

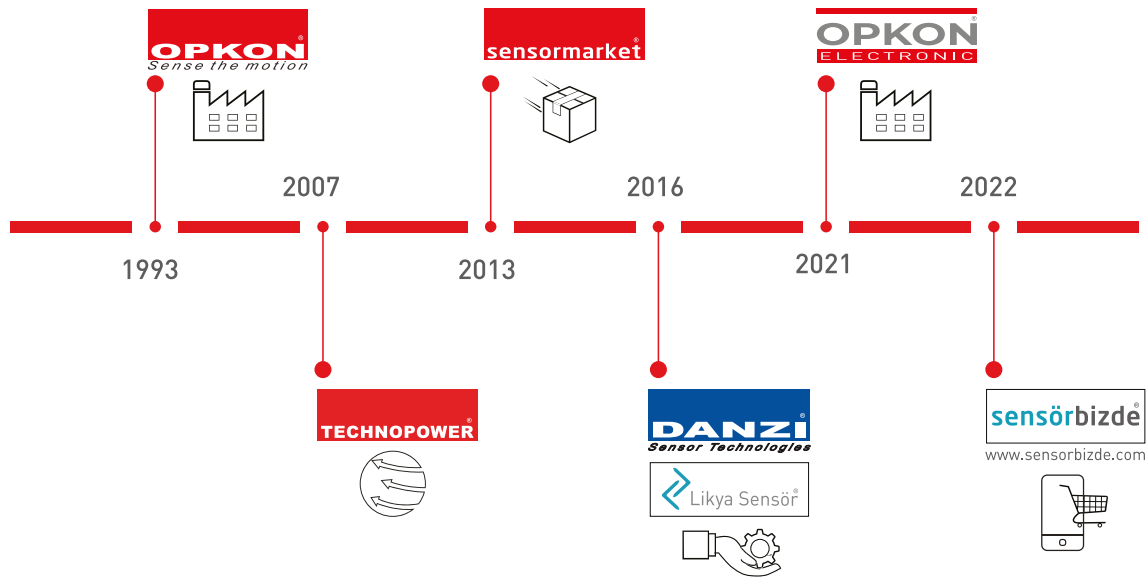
# About OPKON

OPKON Optik Elektronik A.S. was established in İstanbul in 1993 to produce high-quality position sensors for the machine manufacturing industry and the general automation sector. We offer our customers advanced technology products and solutions with our expert and experienced engineering team.

OPKON's R&D and manufacturing facilities are located in İstanbul and Mainproducts are non-contact magnetostrictive sensors, linear potentiometric transducers, rotary potentiometers, draw wire sensors, linear encoders, rotary encoders and panel type measurement&control devices.

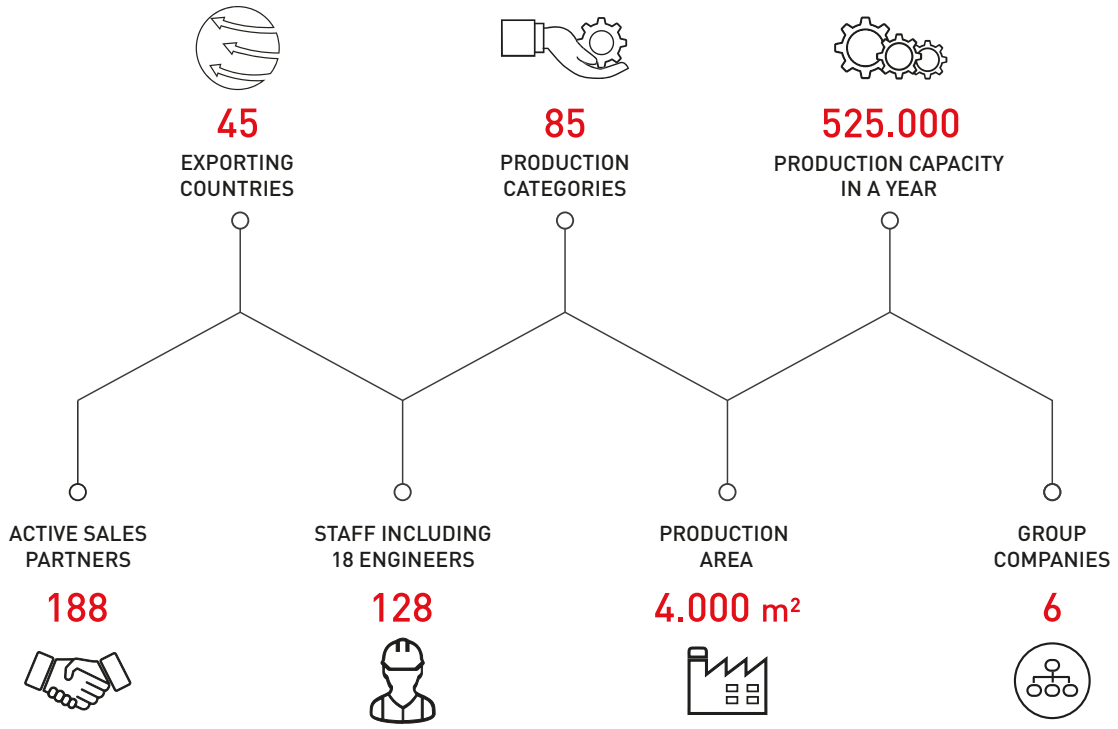
OPKON provides worldwide international sales, service and support with subsidiary offices in Germany and China as well as 88 distribution partners in more than 45 countries. Thus, OPKON can fastly deliver directly from stock. OPKON pursues its international development by designing, manufacturing, and servicing high-tech products where the quality of its expertise makes all the difference.

OPKON's policy is to meet the expectations of the customers technical needs with agile solutions and quality products through cost-efficient production with on-time deliveries. In doing so, we attach great importance to occupational health, safety, and environmental protection.

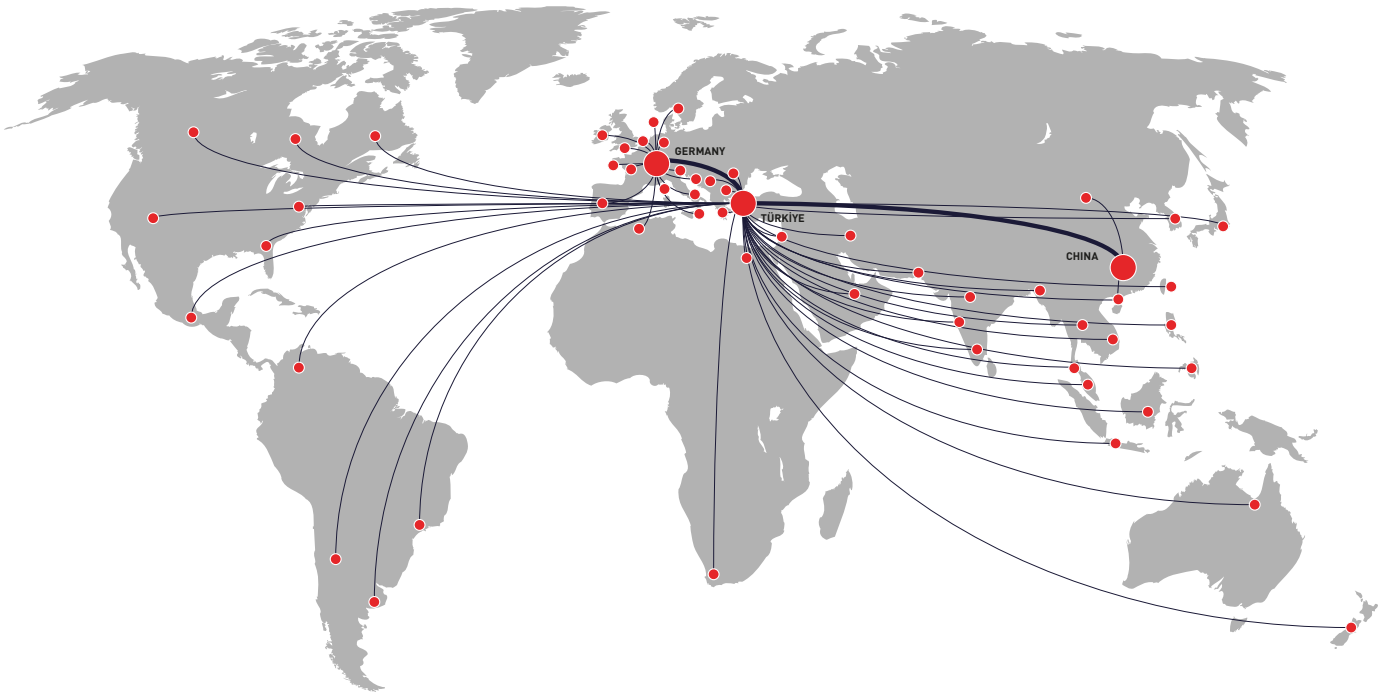


## WHY OPKON?

- Wide production range
- Fast delivery from stock
- Custom design solutions
- Easy and fast communication
- 30 years' experience in R&D, design and production
- Worldwide sales & service network
- Engineering support
- Updated technology and innovative products



## WORLDWIDE SALES NETWORK



# Linear Potentiometers

## Long Stroke





Model  
RTL

- Measuring length 30 - 1000 mm
- Infinite resolution
- Excellent repeatability <0,01 mm
- Long mechanical life 100 million movements
- Easy installation with fixing brackets
- IP 67 protection level



Model  
RPH

- Measuring length 100 - 1950 mm
- With sliding head reducing overall dimension
- Excellent repeatability <0,01 mm
- Long mechanical life 100 million movements
- Rodless design
- IP 40 protection level (if mounted upside down IP 53)



Model  
LPC

- Measuring length 50 - 800 mm
- Orbital movement with ball joints on the both sides
- Excellent repeatability <0,01 mm
- Long mechanical life 100 million movements
- Strong mechanical structure (10 mm rod diameter)
- IP 65 protection level



Model  
RTM

- Measuring length 50 - 600 mm
- Infinite resolution
- Excellent repeatability <0,01 mm
- Long mechanical life 100 million movements
- Orbital movement in square body without fixing brackets
- IP 65 protection level



Model  
LPS

- Measuring length 30 - 150 mm
- Infinite resolution
- Excellent repeatability <0,01 mm
- Long mechanical life 50 million movements
- IP 54 protection level



Model  
LSC

- Measuring length 25 - 400 mm
- Cable output
- Excellent repeatability <0,01 mm
- Long mechanical life 50 million movements
- IP 67 protection level

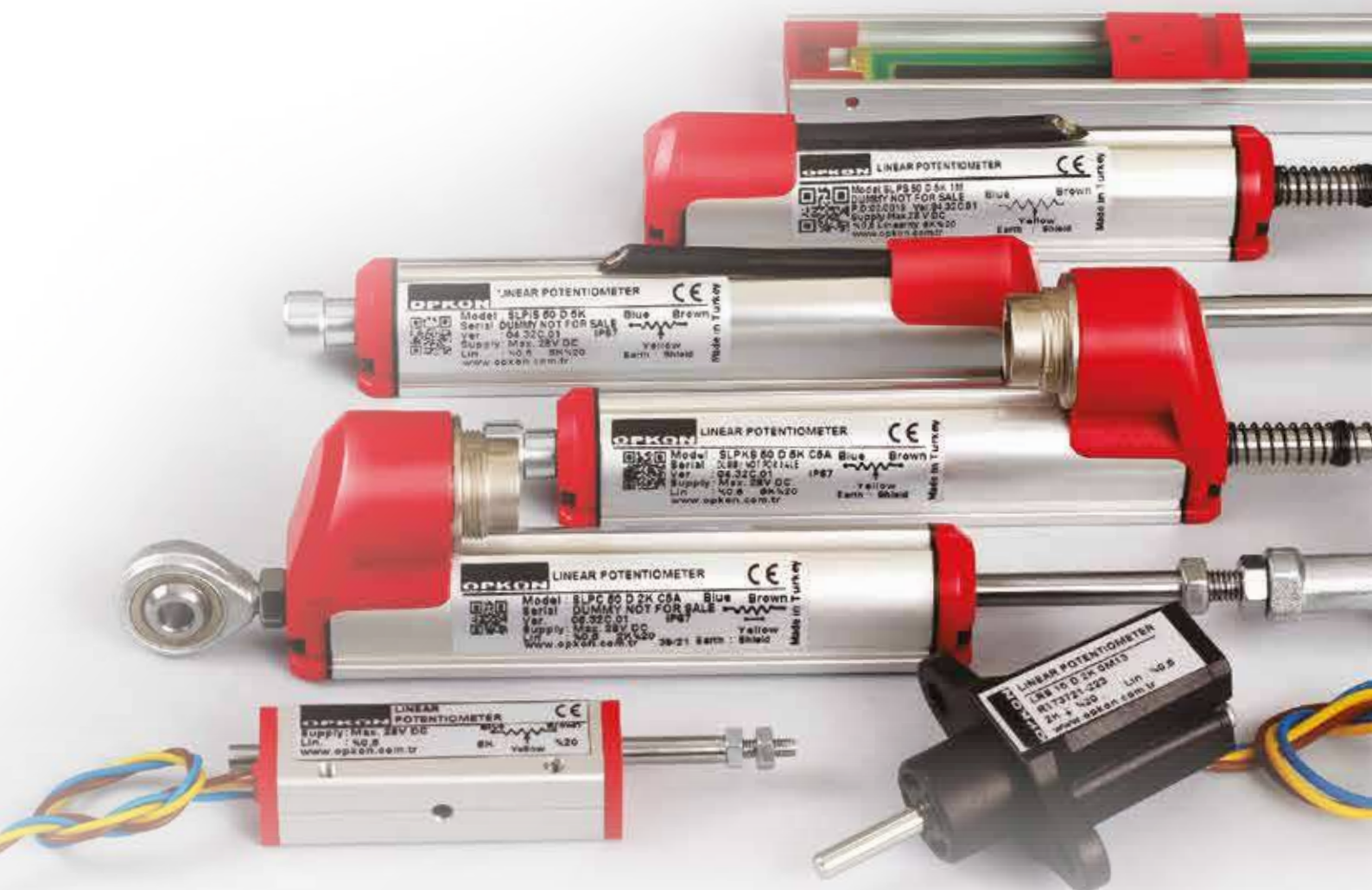


Model  
OPH

- Measuring length 50 - 1000 mm
- Cost effective compact design
- Excellent repeatability <0,01 mm
- Long mechanical life 50 million movements
- Open profile
- Easy and flexible installation

# Linear Potentiometers

Slim Body Compact Design Short Stroke





Model  
SLPT

- Measuring length 10 - 400 mm
- $\pm 0,05$  linearity
- Long mechanical life 50 million movements
- Compact design
- For narrow space applications



Model  
SLPC

- Measuring length 10 - 400 mm
- Compact design
- Long mechanical life 50 million movements
- Orbital movement with ball joints on the both sides
- High accuracy and excellent repeatability



Model  
SLPS

- Measuring length 10 - 100 mm
- External spring loaded
- Useful for flatness and thickness measurements



Model  
SLPK

- Measuring length 10 - 200 mm
- Double-side rod
- Long mechanical life 50 million movements
- High accuracy and repeatability



Model  
SLPKS

- Measuring length 10 - 100 mm
- Double-side rod with external return spring
- Long mechanical life 50 million movements
- Ideal for thickness measurements



Model  
SLPIS

- Measuring length 10 - 100 mm
- Internal return spring
- Long mechanical life 50 million movements
- Probe or roll bearing type
- High repeatability and accuracy



Model  
LMT / LMTIS

- Measuring length 10 - 25 mm
- Infinite resolution
- Ultra compact design with robust aluminium housing
- Long mechanical life 50 million movements
- Easy mounting by thread holes



Model  
SOPH

- Measuring length 25 - 150 mm
- Infinite resolution
- Special teflon guiding system
- Long mechanical life 50 million movements

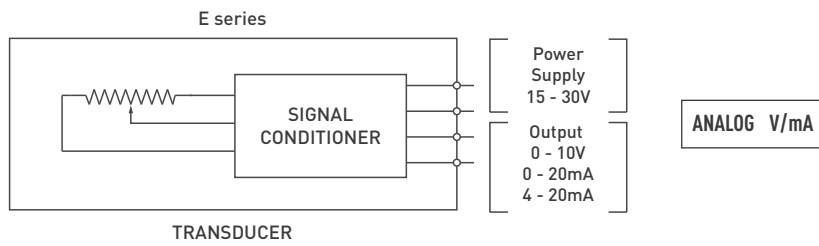


Model  
LRS

- Measuring length 10 - 25 mm
- Infinite resolution
- Excellent repeatability  $< 0,02$ mm
- Long mechanical life 50 million movements

# Linear Potentiometers

## Long Stroke With Internal Signal Conditioner







Model  
ERTL

- Measuring range 30 - 1000 mm
- Internal signal conditioner
- Output 0-10 V, 0-20 mA, 4-20 mA
- Infinite resolution
- Easy installation with fixing brackets
- IP 67 protection level



Model  
ERPH

- Measuring range 100 - 1950 mm
- Internal signal conditioner
- Output 0-10 V, 0-20 mA, 4-20 mA
- Rodless design
- IP 40 (if mounted upside down IP 53)



Model  
ELPC

- Measuring range 50 - 800 mm
- Internal signal conditioner
- Output 0-10 V, 0-20 mA, 4-20 mA
- Orbital movement via ball joints on the both sides
- Strong mechanical structure (10 mm rod diameter)
- IP 67 protection level



Model  
ERTM

- Measuring range 50 - 600 mm
- Internal signal conditioner
- Output 0-10 V, 0-20 mA, 4-20 mA
- Orbital movement in square body fixing without brackets
- Infinite resolution
- IP 65 protection level



Model  
ELSC

- Measuring range 25 - 400 mm
- Internal signal conditioner
- Output 4-20 mA / 10-0 V / 0-5V, 5-0V
- Excellent repeatability
- IP 67 protection level



Model  
OP-SC1A

- Rail type [OP-SC1A]
- Signal conditioner for resistive potentiometers
- Standard output signals (0-10 V, 0-20 mA, 4-20 mA)



Model  
OP-SC1B

- Connector type [OP-SC1B]
- Signal conditioner for resistive potentiometers
- Standard output signals (0-10 V, 0-20 mA, 4-20 mA)

# Non-Contact Magnetostrictive Position Sensor

Analog and Digital Output





Model  
MSS

- Measuring range 50 - 5000 mm
- Output V, mA
- Linearity  $\pm 0.05\%$
- IP 65



Model  
MSW

- Measuring range 50 - 5000 mm
- Output V, mA
- Linearity  $\pm 0.05\%$
- IP 65



Model  
MSR

- Measuring range 50 - 1000 mm
- Output V, mA
- Linearity  $\pm 0.05\%$
- IP 65



Model  
DMSS

- Measuring range 100 - 5000 mm
- Digital output
- Linearity  $\pm 0.05\%$
- IP 65



Model  
DMSW

- Measuring range 100 - 5000 mm
- Digital output
- Linearity  $\pm 0.05\%$
- IP 65



Model  
DMSR

- Measuring range 100 - 5000 mm
- Digital output
- Linearity  $\pm 0.05\%$
- IP 65

## Mobile Hydraulic Position Sensors

In-cylinder and Internal / External Mounting Hydraulic





Model  
RHTP

- In-hydraulic cylinders linear potentiometer
- Single and double sensor (Redundancy)
- 100 - 1000 mm measuring length
- 20 million movements life
- <0.01 mm repeatability
- 5 kOhm : 100 - 600 mm
- 10 kOhm : 650 - 1000 mm



Model  
RHTF

- In-hydraulic cylinders linear potentiometer
- Single and double sensor (Redundancy)
- 100 - 1000 mm measuring length
- 20 million movements life
- <0.01 mm repeatability
- 5 kOhm : 100 - 600 mm
- 10 kOhm : 650 - 1000 mm



Model  
MSP

- In-hydraulic non-contact magnetostrictive position sensor
- Measuring length 50 - 1500 mm
- 15 bit resolution
- 0 - 20 mA, 4 - 20 mA output
- 24 VDC power supply



Model  
MSPB

- In-hydraulic non-contact magnetostrictive position sensor
- Measuring length 50 - 3000 mm
- 15 bit resolution
- 0 - 20 mA, 4 - 20 mA output
- 24 VDC power supply



Model  
MSPF

- Internal / external mounting hydraulic cylinders
- magnetostrictive position sensor
- Measuring length 50 - 3000 mm
- 15 bit resolution
- 0 - 20 mA, 4 - 20 mA output
- 24 VDC power supply



Model  
MST

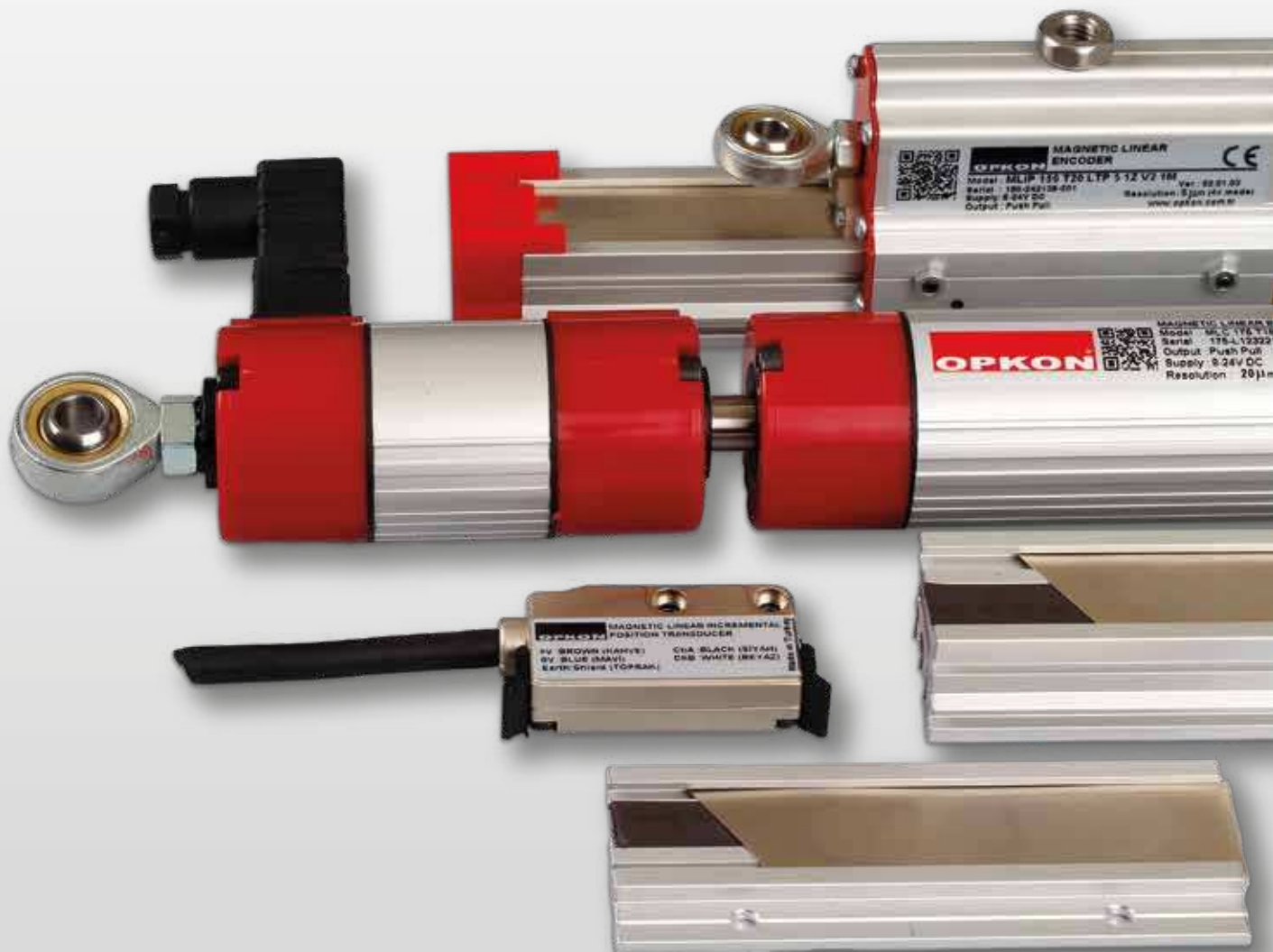
- In-hydraulic cylinders non-contact magnetostrictive position sensor
- Measuring length 50 - 5000 mm
- 12 - 16 bit resolution
- Optional mechanical installation
- Speed information can be provided optionally.



Model  
DMST

- Measuring range 100 - 5000 mm
- Digital output
- Linearity  $\pm 0.05\%$
- IP 65

# Magnetic Linear Incremental Encoders





Model  
MPS

- Measuring length 150 - 2000 mm
- TTL, Linedriver, Push-Pull, High Linedriver output
- $\pm 15 \mu\text{m}$  repeatability
- Abkant press sensor
- IP 65 protection level



Model  
MLIP

- Measuring length 50 - 5000 mm
- TTL, Linedriver, Push-Pull, High Linedriver output
- $\pm 40 \mu\text{m}$  accuracy
- IP 66 protection level



Model  
MLC

- Measuring length 50 - 800 mm
- TTL, Linedriver, Push-Pull, High Linedriver output
- $\pm 40 \mu\text{m}$  accuracy
- IP 65 protection level



Model  
MLCS

- Measuring length 15 mm
- TTL, Linedriver, Push-Pull, High Linedriver output
- $\pm 10 \mu\text{m}$  accuracy
- IP 65 protection level



Model  
MLI

- 2,5 / 5 / 10 / 12,5 / 20 / 25  $\mu\text{m}$  (4x mode) resolution
- TTL, Linedriver, Push-Pull, High Linedriver output
- $\pm 40 \mu\text{m}$  accuracy
- IP 66 protection level



Model  
MT2, MT5  
MP2, MP5

- Up to 50 meters
- Pole pitches 2 mm, 5 mm
- IP 67 protection level

## Draw Wire Sensors

Draw Wire Encoders

Draw Wire Potentiometers







Model  
DWE

- Plastic case draw wire encoder
- Measuring length 500 - 3600 mm
- TTL, Linedriver, Push-Pull, High Linedriver output
- 0.1 mm/pulse, 0.2 mm/pulse resolution
- IP 54 protection level



Model  
DWEM1

- Metal case draw wire encoder
- Measuring length 0 - 1200 mm
- TTL, Linedriver, Push-Pull, High Linedriver output
- 0.1 mm/pulse, 0.2 mm/pulse resolution
- IP 65 protection level



Model  
DWEM2

- Metal case draw wire encoder
- Measuring length 1250 - 4200 mm
- TTL, Linedriver, Push-Pull, High Linedriver output
- 0.1 mm/pulse, 0.2 mm/pulse resolution
- IP 65 protection level



Model  
DWEM3

- Metal case draw wire encoder
- Measuring length 4250 - 10000 mm
- TTL, Linedriver, Push-Pull, High Linedriver output
- 0.1 mm/pulse, 0.2 mm/pulse resolution
- IP 65 protection level



Model  
DWEM4

- Metal case draw wire encoder
- Measuring length 10000 - 20000 mm
- TTL, Linedriver, Push-Pull, High Linedriver output
- 0.1 mm/pulse, 0.2 mm/pulse resolution
- IP 65 protection level



Model  
DWP

- Plastic case draw wire potentiometer
- Measuring length 1800 mm
- Potentiometric or analog output
- %1 linearity
- IP 54 protection level



Model  
DWPM1

- Metal case draw wire potentiometer
- Measuring length 0 - 1200 mm
- Potentiometric or analog output
- %0.5 linearity
- IP 65 protection level



Model  
DWPM2

- Metal case draw wire potentiometer
- Measuring length 1250 - 4500 mm
- Potentiometric or analog output
- %0.5 linearity
- IP 65 protection level



Model  
DWPM3

- Metal case draw wire potentiometer
- Measuring length 4550 - 10000 mm
- Potentiometric or analog output
- %0.5 linearity
- IP 65 protection level



Model  
DWPM4

- Metal case draw wire potentiometer
- Measuring length 10000 - 20000 mm
- Potentiometric or analog output
- %0.5 linearity
- IP 65 protection level

# Rotary Encoders





Model  
PRI 40A

- 300 - 1250 ppr. resolution
- TTL, Linedriver, Push-Pull, High Linedriver output
- IP 54 protection level



Model  
PRI 40SH/H

- 300 - 1250 ppr. resolution
- TTL, Linedriver, Push-Pull, High Linedriver output
- IP 54 protection level



Model  
PRI 50A

- 100 - 5000 ppr. resolution
- TTL, Linedriver, Push-Pull, High Linedriver output
- IP 54 protection level



Model  
PRI 50SH/H

- 100 - 5000 ppr. resolution
- TTL, Linedriver, Push-Pull, High Linedriver output
- IP 54 protection level



Model  
PRI 58A/B

- 100 - 5000 ppr. resolution
- TTL, Linedriver, Push-Pull, High Linedriver output
- IP 54 protection level



Model  
PRI 58SH/H

- 100 - 5000 ppr. resolution
- TTL, Linedriver, Push-Pull, High Linedriver output
- IP 54 protection level



Model  
PRI 80

- 1024 ppr. resolution
- TTL, Linedriver, Push-Pull, High Linedriver output
- IP 50 protection level



Model  
PRI 100

- 1024 ppr. resolution
- TTL, Linedriver, Push-Pull, High Linedriver output
- IP 50 protection level



Model  
ERC 10  
BISS/SSI  
SINE - COSINE

- 2048 ppr. resolution
- 1 Vpp / 1 ppr. absolute commutation signals
- 1 Vpp / 2048 ppr. incremental A/B signals
- IP 67 protection level

## Rotary Potentiometers

## Rotary Non-Contact Magnetic Sensors





Model  
PPW F32

- Rotary potentiometer
- Measuring angle  $345^\circ \pm 2^\circ$
- 50 million movement life
- Double bearings
- %0,5 independent linearity
- 2K, 5K or 10K



Model  
RPF 28

- Rotary potentiometer
- Measuring angle  $345^\circ \pm 2^\circ$
- 50 million movement life
- Double bearings
- %0,5 independent linearity
- 2K, 5K or 10K



Model  
RTP / RTPM

- Rotary potentiometer
- Measuring angle  $345^\circ \pm 2^\circ$
- %0.5 mm linearity
- IP 54 protection level



Model  
MRPF 28

- Rotary, non-contact, magnetic analog output, absolute sensor
- Measuring angle  $345^\circ \pm 2^\circ$
- %0.5 mm linearity
- IP 54 protection level

## Controllers and Indicators

Temperature Controllers

Weight Measuring Devices

Position Indicators and Controllers





Model  
OP-CN2  
OP-CN4

- Fast counter for encoders
- Microprocessor based
- Reset from external front panel
- 6+6 digit counting/programming display
- Easy two-point calibration
- Multiplier entry for distance/angle measurement



Model  
OP-MD3  
OP-MD4

- Linear potentiometer display
- Microprocessor based
- 10 bit analog/digital convertor
- Max. 200 kHz
- Two-point calibration



Model  
OP-LP1  
OP-LP2

- Potentiometer input distance/position measuring and control device
- 12 bit analog/digital convertor
- Offset adjustment feature
- Screen filter
- Hysteresis setting
- Max. 200 kHz
- With microprocessor



Model  
OP-LDP2

- Voltage/current/potentiometer input position measuring and control device
- 4 digit current value display
- Two-point calibration feature
- Offset adjustment feature
- Relay output module system
- RS-232 or RS-485 communication with Modbus protocol
- Max. 200 kHz



Model  
OP-HR4

- Hot runner control device
- Microprocessor based
- Special program for hot runner applications
- Automatic PID
- SSR drive output



Model  
OP-WE1

- Weight control device with loadcell input
- Microprocessor based
- 16 bit resolution
- 4+4 digital LED display
- Built-in packaged software



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