#### MEAS SG, SR

Range	0 - 80 to 0 - 175 inches
Output	Voltage divider, 0 - 5 VDC, 0 - 10 VDC, 4 - 20 mA, incremental encoder, CANbus
Environment / IP Rating	IP67
Enclosure	Polycarbonate with stainless steel bracket
Accuracy	±0.35% to ±0.5%
Unique Features	<ul style="list-style-type: none"> <li>• In stock</li> <li>• Low cost, high value stringpot</li> <li>• Versatile stainless steel mounting bracket</li> <li>• Simple one-button user scalable stroke range (SR)</li> <li>• Custom configurations available for OEM customers</li> </ul>
Operating Temp.	-40°C to 85°C
Dimensions (mm)	100 x 120 x 200
Typical Applications	Outdoor mobile construction equipment, outrigger positioning, hydraulic lifts, water and power controls



#### MEAS SK1, SK6

Range	0 - 250 and 0 - 400 inches
Output	4 - 20 mA, 0 - 10 V, voltage divider, CAN J1939, CANopen®, Encoder drive
Environment / IP Rating	IP67
Enclosure	Polycarbonate with stainless steel bracket
Accuracy	±.25% FS
Unique Features	<ul style="list-style-type: none"> <li>• In stock</li> <li>• Compact design</li> <li>• M12 connectivity</li> <li>• Adjustable mounting bracket</li> </ul>
Operating Temp.	-40°C to 85°C
Dimensions (mm)	120 x 140 x 140
Typical Applications	Mobile construction equipment, factory automation



#### MEAS PTX, PT101

Range	0 - 2 to 0 - 100 inches
Output	Voltage divider, 0 - 5 VDC, 0 - 10 VDC, 4 - 20 mA, incremental encoder, velocity output (DV301)
Environment / IP Rating	IP50
Enclosure	Aluminum
Accuracy	±0.04% to ±0.25%
Unique Features	<ul style="list-style-type: none"> <li>• Original classic design</li> <li>• High precision</li> <li>• Proven track record</li> </ul>
Operating Temp.	-40°C to 90°C
Dimensions (mm)	Model and range specific
Typical Applications	Aerospace testing, architectural and structural testing, factory automation



## LINEAR POSITION TRANSDUCERS—INDUCTIVE

Absolute



### MEAS HR

Package	AISI-400 series stainless steel
Linearity	±0.25% of range
Excitation	AC operated
Output	AC voltage
Range	±0.05 to ±10 inches
Unique Features	<ul style="list-style-type: none"> <li>• Large bore to core clearance</li> <li>• Broad range of excitation frequencies</li> <li>• Variety of options</li> <li>• Mild radiation resistance option</li> </ul>
Operating Temp.	-55°C to 150°C (220°C optional)
Diameter (mm)	20.6
Typical Applications	General industrial



### MEAS M12

Package	AISI-304 series stainless steel
Linearity	±0.25% of range
Excitation	AC operated
Output	AC voltage
Range	±10 to ±100 mm
Unique Features	<ul style="list-style-type: none"> <li>• Metric series</li> <li>• High stroke to length ratio</li> <li>• Constant sum of secondaries</li> <li>• Excellent temperature coefficient</li> </ul>
Operating Temp.	-55°C to 150°C (220°C optional)
Diameter (mm)	12
Typical Applications	Hydraulic spool valve position feedback, flight simulators, aircraft flight control feedback



### MEAS HC

Package	AISI-400 series stainless steel
Linearity	±0.25% of range
Excitation	AC and DC operated versions
Output	AC or DC voltage, 4 - 20 mA loop or RS-485
Range	±0.05 to ±10 inches
Unique Features	<ul style="list-style-type: none"> <li>• Hermetically sealed</li> <li>• Welded connector</li> <li>• Double shielding</li> <li>• Intrinsically safe version</li> <li>• CE mark for DC versions</li> </ul>
Operating Temp.	-55°C to 150°C (AC); 0°C to 70°C (DC)
Diameter (mm)	19
Typical Applications	Harsh environments, submersible applications, process controls, valve position feedback



### MEAS XS-C

Package	AISI-304 series stainless steel
Linearity	±0.25% of range
Excitation	AC operated
Output	AC voltage
Range	±0.25, ±0.5 and ±1 inches
Unique Features	<ul style="list-style-type: none"> <li>• High pressure</li> <li>• Bulkhead mounting</li> <li>• Hermetically sealed welded assembly</li> </ul>
Operating Temp.	-55°C to 150°C
Diameter (mm)	19
Typical Applications	Hydraulic actuators, other pressurized vessels



### MEAS DC-SE

Package	AISI-400 series stainless steel
Linearity	±0.25% of range
Excitation	8.5 to 28 VDC
Output	0 - 5 VDC (4 wire), 1 - 6 VDC (3 wire)
Range	0 - 0.1 to 0 - 6 inches
Unique Features	<ul style="list-style-type: none"> <li>• CE mark</li> <li>• Low current consumption (6 mA typical)</li> <li>• Synchronous demodulation</li> <li>• Shielded cable</li> </ul>
Operating Temp.	-25°C to 85°C
Diameter (mm)	19
Typical Applications	Positioning sensing feedback, battery operated systems, test labs, ram guide, platen position



### MEAS XS-D

Package	AISI-400 series stainless steel
Linearity	±2% of range
Excitation	AC operated
Output	AC voltage
Range	±1 to ±10 inches
Unique Features	<ul style="list-style-type: none"> <li>• Very high stroke to body length ratio</li> </ul>
Operating Temp.	-55°C to 150°C
Diameter (mm)	20.6
Typical Applications	Where sensor installation length is restricted, ideal replacement for linear potentiometers

Other models available, please consult MEAS website library.

## LINEAR POSITION TRANSDUCERS—INDUCTIVE

Absolute



### MACRO HSTA/R

<b>Package</b>	AISI-410 stainless steel
<b>Linearity</b>	±0.25% of range
<b>Excitation</b>	AC operated
<b>Output</b>	AC voltage
<b>Range</b>	±0.050 to ±10.0 inches
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• IP68 rating, hermetically sealed</li> <li>• Mild radiation resistant (30 Mrad) optional</li> <li>• Axial or radial connector with thru-bore construction</li> </ul>
<b>Operating Temp.</b>	-55°C to 200°C standard (Contact factory for higher temperature)
<b>Diameter (mm)</b>	19
<b>Typical Applications</b>	High temperature steam and gas valves, nuclear power plants, harsh and corrosive environments, environments with heavy dust, dirt, and humidity



### MACRO HLR/HLIR

<b>Package</b>	AISI-410 stainless steel
<b>Linearity</b>	±0.25% of range
<b>Excitation</b>	AC (HLR) or DC (HLIR)
<b>Output</b>	AC voltage or 4-20 mA
<b>Range</b>	±1 to ±10 inches
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• UL/ULC or CSA intrinsically safe rating</li> <li>• Intrinsically safe:                             <ul style="list-style-type: none"> <li>• Class I Division I, Class I Division II</li> </ul> </li> <li>• ATEX certified</li> <li>• 1/2" NPT conduit thread</li> </ul>
<b>Operating Temp.</b>	-50°C to 100°C (Per Macro Sensors instructions)
<b>Diameter (mm)</b>	19
<b>Typical Applications</b>	Gas turbine servo controls, fuel valve position feedback, petrochemical process plants



### MACRO SSI/R

<b>Package</b>	Alloy 625
<b>Linearity</b>	±0.10% of range
<b>Excitation</b>	AC or DC operated
<b>Output</b>	AC or 4-20 mA loop digital CANbus available
<b>Range</b>	±1.0 to ±10.0 inches
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Operating pressure to 5,000 psi (7,500 psi proof)</li> <li>• Seawater submersible IP68</li> <li>• Standard Seacon connector</li> <li>• Axial or radial connection</li> </ul>
<b>Operating Temp.</b>	-40°C to 80°C
<b>Diameter (mm)</b>	23.9
<b>Typical Applications</b>	Off-shore drilling platforms, pipeline monitoring, choke valves, mooring cables, extensometers, pulp and paper mills



### MACRO HPGS 750

<b>Package</b>	AISI-410 stainless steel
<b>Linearity</b>	±0.25% of range
<b>Excitation</b>	AC operated
<b>Output</b>	AC voltage
<b>Range</b>	±0.050 to ±10.0 inches
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Radial screw-on 38999 connector</li> <li>• IP68 rating, hermetically sealed</li> <li>• Designed for high vibration applications</li> </ul>
<b>Operating Temp.</b>	-55°C to 200°C
<b>Diameter (mm)</b>	19
<b>Typical Applications</b>	Nuclear power generation equipment, hydraulic cylinder position, steam valve positioning, power generation equipment, corrosive environments, high-vibration environments



### MACRO CD375

<b>Package</b>	AISI-410 stainless steel
<b>Linearity</b>	±0.25% of range
<b>Excitation</b>	AC operated
<b>Output</b>	AC voltage
<b>Range</b>	± 0.025 to ±1 inches
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Compact design</li> <li>• Operating pressure to 20,000 psi+</li> </ul>
<b>Operating Temp.</b>	-55°C to 200°C
<b>Diameter (mm)</b>	9.5
<b>Typical Applications</b>	Machine tools, robotic grippers, medical equipment, valve position sensing, hydraulic cylinder, down-hole equipment



### MACRO GHSE/R

<b>Package</b>	AISI-410 stainless steel
<b>Linearity</b>	±0.1% of range
<b>Excitation</b>	DC operated
<b>Output</b>	0 - 10 VDC
<b>Range</b>	0.100 to 4 inches
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Spring loaded design</li> <li>• IP68 rating, hermetically sealed</li> <li>• Axial and radial connection</li> <li>• Low pressure air-extend / spring-retract version available (GHSER 750-A)</li> </ul>
<b>Operating Temp.</b>	-20°C to 70°C
<b>Diameter (mm)</b>	19
<b>Typical Applications</b>	Industrial gaging systems, replaces dial indicators, fabricated metal products gaging

## LINEAR POSITION TRANSDUCERS—INDUCTIVE

Dimensional Gaging Products



**MEAS LBB Spring-Extend**



**MEAS LBB Air-Extend**



**MEAS PCA 375**



**MEAS GC**



**MEAS Ultimate-Precision Digital LBB**

<b>Linearity</b>	±0.2% of range	±0.2% of range	±0.5% of range	±0.25% (Voltage) to ±0.5% (4 - 20 mA) of range	Accuracy ±0.2%
<b>Excitation</b>	AC operated	AC operated	AC operated	AC or DC voltage	5 VDC USB (Bus or external)
<b>Output</b>	AC voltage	AC voltage	AC voltage	AC or DC voltage, RS-485, or 4 - 20 mA loop	RS485; USB
<b>Range</b>	±0.02 to ±0.20 inches	±0.04 and ±0.1 inches	±0.02 to ±1 inches	±0.05 to ±2 inches	1, 2, 5 and 10 mm
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• 0.000004 inch (0.1 µm) repeatability</li> <li>• Removable tungsten carbide contact tip</li> <li>• Double shielded LVDT</li> <li>• Repairable</li> </ul>	<ul style="list-style-type: none"> <li>• 0.000004 inch (0.1 µm) repeatability</li> <li>• Removable tungsten carbide contact tip</li> <li>• Double shielded LVDT</li> <li>• Repairable</li> </ul>	<ul style="list-style-type: none"> <li>• Longer strokes</li> <li>• IP65 cable exit</li> <li>• Accepts industry standard contact tips</li> <li>• Heavy duty return spring</li> </ul>	<ul style="list-style-type: none"> <li>• Hermetically sealed</li> <li>• Welded MS connector (MIL-C-5015)</li> <li>• CE mark for DC versions</li> <li>• Special tips available</li> <li>• Air extend spring retract available</li> </ul>	<ul style="list-style-type: none"> <li>• Plug-and-play</li> <li>• 14-bit resolution</li> <li>• COM libraries provided</li> <li>• CE mark</li> <li>• USB adapter and power supply available</li> </ul>
<b>Operating Temp.</b>	-40°C to 70°C	-40°C to 70°C	-20°C to 70°C	-55°C to 150°C (AC) 0°C to 70°C (DC)	0°C to 60°C
<b>Diameter (mm)</b>	8 or 9.5	8 or 9.5	9.5	19 mm body, 1/2 - 20 threads	Stackable gage system
<b>Typical Applications</b>	Process standards, manufacturing on-line inspection, robotics, replaces dial indicators in manual measurement systems	Process standards, manufacturing on-line inspection, robotics, replaces dial indicators in manual measurement systems	High density gaging fixtures, resistance weld verification, pressing applications, X-Y stage position feedback, rough casting inspection	Harsh environments, environments requiring hermetic seal, high temperatures (150°C for AC units)	Multi-channel electronic dimensional gaging, precision dimensional measurement, optics inspection systems, SPC data collection, hand tools

## LINEAR POSITION ENCODERS

Incremental



**MEAS ED32i**

<b>Package</b>	IP67 aluminum
<b>Range</b>	Magnetic scale, 5 mm pole pitch, typically up to 100 m absolute version up to 100 mm range on request
<b>Excitation</b>	5 VDC
<b>Output</b>	5 V TTL ABZ differential quadrature; RS-485
<b>Resolution</b>	≥10 µm; field programmable
<b>Max. Speed</b>	4 m/s
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Contactless incremental measurement</li> <li>• Very high accuracy, programmable resolution</li> <li>• High speed up to 4 m/s</li> <li>• Error detection, missing scale function</li> <li>• Adapter plate for easy mounting</li> </ul>
<b>Operating Temp.</b>	-25°C to 85°C
<b>Dimensions (mm)</b>	60 x 20 x 10
<b>Typical Applications</b>	Linear displacement measurement in industrial and medical applications

## ANGULAR POSITION—POTENTIOMETERS



**MEAS 6000 Series**  
Servo Mount

<b>Package</b>	<ul style="list-style-type: none"> <li>• 12.7 mm - 50.8 mm / 0.500" - 2.00" housing diameter</li> <li>• 3.170 mm - 6.34 mm / 0.1248" - 0.2498" shaft diameter</li> <li>• 12.7 mm - 1.74 mm / 0.500" - 0.680" housing length</li> <li>• 11.11 mm - 47.62 mm / 0.438" - 1.875" mounting pilot diameter</li> </ul>
<b>Resistance</b>	1K - 20K $\Omega$
<b>Range</b>	Up to 355°
<b>Linearity</b>	$\pm$ 0.5%
<b>Output Smoothness</b>	<0.1%
<b>Resolution</b>	Infinite
<b>Operating Temp.</b>	-65°C to 125°C
<b>Rotational Life</b>	50 million cycles / minute
<b>Typical Applications</b>	Critical position feedback applications in commercial, industrial, medical, aircraft and military markets



**MEAS 6200 Series**  
Bushing Mount

<b>Package</b>	<ul style="list-style-type: none"> <li>• 12.7 mm - 50.8 mm / 0.500" - 2.00" housing diameter</li> <li>• 3.170 mm - 6.34 mm / 0.1248" - .2498" shaft diameter</li> <li>• 12.7 mm - 1.74 mm / 0.500" - 0.680" housing length</li> <li>• 3/8 32 NEF thread / 10.31 mm / 0.4062" pilot diameter</li> </ul>
<b>Resistance</b>	1K - 20K $\Omega$
<b>Range</b>	Up to 355°
<b>Linearity</b>	$\pm$ 0.5%
<b>Output Smoothness</b>	<0.1%
<b>Resolution</b>	Infinite
<b>Operating Temp.</b>	-65°C to 125°C
<b>Rotational Life</b>	50 million cycles / minute
<b>Typical Applications</b>	Critical position feedback applications in commercial, industrial, medical, aircraft and military markets



**MEAS 6900 Series**  
Element/Wiper/Insulator

<b>Package</b>	<ul style="list-style-type: none"> <li>• 17.81 mm - 45.85 mm / 0.702" - 1.805" in element outside diameter</li> <li>• 4.724 mm - 11.05 mm / 0.186" - 0.435" element inside diameter</li> <li>• 3.175 mm - 6.35 mm / 0.125" - 0.250" shaft insulator inside diameter</li> <li>• 4.064 mm - 7.80 mm / 0.160" - 0.307" mating wiper inside diameter</li> <li>• 5.08 mm / 0.200" assembled package height</li> </ul>
<b>Resistance</b>	1K / 5K / 10K $\Omega$
<b>Range</b>	Up to 350°
<b>Linearity</b>	$\pm$ 0.5%
<b>Output Smoothness</b>	< 0.1%
<b>Resolution</b>	Infinite
<b>Operating Temp.</b>	-65°C to 125°C
<b>Rotational Life</b>	50 million cycles / minute
<b>Typical Applications</b>	Critical position feedback applications in commercial, industrial, medical, aircraft and military markets



**MEAS 6100 Series**  
Hollow Shaft

<b>Package</b>	<ul style="list-style-type: none"> <li>• 27.94 mm - 66.5 mm / 1.100" - 2.62" housing diameter</li> <li>• 3.175 mm - 19 mm / 0.125" - 0.752" hollow shaft diameter</li> </ul>
<b>Resistance</b>	1K - 20K $\Omega$
<b>Range</b>	Up to 355°
<b>Linearity</b>	$\pm$ 0.5%
<b>Output Smoothness</b>	< 0.1%
<b>Resolution</b>	Infinite
<b>Operating Temp.</b>	-65°C to 125°C
<b>Rotational Life</b>	50 million cycles / minute.
<b>Typical Applications</b>	Critical position feedback applications in commercial, industrial, medical, aircraft and military markets

## ANGULAR POSITION—POTENTIOMETERS



### MEAS RT8, RT9

<b>Package</b>	Aluminum or stainless IP67, IP68
<b>Resolution</b>	±0.15% to ±1.25%
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Absolute rotary</li> <li>• Designed for heavy industrial applications</li> <li>• CSA, CENELEC certification for hazardous area applications</li> </ul>
<b>Output</b>	Voltage divider, 0 - 5 V, 0 - 10 V, 4 - 20 mA, incremental encoder, CANbus, DeviceNet™
<b>Range</b>	0 - 0.125 to 0 - 200 turns
<b>Operating Temp.</b>	-40°C to 90°C
<b>Dimensions (mm)</b>	Ø65 x 100 (RT8) Ø115 x 60 (RT9)
<b>Typical Applications</b>	Valve control, airport passenger loading bridge, water management, factory automation

## LINEAR POSITION—POTENTIOMETERS



### MEAS MLP, CLP

<b>Package</b>	Aluminum body, steel rod, IP65, IP67
<b>Range</b>	0 - 0.5 to 0 - 6" (MLP) 0 - 1 to 0 - 10" (CLP)
<b>Linearity</b>	±0.5 to ±1% (MLP) ±0.1 to ±0.2% (CLP)
<b>Excitation</b>	Up to 40 VDC max.
<b>Output</b>	Voltage divider
<b>Resolution</b>	Essentially infinite
<b>Max. Speed</b>	10 m/s
<b>Unique Features</b>	<ul style="list-style-type: none"> <li>• Extended temperature range, miniature design</li> <li>• First choice for auto racing applications</li> <li>• Perfect for high cycle applications</li> </ul>
<b>Operating Temp.</b>	-40°C to 90°C
<b>Dimensions (mm)</b>	Diameter / cross section: Ø9.5 mm (MLP) 15 mm x 15 mm (CLP)
<b>Typical Applications</b>	Vehicle testing, autosport instrumentation, structural and architectural testing and robotics.



### MEAS 5903, 5905 Series

Linear Motion

<b>Package</b>	<ul style="list-style-type: none"> <li>• 7.94 mm - 12.7 mm / 0.312" - 0.500" housing diameter</li> <li>• 1.98 mm - 3.18 mm / 0.078" - 0.125" shaft diameter</li> </ul>
<b>Resistance</b>	1K / 5K / 10K
<b>Range</b>	5903 series - up to 50.8 mm / 2" stroke 5905 series - up to 101.6 mm / 4" stroke
<b>Linearity</b>	±1%
<b>Output Smoothness</b>	<0.1%
<b>Resolution</b>	Infinite
<b>Operating Temp.</b>	-65°C to 125°C
<b>Stroke Life</b>	50 million cycles min
<b>Typical Applications</b>	Critical position feedback applications in commercial, industrial, medical, aircraft and military markets

## LVDT / RVDT INSTRUMENTATION



**MEAS LVM-110, LiM-420**

**Package** Open circuit board

**Supply** DC voltage

**Output** DC voltage or current

**Operating Temp.** 0°C to 55°C

**Unique Features**

- Master / slave for multi-up applications
- Dip switch selectable excitation frequencies
- Plug-in PCB or wire termination
- Small form factor

**Dimensions (mm)** 63 x 56 x 21

**Typical Applications** OEM applications



**MEAS LDM-1000**

**Package** DIN rail mount

**Supply** 10 to 30 VDC

**Output** DC voltage and current

**Operating Temp.** -25°C to 85°C

**Unique Features**

- Operates with 4, 5 & 6 wire LVDT / RVDTs
- Adjustable zero, span and phase
- Status LEDs
- CE mark

**Dimensions (mm)** 115 x 99 x 23

**Typical Applications** Automotive test track instrumentation, gas and steam turbine controls, factory automation



**MEAS ATA-2001**

**Package** 1/8 DIN panel mount

**Supply** 115 and 220 VAC, 50 - 400 Hz

**Output** DC voltage and current

**Operating Temp.** -40°C to 85°C

**Unique Features**

- Push button programmable
- Splash proof front panel
- LED status lights
- Mounting hardware included
- CE mark

**Dimensions (mm)** 267 x 99 x 49

**Typical Applications** Precision metrology labs, power generation valve position monitoring



**MEAS PML 1000**

**Package** 1/8 DIN panel mount

**Supply** 90 to 265 VAC, 50 - 60 Hz or 24 VDC

**Output** DC voltage and current (RS-485 optional)

**Operating Temp.** 10°C to 55°C

**Unique Features**

- 5 digit LED display
- Auto-calibration
- Programmable
- Splash proof front panel
- Mounting hardware included
- CE mark

**Dimensions (mm)** 173 x 97 x 49

**Typical Applications** Remote monitoring stations, measurement test stands, process monitoring



**MEAS MP 2000**

**Package** 1/4 DIN panel mount

**Supply** 100 to 240 VAC, 47 - 63 Hz

**Output** DC voltage and RS-232

**Operating Temp.** 0°C to 55°C

**Unique Features**

- Programmable set point controller
- Dual channel with math functions
- Digital I/O
- Large LCD display
- Splash proof front panel

**Dimensions (mm)** 178 x 92 x 92

**Typical Applications** LVDT based weighing systems, pass / fail parts sorting, quality inspection



**MACRO LVC-4000**

**Package** DIN rail mount

**Supply** 9 to 30 VDC

**Output** RS-485, DC voltage, and 4-20 mA

**Operating Temp.** -20°C to 75°C

**Unique Features**

- Push-button calibration
- Digital RS-485 interface
- Master / slave excitation synchronization (Up to 16 channels)
- Supports all standard AC LVDTs, RVDTs, and VR half-bridge sensors

**Dimensions (mm)** 114.5 x 99 x 22

**Typical Applications** Gas and steam turbine controls, automotive test instrumentation, factory automation



**MACRO LVC-4500**

**Package** DIN rail mount

**Supply** 9 to 30 VDC

**Output** RS-485, DC voltage, and 4-20 mA

**Operating Temp.** -20°C to 75°C

**Unique Features**

- Push-button calibration
- Diff / sum ratiometric conditioning
- Digital RS-485 interface
- Master / slave excitation synchronization (Up to 16 channels)
- Supports all standard AC LVDTs, RVDTs, and VR half-bridge sensors

**Dimensions (mm)** 114.5 x 99 x 22

**Typical Applications** Gas and steam turbine controls, automotive test instrumentation, factory automation



**MACRO MMX Mini Module**

**Package** DIN rail mount

**Supply** 15 to 30 VDC

**Output** DC voltage or 4-20 mA

**Operating Temp.** 0°C to 70 °C

**Unique Features**

- Push-button calibration
- Flame retardant mini-module housing
- Master / slave excitation synchronization (Up to 10 channels)
- LED status lights
- Supports all standard AC LVDTs, RVDTs, and VR half-bridge sensors

**Dimensions (mm)** 85.1 x 70.4 x 17.8

**Typical Applications** Automotive test instrumentation, factory automation