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**LINEAR  
POTENTIOMETRIC  
TRANSDUCERS**

# Linear Potentiometric Transducers Table

		Max. Electrical Stroke (mm)	Resistance (Kohm)	Linearity (±%)	Repeatability (mm)	Operating Speed	Output Signal	Supply Voltage	Electrical Connection	Operating Temperature (°C)	Protection Class
	<b>LTK Series Linear Position Transducer (sliding system)</b>	1500	5, 10	0,1	0.01	≤5	Potentiometric	42V max.	DIN 43650	-30...+100	IP 40 IP 54
							0-10V 4-20 mA	12...30 VDC			
	<b>LTM Series Linear Position Transducer (One-side Actuating Rod)</b>	1000	5, 10	0,1...0,2	0.01	≤5	Potentiometric	42V max.	DIN 43650 or cable	-30...+100	IP 62
							0-10V 4-20 mA	12...30 VDC			
	<b>LTP Series Linear Position Transducer (Double-side Articulated System)</b>	1000	5, 10	0,1...0,2	0.01	≤5	Potentiometric	42V max.	DIN 43650 or cable	-30...+100	IP 62
							0-10V 4-20 mA	12...30 VDC			
	<b>LTC Series Linear Position Transducer (Double-side Articulated System)</b>	1000	5, 10	0,1...0,2	0.01	≤5	Potentiometric	42V max.	DIN 43650 or cable	-30...+100	IP 62
							0-10V 4-20 mA	12...30 VDC			
	<b>LT Series Linear Position Transducer (Small Size)</b>	300	5, 10	0,1...1	0.01	≤5	Potentiometric	42V max.	DIN 43650 or cable	-30...+100	IP 40
							0-10V 4-20 mA	12...30 VDC			
	<b>LTR Series Linear Position Transducer (Push-back Spring System)</b>	300	5, 10	0,1...1	0.01	≤5	Potentiometric	42V max.	DIN 43650 or cable	-30...+100	IP 40
							0-10V 4-20 mA	12...30 VDC			
	<b>LF Series Linear Position Transducer (One-side Actuating Rod)</b>	300	5, 10	0,1...1	0.01	≤5	Potentiometric	42V max.	DIN 43650 or cable	-30...+100	IP 40 IP 65
							0-10V 4-20 mA	12...30 VDC			
	<b>LFM Series Linear Position Transducer (Double-side Articulated System)</b>	300	5, 10	0,1...1	0.01	≤5	Potentiometric	42V max.	DIN 43650 or cable	-30...+100	IP 40 IP 65
							0-10V 4-20 mA	12...30 VDC			
	<b>LFR Series Linear Position Transducer (Push-back Spring System)</b>	150	5, 10	0,2...1	0.01	≤5	Potentiometric	42V max.	DIN 43650 or cable	-30...+100	IP 40 IP 65
							0-10V 4-20 mA	12...30 VDC			



# LINEAR POTENTIOMETRIC TRANSDUCERS

## Absolute Potentiometric Measurement, High Accuracy, Analog Output

Atek series linear transducers work as ABSOLUTE because they are measuring with the potentiometric principle, that is, they do not lose their position in case of power off. Potentiometric, 4-20 mA (optional 0-20 mA) or 0-10V analog output options are available.

Because of their linearized conductive plastic resistance alloy and special contacts, they are not affected by wear and operate for a long time with a life cycle of up to 100 million. They are stable by being linear and they measure evenly.

They are used in many fields such as plastic and metal injection machines, press brakes, transfer machines, hydraulic machines, sheet metal processing machines, bending machines, textile machines and profile cutting machines.



- Measuring ranges up to 1500 mm
- Absolute potentiometric measurement
- Potentiometric, 4-20 mA or 0-10V analog output options
- Long life up to 100 million movements
- 5 m/s operating speed
- High accuracy
- Compact design
- DIN43650 connector or cable connection

### LTK

- One-sided Actuating Rod
- Measurement lengths between 50 mm and 1500 mm
- DIN43650-A connector
- IP40 protection class  
(if slider is mounted upside down, it becomes IP54)



More info

### LTM

- One-sided Actuating Rod
- Measurement lengths between 50 mm and 1000 mm
- Cable or DIN 43650-A connector
- IP62 protection class



More info

### LTP

- Double articulated body structure
- $\pm 30^\circ$  maximum angular motion with joints
- Measurement lengths between 50 mm and 1000 mm
- Cable or DIN 43650-C connector
- IP62 protection class



More info

### LTC

- Double articulated square body structure
- $\pm 30^\circ$  maximum angular motion
- Measurement lengths between 50 mm and 1000 mm
- Cable or DIN 43650-C connector
- IP62 protection class



More info

## LT

- Small size, short distance measurement with push-back spring
- Measurement lengths between 10 mm and 300 mm
- Cable or DIN 43650-C connector
- IP40 protection class



More info

## LTR

- Push-back spring system
- Measurement lengths between 10 mm and 300 mm
- Cable or DIN 43650-C connector
- IP40 protection class



More info

## LF

- One-side actuating rod
- Measurement lengths between 10 mm and 300 mm
- Cable or DIN 43650-C connector
- IP40 (optional IP65) protection class



More info

## LFM

- Double-side articulated body
- Measurement lengths between 10 mm and 300 mm
- Cable or DIN 43650-C connector
- IP40 (optional IP65) protection class



More info

## LFR

- Push-back spring system
- Measurement lengths between 10 mm and 150 mm
- Cable or DIN 43650-C connector
- IP40 (optional IP65) protection class



More info

Model	Max. Stroke	Linearity	Resistance	Supply	Electrical Connection	Operating Temp.	Protection Class
LTK	1500 mm	±0,1%	5KΩ or 10KΩ (±20% tolerance)	For current or voltage output: 12...30 VDC For potentiometric output: 42V max.	DIN 43650-A 4 pin connector	-30...+100°C	IP40 or IP54
LTM	1000 mm	±0,1% ... ±0,2%			DIN 43650-A 4 pin connector or cable		IP62
LTP					DIN 43650-C 4 pin connector or cable		
LTC					DIN 43650-A 4 pin connector or cable		
LT	300 mm	±0,1% ... ±1%			DIN 43650-C 4 pin connector or cable		IP40
LTR	300 mm						
LF	300 mm						
LFM	300 mm						IP40 IP65 (opt.)
LFR	150 mm						





**LINEAR TOUCHLESS  
TRANSDUCERS**

# LINEAR TOUCHLESS TRANSDUCERS



More info

## ILT

### Non-Contact, Inductive Measurement Technology, IP67 Protection Class

The working principle of ILT-10 series inductive linear position scales depends on the RLC connection between the positioning element and the sensor. An output signal is provided according to the position of the positioning element.

Thanks to the non-contact working principle, they are long-lasting since there are no factors such as wear and tear.

They offer wide temperature tolerance, high repeatability, resolution and linearity. They work stably for a long time without being affected by electromagnetic fields.



They are used in automation technology and manufacturing engineering, such as plastic and metal injection machines, textile machines, packaging machines, sheet metal working machines and woodwork machines.



### General Features

- Inductive measurement technology
- Resistant to electromagnetic field
- Non-contact measurement
- Status LED
- Versatile mounting possibility
- 1 µm resolution
- 500 Hz high update rate
- Offset tolerance up to  $\pm 2$  mm
- Shock and vibration resistant
- Analog, SSI, CANopen, RS-232 or RS-485 interface
- IP67 protection class



Model	Max. Stroke	Linearity	Resolution	Output and Supply		Electrical Connection	Operating Temp.	Protection Class
ILT	1000 mm	$\pm 0,1\% \dots \pm 1\%$ (according to stroke)	1 µm min.	Analog	15...33VDC	M12 connector or cable	-40...+85 °C	IP67
				SSI	8...33VDC			
				CANopen				





**OPTICAL LINEAR  
ENCODERS**

# Optical Linear Encoders Selection Table

		Measuring Lengths (max)	Resolution	Linearity (μm/m)	Repeatability (pulse)	Push pull <sup>(1)</sup>	TTL <sup>(2)</sup>	HTL <sup>(3)</sup>	HPL <sup>(4)</sup>	1Vpp Sinus <sup>(5)</sup>	PNP Open Collector	NPN Open Collector	Operating Speed (m/min)	Operating Temp. (°C)	Protection Class	Electrical Connection <sup>(6)</sup>
	<b>OLC-43X Optical Linear Encoder</b>	1000 mm	5μm	±10	±1	✓	✓	✓	✓	-	✓	✓	60	0...+50	IP 54	Cable and M16 Conn.
	<b>ALS-4 Optical Linear Encoder</b>	1000 mm	1μm 5μm 1Vpp	±10	±1	-	✓	-	-	✓	-	-	60	0...+50	IP 54	Cable, M16 or D-Sub Conn.
	<b>ALS-5 Optical Linear Encoder</b>	1500 mm	1μm 5μm 1Vpp	±10	±1	-	✓	-	-	✓	-	-	60	0...+50	IP 54	Cable, M16 or D-Sub Conn.
	<b>ALS-6 Optical Linear Encoder</b>	3200 mm	1μm 5μm 1Vpp	±10	±1	-	✓	-	-	✓	-	-	60	0...+50	IP 54	Cable, M16 or D-Sub Conn.

(1) PP : 10...30VDC Supply - 10...30VDC Output

(2) TTL : 5VDC Supply - 5VDC TTL Output

(3) HTL: 10...30VDC Supply - 5VDC TTL Output

(4) HPL: 5...30VDC Supply - 5...30VDC PP Output

(5) 5VDC Supply - 1Vpp Sinus Output

(6) ALS series; For TTL signal: D-SUB 9 pin connector, For Sinus signal: M16 8 pin connector is used.



# OPTICAL LINEAR ENCODERS



More information

## OLC 43X

**Long Distance, Accurate Measurement, IP54 Protection Class  
Push-Pull, TTL RS422 Line Driver or Open Collector Output**

The OLC 43X series optical linear encoders consist of a gasket protected aluminium body and reader sensor moving in this body.

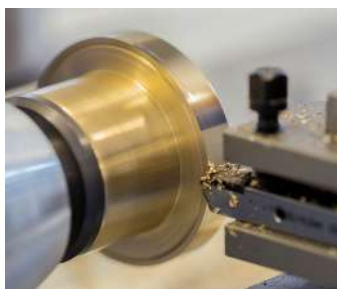
It is frictionless because of making non-contact measuring with glass scale. With its selectable reference signal at every 10 mm and its 5µm resolution, it is very suitable for high precision measurements.

With gasketed structure, it has extra protection against dust, dirt and chip.



### Applications:

- Manuel Benches
- Press Brakes and Bending Machines
- Robotic and Material Packaging
- Linear Bearing Systems
- Automation
- Robotic Applications



### General Feratures

- Incremental optical system
- Different measuring lengths from 50 mm to 1000 mm
- Reader sensor which is beared with steel shafts and rollers
- Gasket protected aluminium body
- Selectable reference signal which can be selected at every 10 mm
- 3 pcs LED indicators
- 5µm resolution
- IP54 protection class
- Compact design
- Wide mounting tolerance when connected with joint
- 60 m/min traversing speed



Model	Max. Stroke	Resolution	Electrical Interface	Electrical Connection	Traversing Speed	Operating Temp.	Protection Class
OLC-43X	1000 mm	5µm	PP : 10...30VDC Supply - 10...30VDC Output TTL : 5VDC Supply - 5VDC TTL Output HTL: 10...30VDC Supply - 5VDC TTL Output HPL: 5...30VDC Supply - 5...30VDC PP Output OCL: NPN Open Collector OCP: PNP Open Collector	D-Sub 9 pin connector, 5 veya 8 x 0,14 mm <sup>2</sup> kablo	60 m/min	-25...+85 °C	IP54

# OPTICAL LINEAR ENCODERS

## ALS SERIES

Measurement up to 3200 mm, IP54 Protection Class, 5VDC TTL or Sinus Output Signal

ALS series optical linear encoder systems are protected from factors such as dust, shavings, dirt and coolant with its compact design. ALS series, which has optical measuring principle with glass ruler, can measure up to 3200 mm.

- Optical measurement
- Measuring lengths up to 3200 mm
- High resolution up to 1  $\mu\text{m}$
- $\pm 10 \mu\text{m}$  accuracy
- 5 ball bearing system
- 5 VDC TTL quadrature or 1vpp sinusoidal signal
- Easy mounting
- 60 m/min traveling speed

### ALS-4

- Slim body type
- Different measuring lengths between 50 mm and 1000 mm



More information

### ALS-5

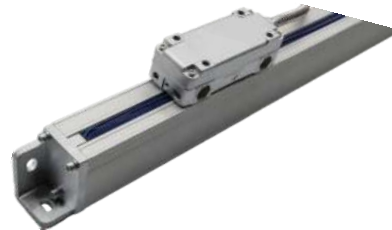
- Thick body type
- Different measuring lengths between 50 mm and 1500 mm



More information

### ALS-6

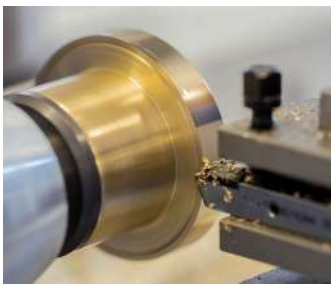
- Thick body type, long distance measurement
- Different measuring lengths between 50 mm and 3200 mm



More information

#### Applications:

- Manual Benches
- Press Brakes and Bending Machines
- Robotic / Material Packaging
- Automation and Robotic Applications
- Transfer Machines
- Linear Bearing Systems
- Turning, Milling
- Textile Machinery






Model	Max. Stroke	Resolution	Supply Voltage	Output Type	Electrical Connection	Traversing Speed	Operating Temp.	Protection Class
ALS 4	1000 mm	1 $\mu\text{m}$ , 5 $\mu\text{m}$ , 1Vpp	5VDC	5VDC TTL, 1Vpp Sinus	Connector and cable with spiral (For TTL Signal : D-SUB conn. / For Sinus Signal: M16 connector)	60 m/min	0...+50 °C	IP54
ALS 5	1500 mm							
ALS 6	3200 mm							





## MAGNETIC LINEAR ENCODERS

# Magnetic Linear Encoders Selection Table

		Measuring Length (max)	Resolution (μm)	Accuracy (μm/m)	Repeatability (pulse)	Push pull <sup>(1)</sup>	TTL <sup>(2)</sup>	HTL <sup>(3)</sup>	HPL <sup>(4)</sup>	Operating Speed (m/s)	Operating Temp. (°C)	Protection Class	Electrical Connection
	<b>MLC-310 Magnetic Linear Encoder</b>	Up to 20 meters	5, 10, 25, 50, 62.5, 100 (opt. other)	±40	±1	✓	✓	✓	✓	3	-25...+85	IP 67	Cable and D-Sub Conn.
	<b>MLC-320 Magnetic Linear Encoder</b>	Up to 20 meters	1, 5, 10, 25, 50, 62.5, 80 (opt. other)	±40 or ±20	±1	✓	✓	✓	✓	3	-25...+85	IP 67	Cable and D-Sub Conn.
	<b>MLC-330 Magnetic Linear Encoder</b>	Up to 20 meters	5, 10, 25, 50, 62.5, 100 (opt. other)	±40 or ±20	±1	✓	✓	✓	✓	3	-25...+85	IP 67	Cable and D-Sub Conn.
	<b>MLC-410 Magnetic Linear Encoder</b>	Up to 4 meters	5, 10, 25, 50, 62.5, 100 (opt. other)	±20	±1	✓	✓	✓	✓	3	-25...+85	IP 67	Cable and D-Sub Conn.
	<b>MLC-420 Magnetic Linear Encoder</b>	Up to 2 meters	5, 10, 25, 50 (opt. other)	±20	±1	✓	✓	✓	✓	3	-25...+85	IP 65	Cable and D-Sub Conn.
	<b>MLC-520 Magnetic Linear Encoder</b>	Up to 2 meters	5, 10, 25, 50, 62.5, 100 (opt. other)	±35	±1	✓	✓	✓	✓	3	-25...+85	IP 67	Cable and D-Sub Conn.
	<b>MLS-120 Magnetic Reader Sensor</b>	Up to 100 meters	1, 5, 10, 25, 50, 62.5, 80, 100 (opt. other)	±20	±1	✓	✓	✓	✓	3	-25...+85	IP 67	Conn.
	<b>MLS-121 Magnetic Reader Sensor</b>	Up to 100 meters	1, 5, 10, 25, 50, 62.5, 80, 100 (opt. other)	±20	±1	✓	✓	✓	✓	3	-25...+85	IP 67	Cable
	<b>MLS-130 Magnetic Reader Sensor</b>	Up to 100 meters	1, 5, 10, 25, 50, 62.5, 80, 100 (opt. other)	±20	±1	✓	✓	✓	✓	3	-25...+85	IP 67	Cable and D-Sub Conn.
	<b>MLS-210 Magnetic Reader Sensor</b>	Up to 100 meters	5, 10, 25, 62.5, 80, 100 (opt. other)	±20	±1	✓	✓	✓	✓	3	-25...+85	IP 67	Cable and D-Sub Conn.

(1) PP : 10...30VDC Supply - 10...30VDC Output

(2) TTL : 5VDC Supply - 5VDC TTL Output

(3) HTL: 10...30VDC Supply - 5VDC TTL Output

(4) HPL: 5...30VDC Supply - 5...30VDC PP Output

# MAGNETIC LINEAR ENCODERS

## MLC 300 Series

**Retensiton Profile Closed System, Magnetic Measurement, IP67 Protection, Push-Pull or TTL RS422 Line Driver Output**

MLC 300 magnetic linear encoder systems measure non-contactly and gives the output signal as an incremental encoder pulse.

They are not affected by external factors due to its compact design. MLC 300 sensor is housed along the aluminum profile. Extra protection from dust, dirt and chips is provided by having a seal protection system. It is the ideal solution for machining environments. It can be produced up to a measuring length of 20.000 mm.

- High accuracy and repeatability
- Magnetic measurement
- Contactless / non-friction system
- High tolerance to vibration and shocks
- Measuring up to 20 meters
- Resistant to dust, oil and moisture
- No maintenance required
- Robust aluminum body
- IP67 protection class
- Easy installation

### MLC-310

- Thick profile structure, double sealed protection
- Different measuring lengths between 100 mm and 4000 mm
- \*Optional up to 20.000 mm



More information

### MLC-320

- Extra thin profile structure, sealed protection
- Different measuring lengths between 100 mm and 1000 mm
- \*Optional up to 20.000 mm



More information

### MLC-330

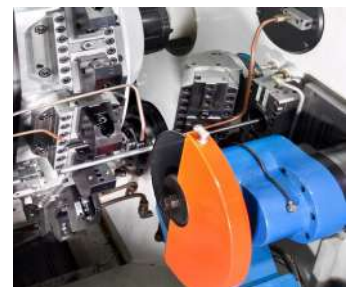
- Thin profile structure, sealed protection
- Different measuring lengths between 100 mm and 4000 mm
- \*Optional up to 20.000 mm



More information

#### Applications:

- Machinery Industry
- PVC Cutting Machines
- Woodworking
- Press Brakes
- Textile Machinery
- Marble Machinery
- Metal Processing Machinery
- Lathe
- Milling
- Bohrwerk
- Transfer Machines
- Vargel



Model	Max. Stroke	Resolution	Electrical Interface	Electrical Connection	Operating Speed	Operating Temp.	Protection Class
MLC-310	20.000 mm	5µm, 10µm, 25µm, 50 µm, 62.5µm, 100µm	PP : 10...30VDC Supply - 10...30VDC Output	D-Sub 9 pin connector, 5 or 8 x 0,14 mm <sup>2</sup> cable	3 m/s	-25...+85 °C	IP67
MLC-320		1µm, 5µm, 10µm, 25µm, 50µm, 62.5µm, 80µm	TTL : 5VDC Supply - 5VDC TTL Output HTL: 10...30VDC Supply - 5VDC TTL Output				
MLC-330		5µm, 10µm, 25µm, 50 µm, 62.5µm, 100µm	HPL: 5...30VDC Supply - 5...30VDC PP Output				



# MAGNETIC LINEAR ENCODERS

## MLC 400 Series

**For Press Brake and Bending Machines, Contactless/Non-friction System,  
Push-Pull or TTL RS422 Line Driver Output**

MLC 400 series magnetic linear encoder systems measure non-contactly and gives the output signal as an incremental encoder pulse.

MLC 400 series magnetic linear encoders are specially designed for high speed and vibration, especially for press brakes. Due to excellent bearing, it is possible to prevent any mistakes that may occur because of vibration, during measurement.

- High accuracy and repeatability
- Magnetic measurement
- Contactless / non-friction system
- High tolerance to vibration and shocks
- Excellent bearing system
- Easy mounting with wide mounting tolerances
- Portable reference point
- Resistant to dust, oil and moisture
- Robust aluminum body
- Excellent Stability

### MLC-410

Due to excellent bearing, it is possible to prevent any mistakes that may occur because of vibration, during measurement. It is used to control right and left hydraulic cylinders to provide synchronization in press brakes. It can also be used for applications with vibrations other than press brakes.

- Measuring up to 4 meters
- IP67 protection class
- The same scale can be used as left or right



More information

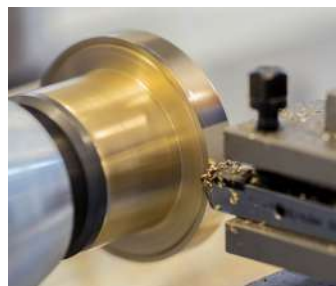
### MLC-420

With its mounting points and design, it minimizes errors that may occur due to temperature changes. On the other hand, special measures have been taken against the vibrations caused by the machine. Thanks to its ergonomic design, the cable output does not interfere with the ruler and works in perfect stability. The direction of the ruler can be easily changed by the user.

- Measuring up to 2 meters
- IP65 protection class
- The same scale can be used as left or right



More information



Model	Max. Stroke	Resolution	Electrical Interface	Electrical Connection	Operating Speed	Operating Temp.	Protection Class
MLC-410	4000 mm	5µm, 10µm, 25µm, 50 µm, 62.5µm, 100µm	PP : 10...30VDC Supply - 10...30VDC Output TTL : 5VDC Supply - 5VDC TTL Output HTL: 10...30VDC Supply - 5VDC TTL Output HPL: 5...30VDC Supply - 5...30VDC PP Output	D-Sub 9 pin connector , 5 or 8 x 0,14 mm <sup>2</sup> cable	3 m/s	-25...+85 °C	IP67
MLC-420	2000 mm	5µm, 10µm, 25µm, 50 µm					IP65

# MAGNETIC LINEAR ENCODERS



## MLC 520

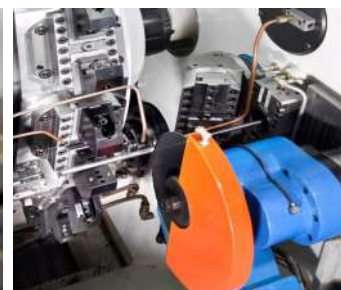
**For Press Brake and Bending Machines, Contactless/Non-friction System, Push-Pull or TTL RS422 Line Driver Output, IP67 Protection**

MLC 520 series magnetic linear encoder systems measure non-contactly and gives the output signal as an incremental encoder pulse.

MLC 520 series magnetic linear encoders are specially designed for high speed and vibration, especially for press brakes. Due to excellent bearing, it is possible to prevent any mistakes that may occur because of vibration, during measurement.

### Applications:

- Machinery Industry
- PVC Cutting Machines
- Woodworking
- Press Brakes
- Textile Machinery
- Marble Machinery
- Metal Processing Machinery
- Lathe
- Milling
- Bohrwerk
- Transfer Machines
- Vargel



### General Features

- Magnetic non-contact measurement
- Different measuring lengths between 50 ... 2000 mm
- Adjustable Z reference points
- 5µm, 10µm, 25µm, 50 µm, 62.5µm, 100µm resolution
- Incremental encoder output: A, B, Z, /A, /B, /Z
- Status LEDs
- Versatile mounting possibilities
- Shock and vibrations resistance
- Resistant to dust, oil and moisture
- Robust aluminum body
- IP67 protection
- Compatible with Delem, Cybelec and ESA



Model	Max. Stroke	Resolution	Electrical Interface	Electrical Connection	Operating Speed	Operating Temp.	Protection Class
MLC-520	2000 mm	5µm, 10µm, 25µm, 50 µm, 62.5µm, 100µm	PP : 10...30VDC Supply - 10...30VDC Output TTL : 5VDC Supply - 5VDC TTL Output HTL: 10...30VDC Supply - 5VDC TTL Output HPL: 5...30VDC Supply - 5...30VDC PP Output	D-Sub 9 pin connector , 5 or 8 x 0,14 mm <sup>2</sup> cable	3 m/s	-25...+85 °C	IP67

# MAGNETIC LINEAR ENCODERS

## MLS Series Reader Sensors

**Compact Reader Sensor, Magnetic Measurement, IP67 Protection**  
**Push-Pull or TTL RS422 Line Driver Output**

The MLS series reader sensors can be used with magnetic stripe tape as well as PS profile system.

It moves at a distance of 0,1 - 2 mm without touching the magnetic band and reads the position information precisely and sends it as encoder pulse.

Its compact structure provides the user with maximum ease of installation. There are spiral and cable models.

- Non-contact measurement with magnetic principle
- Easy Installation
- Resolution from 1  $\mu\text{m}$  to 100  $\mu\text{m}$
- Push-pull and TTL output
- High accuracy and repeatability
- Spiral or cable options
- Measuring up to 100 meters
- Dust, oil and nourishment insensitive
- Insensitive to noise and vibrations
- Robust aluminum body
- IP67 protection class

### Applications:

- Machinery Industry
- PVC Cutting Machines
- Woodworking Machinery
- Press Brakes
- Textile Machinery
- Marble Machinery
- Transfer Machines
- Saws
- Metal Processing Machinery
- Lathe
- Milling
- Bohrwerk
- Vargel
- Robots



### MLS 110

- Small reader sensor
- Resolution from 1  $\mu\text{m}$  to 100  $\mu\text{m}$
- As standard, a Z Reference Signal at 5mm for B5 tape and one at 2mm for B2 tape
- External Z reference signal with optional magnet



More information

### MLS 120 / MLS 121

- Compact reader sensor with scraper
- Model with socket or cable
- Resolution from 1  $\mu\text{m}$  to 100  $\mu\text{m}$
- As standard, a Z Reference Signal at 5mm for B5 tape and one at 2mm for B2 tape
- External Z reference signal with optional magnet



More information



## MLS 130

- Very small size reader sensor
- Resolution from 1  $\mu\text{m}$  to 100  $\mu\text{m}$
- As standard, a Z Reference Signal at 5mm for B5 tape and one at 2mm for B2 tape
- Optional one Z reference signal



More information

## MLS 210

- Big size reader sensor
- Resolution from 5  $\mu\text{m}$  to 100  $\mu\text{m}$
- As standard, Z Reference Signal at every 5mm
- Optional one Z reference signal



More information

### Magnetic Tape or Profile Systems Used with MLS Series



PS1 Profile System



PS2 Profile System



PS3 Profile System



B2 or B5 Magnetic Tape

### Sample Combinations



B5 Magnetic Tape +  
MLS 110 Sensor



B2 Magnetic Tape +  
MLS 120 Sensor



B2 Magnetic Tape +  
MLS 130 Sensor



PS 110 Carrier Profile +  
MLS 210 Sensor



PS 220 Carrier Profile +  
MLS 110 Sensor



PS 220 Carrier Profile +  
MLS 120 Sensor



PS 220 Carrier Profile +  
MLS 130 Sensor



PS 310 Carrier Profile+  
MLS 210 Sensor

Model	Magnetic Tape	Resolution	Electrical Interface	Electrical Connection	Operating Speed	Operating Temp.	Protection Class
MLS-110	B2 B5	1 $\mu\text{m}$ , 5 $\mu\text{m}$ , 10 $\mu\text{m}$ , 25 $\mu\text{m}$ , 50 $\mu\text{m}$ , 62.5 $\mu\text{m}$ , 80 $\mu\text{m}$ , 100 $\mu\text{m}$ (optional other)	PP : 10...30VDC Supply - 10...30VDC Output TTL : 5VDC Supply - 5VDC TTL Output HTL: 10...30VDC Supply - 5VDC TTL Output HPL: 5...30VDC Supply - 5...30VDC PP Output	D-Sub 9 pin connector, 5 or 8 x 0,14 mm <sup>2</sup> cable	3 m/s	-25...+85 °C	IP67
MLS-120							
MLS-130							
MLS-210	B5	5 $\mu\text{m}$ , 10 $\mu\text{m}$ , 25 $\mu\text{m}$ , 50 $\mu\text{m}$ , 62.5 $\mu\text{m}$ , 80 $\mu\text{m}$ , 100 $\mu\text{m}$ (optional other)					

# MAGNETIC LINEAR ENCODER SYSTEMS

## B SERIES MAGNETIC TAPE

### 3 Layers Sturdy and Flexible Structure, Easy Installation

- Easy Installation
- Robust and flexible construction
- 5 mm or 2 mm pole distance
- Measuring up to 100 meters
- Dust, oil and moisture insensitive
- IP67 protection class
- Nitrile rubber



More informations



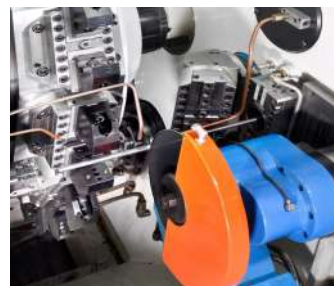
B Magnetic Tape +  
MLS 110 Sensor

B Magnetic Tape +  
MLS 120 Sensor

B Magnetic Tape +  
MLS 130 Sensor

B Magnetic Tape +  
MLS 210 Sensor

Model	Pole Distance	Accuracy	Temperature Coefficient	Operating Temperature	Protection
B Series Magnetic Tape	5 mm or 2 mm	$\pm 18 \mu\text{m/m}$ or $\pm 20 \mu\text{m/m}$	$11 \pm 1 \mu\text{m} / \text{K}$	$-40...+120^\circ\text{C}$	CrNi 17 7 stainless steel sheet Oil, dust, etc. insensitive



## RB SERIES MAGNETIC RING

### Radial Magnetic Ring For Non-contact Incremental Measurement

- Magnetic non-contact incremental measurement technology
- Different resolution options up to 36000 pulses with Atek MLS series reader sensors
- 1mm, 2mm or 5mm pitch
- Hollow shaft up to 54mm
- High accuracy
- Hard ferrite material
- Robust structure
- Resistant to dust, oil and moisture
- IP67 protection



More informations

Model	Pole Length	Number of Pole	Accuracy	Operating Temperature	Protection
RB Series Magnetic Ring	1 mm, 2 mm or 5 mm	36, 46, 50, 64, 72, 100 or 128	$0.1^\circ / 0.01^\circ$ ( depend on diameter )	$-20...+180^\circ\text{C}$	Sintered ferrite IP67

# MAGNETIC LINEAR ENCODER SYSTEMS

## PS SERIES CARRIER PROFILES

### Robust Structure, Easy Mounting, IP67 Protection

In PS Series profile systems, magnetic tape is integrated into the profiles.

The most important feature of **PS 100** series are easy mounting. It can be used with MLS-110, MLS-120, MLS-130 and MLS-210 reader sensors.

- Tape in "L" Aluminum Profile
- Contactless and Wear Free System
- Easy Mounting
- High Accuracy
- IP67 Protection Class



More information

**PS 200 Series** "Slim" profile is extremely robust, flexible plastic magnetic tape can be easily applied to the machine tool. Can be used for all reader sensors.

- Slim Profile Type
- Non Contact / Frictionless Measurement
- Easy Mounting
- High Accuracy
- IP67 Protection Class



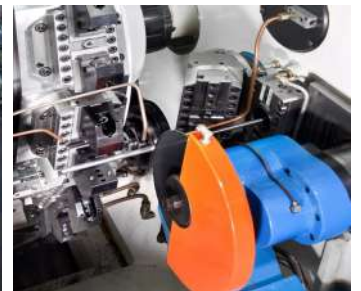
More information

**PS 300 Series** "Closed" profile, sealing system provides extra protection against dust and chips. Can only be used with MLS-210 reader sensors.

- Bearing Profile System
- Double Seal Protection
- Extra Protection Against External Factors
- Non Contact / Frictionless Measurement
- Easy Mounting
- High Accuracy
- IP67 Protection Class



More information



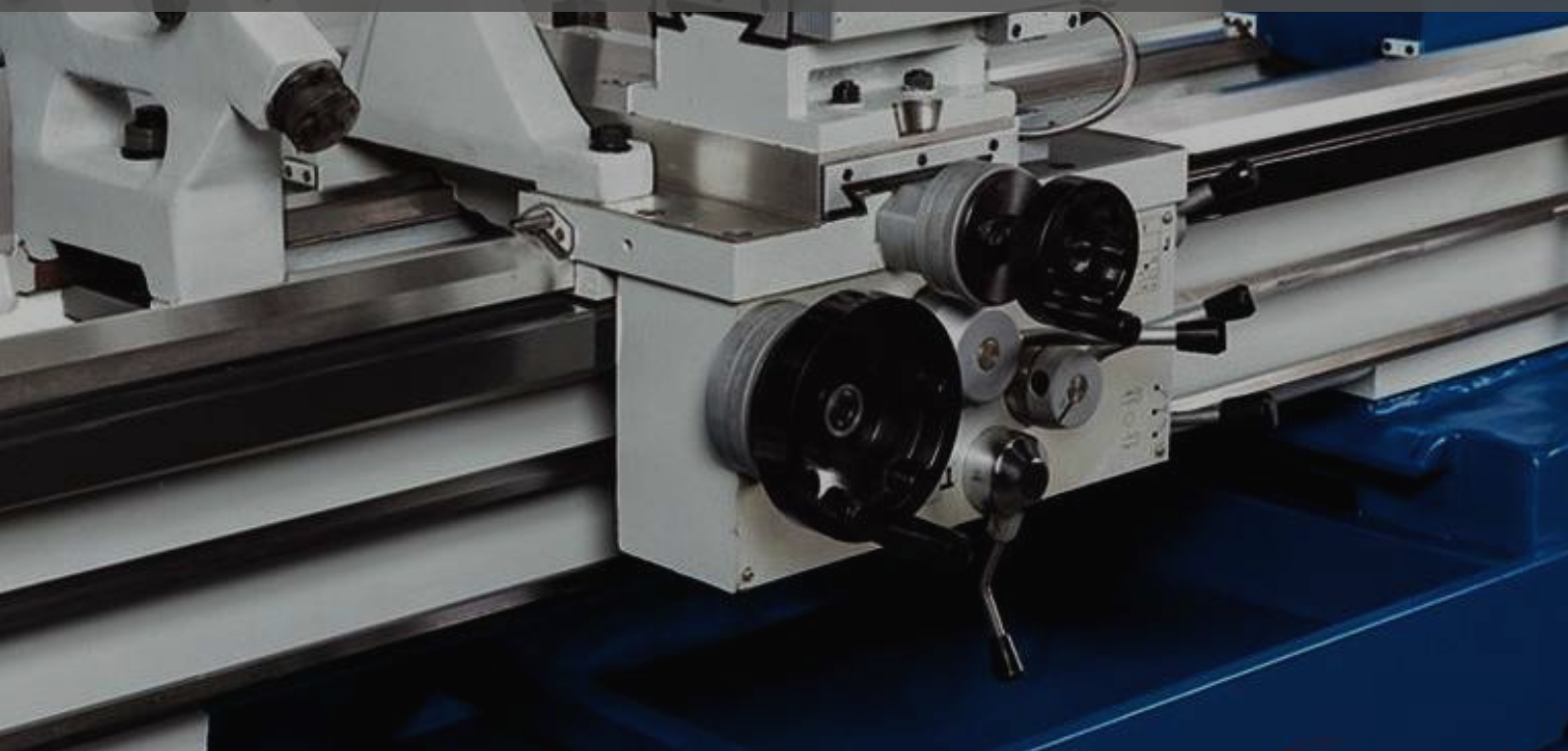
Model	Body	Magnetic Tape Type	Operating Temp.	Protection Class
PS 100	Aluminum (L) Type Profile	B5 (Optional B2)	-25 ... +85°C	IP67
PS 200	Aluminum (L) Type Profile			
PS 300	Aluminum Closed Profile			





## Digital Readout Systems

2, 3 or 4 axis ADR series digital readouts are designed to provide maximum performance in all metalworking machines and are designed for pool drain, divisor, linear weaving, simple and soft radius, taper measurement, angle measurement, erosion, error correction, shrink, diameter mode, user modes and dozens of other functions, including all the features necessary to increase productivity.





## LINEAR GAUGES / TASTERS

# LINEAR GAUGE / TASTER

## MLG Series



More information

### Spring Loaded System, Push-Pull or TTL Output, IP54 Protection

- 5mm or 10mm measuring range
- Spring Loaded System
- 1  $\mu$ m high resolution
- 20  $\mu$ m linearity
- Quadrature square wave output
- Small structure, easy installation
- Robust aluminum housing
- IP54 protection class

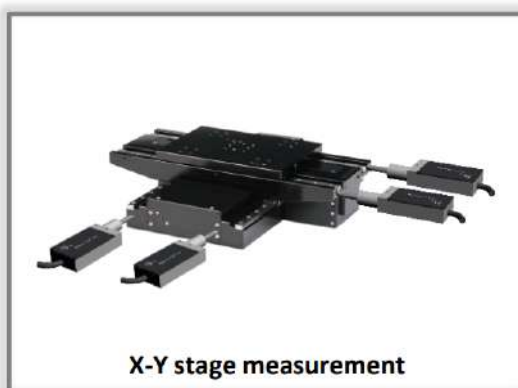


MLG 112 series linear gauges are used for the measurement of various dimensions, displacements and travel distances. It reads position information sensitively and sends it as encoder pulse

With its compact structure, it provides maximum ease of installation to the user. It also has a long working life of up to 10 million times. It provides suitable solutions for areas such as cyclic position measurements, automatic dimension measurements, industrial measurement systems.



Part size measurement



X-Y stage measurement



Part height measurement

Model	Measurement Range	Resolution	Electrical Interface	Electrical Connection	Operating Speed	Operating Temperature	Protection
MLG-112	5mm or 10mm	1 $\mu$ m	PP : 10...30VDC Supply - 10...30VDC Output TTL : 5VDC Supply - 5VDC TTL Output HTL: 10...30VDC Supply - 5VDC TTL Output HPL: 5...30VDC Supply - 5...30VDC PP Output	0,14 mm <sup>2</sup> shielded cable	3 m/s	-25...+85°C	IP54





**DIGITAL READOUT  
SYSTEMS**

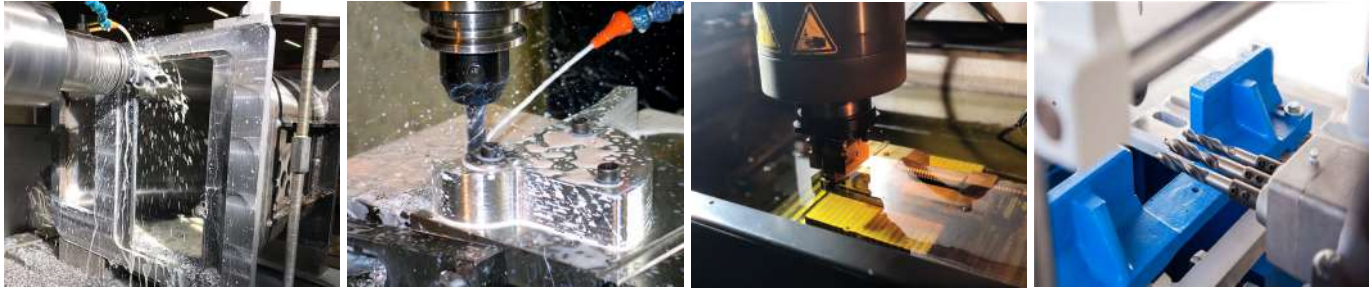
# DIGITAL READOUT SYSTEMS

## ADR Series

**2, 3 or 4 Axis Option, User Designated Resolution, 1000 Program Memory, 5 Different Languages**

ADR Series Digital Readout Systems are designed to provide maximum efficiency and performance from all your metalworking machines.

ADR series with 2, 3 and 4 axis options, has a powerful memory, 1000 program memories and 1000 tool memories for lathes. There are 5 different menu language options: Turkish, English, German, Spanish and Portuguese. Connection opportunity by contact probe is also available.



### Applications:

- All metalworking machines
- Lathe
- Bohrwerk
- Milling
- EDM
- Grinding Machines



### ADR-10

- 2, 3 or 4 Axis
- User Designated Resolution
- Data Transmission with RS-232 Port
- 1.000 Program Memory
- Angle Measuring
- 1.000 pieces of tool memory for turning
- Contact Probe Connection
- 24 VAC/VDC or 85 – 265 VAC Supply
- 8+1 Dijiit Digit Wide Display Screen
- 5 Different Language Options



More information



### ADR-50

- 2, 3 or 4 Axis
- Colorful LCD
- User Designated Resolution
- USB or RS232 Port Option
- 6 Adet Open Collector Output
- 2D Simulations
- 1.000 Coordinate Memory
- Angle Measurement
- 24 VAC/VDC or 85 – 265 VAC Supply
- 5 Language Options



More information

Model	Number of Axis	Display	Display Resolution	Input Signal	Supply Voltage	Operating Temp.	Measuring Limits
ADR-10	2, 3 or 4	8 Digit +1 Sign Digit, Green, Touring (-) Sign	User can designate as requested	Optional Push Pull or TTL A,B,Z (Line Driver A, B, Z, /A, /B, /Z) Incremental Encoder Signals	85 – 265 VAC 50/60 Hz. or 24 VAC / VDC	-10...+45 °C	- 99999,999 mm ~ 99999,999 mm
ADR-50		Colorful LCD					





**DRAW WIRE SENSORS  
AND ENCODERS**



# Draw Wire Sensors Product Selection Table

		Max Stroke (mm)	Linearity (%)	Analog Output	CANopen Output	Supply Voltage	Maximum Speed	Electrical Connection	Operating Temp. (°C)	Protection Class
	<b>AWP 110 Series Draw Wire Sensor</b>	1200	±0,25 FS	Potentiometric 0-10V 4-20 mA	-	12...30 VDC 42V max. (*)	2 m/s	cabl M12	-25...+85	IP53
	<b>AWP 116 Series Draw Wire Sensor</b>	2500	±0,25 FS	Potentiometric	-	42V max. (*)	2 m/s	cabl M12	-25...+85	IP40
	<b>AWP 210 Series Draw Wire Sensor</b>	5000	±0,25 FS	Potentiometric 0-10V 4-20 mA	-	12...30 VDC 42V max. (*)	2 m/s	cabl M12	-25...+85	IP53
	<b>AWP 310 Series Draw Wire Sensor</b>	10000	±0,25 FS	Potentiometric 0-10V 4-20 mA	-	12...30 VDC 42V max. (*)	2 m/s	cabl M12	-25...+85	IP53
	<b>AWP 404 Series Draw Wire Sensor</b>	4000	±0,1 FS	Potentiometric 0-10V 4-20 mA *Opt. redundant	✓	10...30 VDC 12...30 VDC 42V max. (*)	2 m/s	cabl M12	-25...+85	IP54 IP67
	<b>AWP 508 Series Draw Wire Sensor</b>	8000	±0,5 FS	Potentiometric 0-10V 4-20 mA *Opt. redundant	✓	10...30 VDC 12...30 VDC 42V max. (*)	2 m/s	cabl M12	-25...+85	IP54 IP67
	<b>AWP 512 Series Draw Wire Sensor</b>	12000	±1 FS	Potentiometric 0-10V 4-20 mA *Opt. redundant	✓	10...30 VDC 12...30 VDC 42V max. (*)	2 m/s	cabl M12	-25...+85	IP54 IP67
	<b>AWP 515 Series Draw Wire Sensor</b>	15000	±0.5 FS	Potentiometric 0-10V 4-20 mA *Opt. redundant	✓	10...30 VDC 12...30 VDC 42V max. (*)	2 m/s	cabl M12	-25...+85	IP54 IP67
	<b>AWP 722 Series Draw Wire Sensor</b>	22000	±0,3 FS	Potentiometric 0-10V 4-20 mA *Opt. redundant	✓	10...30 VDC 12...30 VDC 42V max. (*)	2 m/s	cabl M12	-25...+85	IP53 IP67
	<b>AWP 810 Series Draw Wire Sensor</b>	5100	±0,25 FS	Potentiometric 0-10V 4-20 mA *Opt. redundant	✓	10...30 VDC 12...30 VDC 42V max. (*)	2 m/s	cabl M12	-25...+85	IP65
	<b>AWP 820 Series Draw Wire Sensor</b>	8000	±0,25 FS	Potentiometric 0-10V 4-20 mA *Opt. redundant	✓	10...30 VDC 12...30 VDC 42V max. (*)	2 m/s	cabl M12	-25...+85	IP65
	<b>AWP 905 Series Draw Wire Sensor</b>	5000	±0,25 FS	Potentiometric 0-10V 4-20 mA *Opt. redundant	✓	10...30 VDC 12...30 VDC 42V max. (*)	2 m/s	cabl M12	-25...+85	IP67

(\*) Supply Voltage;

For potentiometric output: 42V max.

For voltage and current output: 12...30VDC

For CANopen output: 10...30VDC

# DRAW WIRE SENSORS

## AWP Series Draw Wire Sensors

Potentiometric Measurement Up to 22000 mm, IP67 Protection  
Potentiometric / 4-20 mA / 0-10V / CANopen Output

AWP series draw wire sensors; consists of a rotary potentiometer which is controlled by stainless steel wire. They make measurement by pulling and rewinding stainless steel wire. They convert linear motion into potentiometric output. With these sensors, length or velocity measurements are made of linear movements. There is no tensions in these sensors. Precise position measurement is made without any tension, especially in vibrating movements with large range of motion at long distances.

Potentiometric, 4-20 mA, 0-10V or CANopen output signals can be received from draw wire sensors with a measurement distance of up to 22000 mm. In addition to the standard models, it is possible to produce non-standard models specific to the customer.

- Different measuring lengths up to 22000 mm
- Linearity up to  $\pm 0.1$  FS
- Analog or CANopen output options
- Aluminum housing and ve stainless steel measuring wire
- 2 m/s maximum speed
- Compact structure
- Models with IP67 protection class
- Shock / vibration resistant
- Easy installation

### Applications:

- Elevators
- Crane systems
- Wood processing machines
- Press machines
- Hydraulic machines
- Forklifts
- Medical applications
- Sheet metal machines
- Construction machinery
- Horizontal control equipments
- Injection machines
- Industrial robots
- X-Y axis displacement
- Sluice gate control
- Air compressors
- Various Automation Applications



### AWP 110

- Different measuring lengths between 200 mm and 1200 mm
- $\pm 0.25$  FS linearity
- Potentiometric, 0-10 VDC or 4-20 mA output
- IP53 protection class



More information

### AWP 116

- Different measuring lengths up to 2500 mm
- $\pm 0.25$  FS linearity
- Potentiometric output
- IP40 protection class



More information

### AWP 210

- Different measuring lengths between 1000 mm and 5000 mm
- $\pm 0.25$  FS linearity
- Potentiometric, 0-10 VDC or 4-20 mA output
- IP53 protection class



More information

### AWP 310

- Different measuring lengths between 5100 mm and 10000 mm
- $\pm 0.25$  FS linearity
- Potentiometric, 0-10 VDC or 4-20 mA output
- IP53 protection class



More information

## AWP 404

- Different measuring lengths between 1000 mm and 4000 mm
- $\pm 0.1$  FS linearity
- Potentiometric, 0-10 VDC, 4-20 mA or CANopen output
- Standard IP54, optional IP67 protection class



More information

## AWP 508

- Different measuring lengths between 4000 mm and 8000 mm
- $\pm 0.5$  FS linearity
- Potentiometric, 0-10 VDC, 4-20 mA or CANopen output
- Standard IP54, optional IP67 protection class



More information

## AWP 512

- Different measuring lengths between 8000 mm and 12000 mm
- $\pm 1$  FS linearity
- Potentiometric, 0-10 VDC, 4-20 mA or CANopen output
- Standard IP54, optional IP67 protection class



More information

## AWP 515

- Different measuring lengths up to 15000 mm
- $\pm 0.5$  FS linearity
- Potentiometric, 0-10 VDC, 4-20 mA or CANopen output
- Standard IP54, optional IP67 protection class



More information

## AWP 810

- Different measuring lengths between 2000 mm and 5100 mm
- $\pm 0.25$  FS linearity
- Potentiometric, 0-10 VDC, 4-20 mA or CANopen output
- IP65 protection class



More information

## AWP 820

- Different measuring lengths between 6000 mm and 11000 mm
- $\pm 0.25$  FS linearity
- Potentiometric, 0-10 VDC, 4-20 mA or CANopen output
- IP65 protection class



More information

## AWP 905

- Different measuring lengths up to 5000 mm
- $\pm 0.25$  FS linearity
- Potentiometric, 0-10 VDC, 4-20 mA or CANopen output
- IP67 protection class



More information

Model	Max. Stroke	Linearity	Electrical Interface		Electrical Connection	Max. Speed	Operating Temperature	Protection
AWP 110	1200 mm	±%0.25 FS	Output Potentiometric 0-10 V 4-20 mA	Supply 42V max. 12...30 VDC 12...30 VDC	Cable or M12 connector	2 m/s	-25...+85 °C	IP53
AWP 210	5000 mm							
AWP 310	10000 mm							
AWP 404	4000 mm	±%0.1 FS	Output Potentiometric 0-10 V 4-20 mA CANopen	Supply 42V max. 12...30 VDC 12...30 VDC 10...30 VDC				IP54 (opt. IP67)
AWP 508	8000 mm	±%0.5						
AWP 512	12000 mm	%1 FS						
AWP 515	15000 mm	±%0.5						
AWP 810	5100 mm	±%0.25 FS						
AWP 820	8000 mm							
AWP 905	5000 mm							IP67



# DRAW WIRE SENSORS

## AWP Series Programmable Draw Wire Sensors

**Magnetic Absolute Measurement Up to 40.000 mm, High Protection Class Up to IP67  
Analog or CANopen Output, Programmable Analog Output**

### AWP 110 HR

- Different measuring lengths between 200 mm and 1200 mm
- $\pm 0.25$  FS linearity
- 0-10V, 0.5-4.5V, 0-5V, 4-20 mA or CANopen output
- Programmable analog output option
- IP67 protection class



More information

### AWP 515

- Different measuring lengths up to 15000 mm
- $\pm 0.5$  FS linearity
- 0-10V, 0.5-4.5V, 0-5V, 4-20 mA or CANopen output
- Programmable analog output option
- Standard IP54, optional IP67 protection class



More information

### AWP 703

- Different measuring lengths up to 3000 mm
- $\pm 0.3$  FS linearity
- 0-10V, 0.5-4.5V, 0-5V, 4-20 mA or CANopen output
- Programmable analog output option
- IP67 protection class



More information

### AWP 706

- Different measuring lengths up to 6000 mm
- $\pm 0.3$  FS linearity
- 0-10V, 0.5-4.5V, 0-5V, 4-20 mA or CANopen output
- Programmable analog output option
- IP67 protection class



More information

### AWP 722

- Different measuring lengths up to 22000 mm
- $\pm 0.3$  FS linearity
- 0-10V, 0.5-4.5V, 0-5V, 4-20 mA or CANopen output
- Programmable analog output option
- Standard IP53, optional IP67 protection class



More information

### AWP 740

- Different measuring lengths up to 40000 mm
- $\pm 0.3$  FS linearity
- 0-10V, 0.5-4.5V, 0-5V, 4-20 mA or CANopen output
- Programmable analog output option
- IP67 protection class



More information

# Draw Wire Encoders Selection Table

		Max Stroke (mm)	Linearity (%)	Resolution	Push pull <sup>(1)</sup>	TTL <sup>(2)</sup>	HTL <sup>(3)</sup>	HPL <sup>(4)</sup>	Maximum Speed	Electrical Connection	Operating Temp. (°C)	Protection Class
	<b>AWE 110 Series Draw Wire Encoder</b>	1200	±0,25 FS	0.1 0.2 0.05	✓	✓	✓	✓	2 m/s	cablo M12	-25...+85	IP 53
	<b>AWE 210 Series Draw Wire Encoder</b>	5000	±0,25 FS	0.2	✓	✓	✓	✓	2 m/s	cablo M12	-25...+85	IP 53
	<b>AWE 310 Series Draw Wire Encoder</b>	10000	±0,25 FS	0.3	✓	✓	✓	✓	2 m/s	cablo M12	-25...+85	IP 53
	<b>AWE 404 Series Draw Wire Encoder</b>	4000	±0,25 FS	0.1 0.2 0.05	✓	✓	✓	✓	2 m/s	cablo M12	-25...+85	IP54 IP67
	<b>AWE 508 Series Draw Wire Encoder</b>	8000	±0,25 FS	0.1 0.2 0.05	✓	✓	✓	✓	2 m/s	cablo M12	-25...+85	IP54 IP67
	<b>AWE 512 Series Draw Wire Encoder</b>	12000	±0,25 FS	0.3	✓	✓	✓	✓	2 m/s	cablo M12	-25...+85	IP54 IP67
	<b>AWE 722 Series Draw Wire Encoder</b>	22000	±0,3 FS	0.3	✓	✓	✓	✓	2 m/s	kablo M12	-25...+85	IP53 IP67

(1) PP : 10...30VDC Supply - 10...30VDC Output

(2) TTL : 5VDC Supply - 5VDC TTL Output

(3) HTL: 10...30VDC Supply - 5VDC TTL Output

(4) HPL: 5...30VDC Supply - 5...30VDC PP Output

# DRAW WIRE SENSORS

## AWE Series Draw Wire Encoders

**Incremental Measurement Up to 22000 mm, High Protection Up to IP67  
Push-Pull or TTL Output**

AWP series draw wire encoders convert linear motion into incremental digital pulses. They make measurement by pulling and rewinding stainless steel wire. Length or velocity measurements are made with these sensors in linear movements..

Push-pull or TTL output signals can be received from draw wire encoders with a measurement distance of up to 22000 mm. In addition to the standard models, it is possible to produce non-standard models specific to the customer.

- Different measuring lengths up to 22000 mm
- $\pm 0.25$  FS linearity
- High resolution up to 0.05 mm/pulse
- Push-pull or TTL output
- Aluminum housing and ve stainless steel measuring wire
- 2 m/s maximum speed
- Compact structure
- Models with IP67 protection class
- Shock / vibration resistant
- Easy installation

### Applications:

- Elevators
- Crane systems
- Wood processing machines
- Press machines
- Hydraulic machines
- Forklifts
- Medical applications
- Sheet metal machines
- Construction machinery
- Horizontal control equipments
- Injection machines
- Industrial robots
- X-Y axis displacement
- Sluice gate control
- Air compressors
- Various Automation Applications



### AWE 110

- Different measuring lengths between 300 mm and 1200 mm
- 0.1 mm/pulse, 0.2 mm/pulse or 0.05 mm/pulse resolution options
- Standard IP53 protection class



More information

### AWE 210

- Different measuring lengths between 1000 mm and 5000 mm
- 0.2 mm/pulse resolution
- IP53 protection class



More information

### AWE 310

- Different measuring lengths between 5000 mm and 10000 mm
- 0.3 mm/pulse resolution
- IP53 protection class



More information



## AWE 404

- Different measuring lengths between 1000 mm and 4000 mm
- 0.1 mm/pulse, 0.2 mm/pulse or 0.05 mm/pulse resolution options
- Standard IP54, optional IP67 protection class



More information

## AWE 508

- Different measuring lengths between 4000 mm and 8000 mm
- 0.3 mm/pulse resolution
- Standard IP54, optional IP67 protection class



More information

## AWE 512

- Different measuring lengths between 5000 mm and 12000 mm
- 0.3 mm/pulse resolution
- Standard IP54, optional IP67 protection class



More information

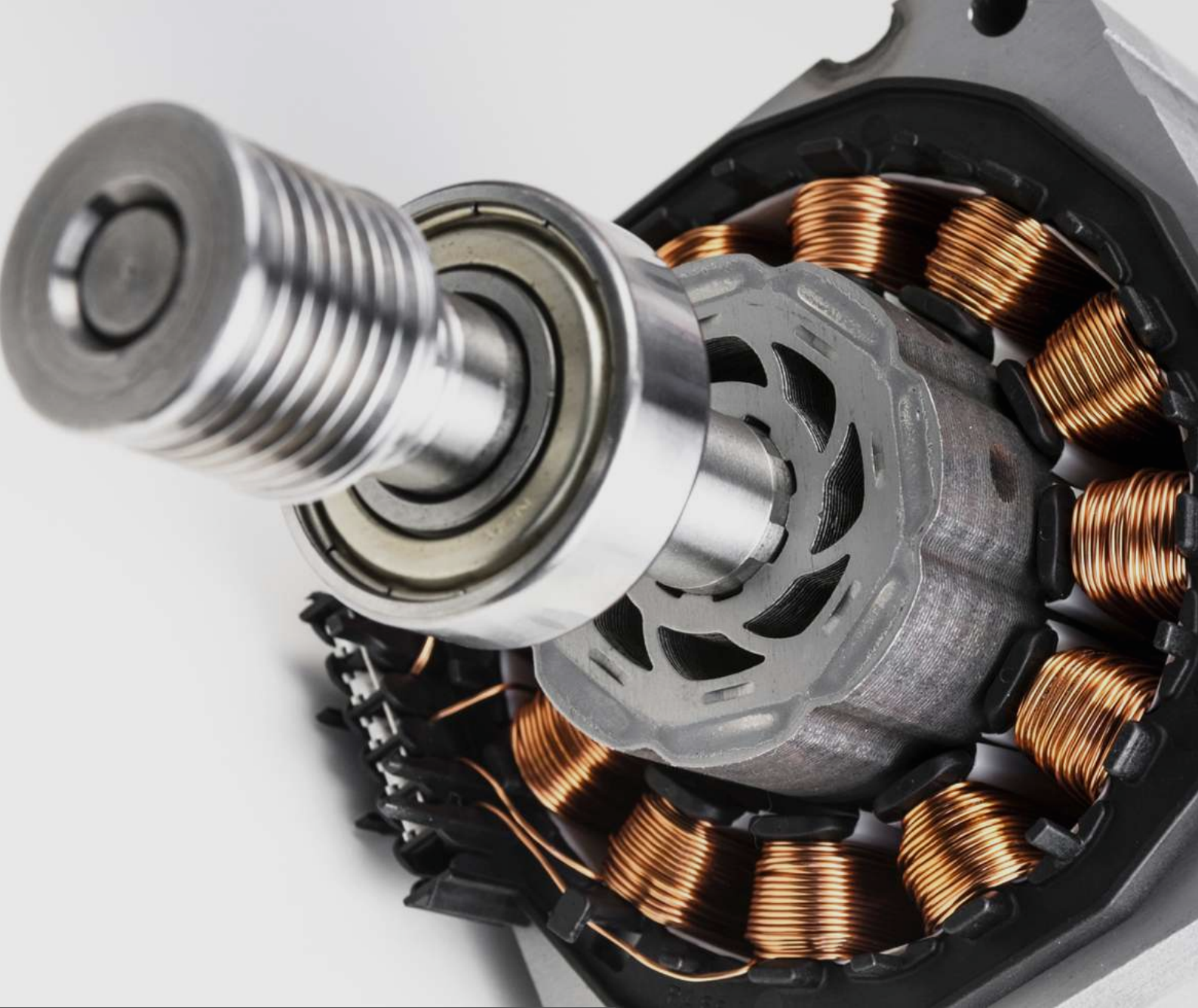
## AWE 722

- Different measuring lengths between 14000 mm and 22000 mm
- 0.3 mm/pulse resolution
- Standard IP53, optional IP67 protection class



More information

Model	Max Stroke	Linearity	Resolution	Electrical Interface	Electrical Connection	Max Speed	Operating Temp.	Protection
AWE 110	1200 mm	±%0.25 FS	0.1 mm/pulse 0.2 mm/pulse 0.05 mm/pulse	PP : 10...30VDCSupply - 10...30VDC Output TTL : 5VDCSupply - 5VDC TTL Output HTL: 10...30VDCSupply - 5VDC TTL Output HPL: 5...30VDCSupply - 5...30VDC PP Output	Cable or M12 connector	2 m/s	-25...+85 °C	IP53
AWE 210	5000 mm		0.2 mm/pulse					
AWE 310	10000 mm		0.3 mm/pulse					
AWE 404	4000 mm		0.1 mm/pulse 0.2 mm/pulse 0.05 mm/pulse					IP54 (opt. IP67)
AWE 508	8000 mm		0.3 mm/pulse					
AWE 512	12000 mm	±%0.03 FS						
AWE 722	22000 mm							IP53 (opt. IP67)



**ROTARY  
ENCODERS**

# Incremental Rotary Encoders Selection Table

		Body Diameter (mm)	Magnetic	Optical	Resolution max. (pulse)	Push pull <sup>(1)</sup>	TTL <sup>(2)</sup>	HTL <sup>(3)</sup>	HPL <sup>(4)</sup>	Open Collector <sup>(5)</sup>	Shaft (mm)	Semi Hollow Shaft (mm)	Hollow Shaft (mm)	Operating Speed (RPM)	Operating Temp. (°C)	Protection Class	Electrical Connection
	<b>ARS S 37 Incremental Rotary Encoder</b>	37	✓	-	1024	✓	✓	✓	✓	✓	6...10	-	-	3000	-25...+85	IP 54	cable
	<b>ARS S 50 Incremental Rotary Encoder</b>	50	✓	-	1024	✓	✓	✓	✓	✓	6...10	-	-	3000	-25...+85	IP 54	cable M16
	<b>ARC S 50 Incremental Rotary Encoder</b>	50	-	✓	20000	✓	✓	✓	✓	✓	6...10	-	-	6000	-25...+85	IP 54	cable M16
	<b>ARS S 58 Incremental Rotary Encoder</b>	58	✓	-	1024	✓	✓	✓	✓	✓	6...14	-	-	3000	-25...+85	IP 54	cable M16 M23
	<b>ARC S 58 Incremental Rotary Encoder</b>	58	-	✓	20000	✓	✓	✓	✓	✓	6...14	-	-	6000	-25...+85	IP 54	cable M16 M23
	<b>ARS B 37 Incremental Rotary Encoder</b>	37	✓	-	1024	✓	✓	✓	✓	✓	-	4...6	-	3000	-25...+85	IP 54	cable
	<b>ARS B 38 Incremental Rotary Encoder</b>	37	✓	-	1024	✓	✓	✓	✓	✓	-	6...10	-	3000	-25...+85	IP 54	cable
	<b>ARS B 50 Incremental Rotary Encoder</b>	50	✓	-	1024	✓	✓	✓	✓	✓	-	6...10	-	3000	-25...+85	IP 54	cable M16
	<b>ARC B 50 Incremental Rotary Encoder</b>	50	-	✓	20000	✓	✓	✓	✓	✓	-	6...10	-	6000	-25...+85	IP 54	cable M16
	<b>ARS B 58 Incremental Rotary Encoder</b>	58	✓	-	1024	✓	✓	✓	✓	✓	-	6...20	-	3000	-25...+85	IP 54	cable M16 M23
	<b>ARC B 58 Incremental Rotary Encoder</b>	58	-	✓	20000	✓	✓	✓	✓	✓	-	6...20	-	6000	-25...+85	IP 54	cable M16 M23

(1) PP : 10...30VDC Supply - 10...30VDC Output

(2) TTL : 5VDC Supply - 5VDC TTL Output

(3) HTL: 10...30VDC Supply - 5VDC TTL Output

(4) HPL: 5...30VDC Supply - 5...30VDC PP Output

(5) The supply signal should not be lower than the output signal



# Incremental Rotary Encoders Selection Table

		Body Diameter (mm)	Magnetic	Optical	Resolution max. (pulse)	Push pull <sup>(1)</sup>	TTL <sup>(2)</sup>	HTL <sup>(3)</sup>	HPL <sup>(4)</sup>	Open Collector <sup>(5)</sup>	Shaft (mm)	Semi Hollow Shaft (mm)	Hollow Shaft (mm)	Operating Speed (RPM)	Operating Temp. (°C)	Protection Class	Electrical Connection
	<b>ARC H 50 Incremental Rotary Encoder</b>	50	-	√	5000	√	√	√	√	√	-	-	6...10	6000	-25...+85	IP 54	cable
	<b>ARC H 58 Incremental Rotary Encoder</b>	58	-	√	20000	√	√	√	√	√	-	-	10...14	6000	-25...+85	IP 54	cable
	<b>ARC H 100 Incremental Rotary Encoder</b>	100	-	√	1024	√	√	√	√	√	-	-	30...42	3000	-25...+85	IP 54	cable
	<b>ARX S 1XP8001 Incremental Rotary Encoder</b>	58	√	√	1024	√	√	√	√	√	8	-	-	6000	-25...+85	IP 54	cable M16
	<b>ARK S 58 Incremental Rotary Encoder</b>	58	√	-	1024	√	√	√	√	√	6...10	-	-	3000	-25...+85	IP 67	cable M16
	<b>ART B 58 Incremental Non-Contact Rotary Encoder</b>	58	√	-	1024	√	√	√	√	√	-	-	6...20	20.000	-25...+85	IP 65	cable
	<b>ARP T 50 Incremental Non-Contact Rotary Encoder</b>	50	√	-	1024	√	√	√	√	√	-	-	-	20.000	-25...+85	IP 54 IP 67	cable
	<b>ARM T 08 Incremental Micro Rotary Encoder</b>	8	√	-	1024	√	√	√	√	√	-	-	-	30.000	-25...+85	IP 68	cable conn.
	<b>ARS T 20 Incremental Non-Contact Rotary Encoder</b>	20	√	-	1024	-	√	-	-	-	-	-	5...8	3000	-25...+85	IP 67	cable
	<b>ARS T 40 Incremental Non-Contact Rotary Encoder</b>	40	√	-	1024	√	√	√	√	√	-	-	6...12	3000	-25...+85	IP 67	cable

(1) PP : 10...30VDC Supply - 10...30VDC Output

(2) TTL : 5VDC Supply - 5VDC TTL Output

(3) HTL: 10...30VDC Supply - 5VDC TTL Output

(4) HPL: 5...30VDC Supply - 5...30VDC PP Output

(5) The supply signal should not be lower than the output signal

# INCREMENTAL ROTARY ENCODERS

## ARC/ARS Series

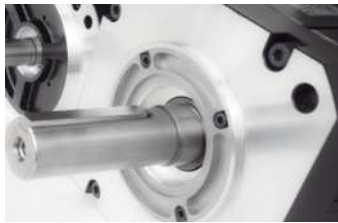
**Optical or Magnetic Measurement, Push-Pull / TTL / Open Collector Output, IP54 Protection**

Atek ARC / ARS series rotary encoders measure with optical or magnetic principle and operate incrementally.

These products, which are used frequently in every field of the industry, are used in many different applications such as process control, position, level, distance, control, cutting, height, robot, servo motor. With their low cost and high quality, they show the highest performance and are very economical.

Designed for high accuracy feedback control, Atek series rotary encoders have a wide selection range according to your needs.

- Incremental measurement with Optical (ARC) or Magnetic (ARS) principle
- Resolution up to 20.000 pulses for Optical (ARC) and 1024 pulses for Magnetic (ARS)
- Push-pull, TTL Line Driver, Open Collector output
- Different body and shaft diameter options
- Optical (ARC): 6000 RPM, Magnetic (ARS): 3000 RPM operating speed
- High accuracy
- Robust structure, long operating life
- Connection with cable or connector
- IP54 protection class



### MODELS WITH SHAFT

#### ARSS 37

- Incremental measurement with magnetic principle
- 37 mm body diameter
- 6 mm, 8 mm or 10 mm shaft options
- Push-pull, TTL Line Driver, Open Collector output



More information

#### ARC/ARSS 50

- Incremental measurement with Optical (ARC) or Magnetic (ARS) principle
- 50 mm body diameter
- 6 mm, 8 mm or 10 mm shaft options
- Clamping flange
- Push-pull, TTL Line Driver, Open Collector output



More information

#### ARC/ARSS 58

- Incremental measurement with Optical (ARC) or Magnetic (ARS) principle
- 58 mm body diameter
- 6 mm, 8 mm, 10 mm, 12 mm or 14 mm shaft options
- Clamping, synchro, tacho or square flange
- Push-pull, TTL Line Driver, Open Collector output



More information



Clamping Flange



Synchro Flange



Tacho Flange



Square Flange

## MODELS WITH SEMI HOLLOW SHAFT

### ARS B37

- Incremental measurement with magnetic principle
- 37 mm body diameter
- 6 mm, 8 mm or 10 mm semi hollow shaft options
- Push-pull, TTL Line Driver or Open Collector output



More information

### ARS B38

- Incremental measurement with magnetic principle
- 37 mm body diameter
- 4 mm, 5 mm, 6 mm, 8 mm or 10 mm semi hollow shaft options
- Push-pull, TTL Line Driver or Open Collector output



More information

### ARC/ARS B50

- Optical (ARC) or Magnetic (ARS) measurement principle
- 50 mm body diameter
- 6 mm, 8 mm or 10 mm semi hollow shaft options
- Z type or circular flange options
- Push-pull, TTL Line Driver, Open Collector output



Circular Flange



Z Type Flange



More information

### ARC/ARS B58

- Optical (ARC) or Magnetic (ARS) measurement principle
- 58 mm body diameter
- Semi hollow shaft options between 6 mm and 20 mm
- Z type or circular flange options
- Push-pull, TTL Line Driver, Open Collector output



Circular Flange



Z Type Flange



More information

## MODELS WITH HOLLOW SHAFT

### ARCH 50

- Optical measurement
- 50 mm body diameter
- Resolution from 60 to 5000 pulse
- 6 mm, 8 mm or 10 mm hollow shaft
- Z type, circular or backside flange
- Push-pull, TTL Line Driver, Open Collector output



Z type flange



Circular flange



More information

### ARCH 58

- Optical measurement
- 58 mm body diameter
- Resolution from 1024 to 20.000 pulse
- 10 mm, 12 mm or 14 mm hollow shaft
- Z type or circular flange
- Push-pull, TTL Line Driver, Open Collector output



Z type flange



Circular flange



More information

### ARCH 100

- Optical measurement
- 100 mm body diameter
- 1024 pulse resolution
- Hollow shaft options from 13 mm to 42 mm
- Push-pull, TTL Line Driver, Open Collector output



More information



# INCREMENTAL ROTARY ENCODERS

## ARX-S-1XP8001 Series

**Optical or Magnetic Measurement, Push-Pull / TTL / Open Collector Output  
IP54 Protection, Special Shaft**

- Incremental measurement with Optical (ARC) or Magnetic (ARS) principle
- Standard 1024 pulse, optional up to 4096 pulse resolution
- Push-pull, TTL Line Driver or Open Collector output options
- 58 mm body diameter
- Special design shaft
- Optical (ARC): 6000 RPM, Magnetic (ARS): 3000 RPM operating speed
- 300 KHz response frequency
- High accuracy
- Robust structure, long operating life



More information

## ARK S 58 Series

**Magnetic Non-Contact Measurement, Push-Pull / TTL / Open Collector Output  
IP67 Protection**

- Non-contact measurement with magnetic principle
- Incremental output
- Resolution options between 1 pulse and 1024 pulses
- Push-pull, TTL Line Driver or Open Collector output options
- 58 mm body diameter
- 6 mm, 8 mm or 10 mm shaft options
- 3000 RPM operating speed
- 300 KHz response frequency
- High accuracy
- Robust structure, long service life
- Connection options with cable or connector
- IP67 protection class for heavy environmental conditions



More information

## ART B 58 Series

**Magnetic Non-Contact Measurement, Push-Pull / TTL / Open Collector Output,  
IP 65 Protection**

- Non-contact measurement with magnetic principle
- Incremental output
- All resolution values between 1 and 1024 pulses
- Push-pull, TTL Line Driver or Open Collector output options
- 58 mm body diameter
- Different hollow diameters from 6 mm to 20 mm
- 20.000 RPM operating speed
- 300 KHz response frequency
- High accuracy
- Robust structure, long service life
- IP65 protection class



More information

# TEMASSIZ INKREMENTAL ROTARY ENKODERLER

## ART B 58 Series

**Magnetic Non-Contact Measurement, 58 mm Body Diameter, IP 65 Protection, Push-Pull / TTL / Open Collector Output**

- Non-contact measurement with magnetic principle, incremental output
- All resolution values between 1 and 1024 pulses
- Push-pull, TTL Line Driver or Open Collector output options
- 58 mm body diameter
- Different hollow diameters from 6 mm to 20 mm
- 20.000 RPM operating speed
- 300 KHz response frequency
- High accuracy, robust structure, long service life
- IP65 protection class



More information

## ARP T 50 Series

**Magnetic Non-Contact Measurement, 50 mm Body Diameter, IP 54 Protection, Push-Pull / TTL / Open Collector Output**

- Non-contact measurement with magnetic principle, incremental output
- All resolution values between 1 and 1024 pulses
- Push-pull, TTL Line Driver or Open Collector output options
- 50 mm body diameter
- 20.000 RPM operating speed
- 300 KHz response frequency
- High accuracy, robust structure, long service life
- Standard IP54, optional P67 protection class



More information

## ARM T Series

**Micro Non-Contact Rotary Encoder, 8 mm Body Diameter, IP 68 Protection, Push-Pull / TTL / Open Collector Output**

- Non-contact measurement with magnetic principle, incremental output
- All resolution values between 1 and 1024 pulses
- Push-pull, TTL Line Driver or Open Collector output options
- 8 mm ultra small body diameter
- 30.000 RPM operating speed
- 2 MHz response frequency
- High accuracy, robust structure, long service life
- IP68 protection class



More information

## ARS T 20 Series












**Magnetic Non-Contact Measurement, 20 mm Body Diameter, IP 67 Protection, TTL Output**

- Non-contact measurement with magnetic principle, incremental output
- All resolution values between 1 and 1024 pulses
- TTL Line Driver output
- 20 mm small body diameter
- Different rotor hole diameter options from 5 mm to 8 mm
- 3000 RPM operating speed
- 300 KHz response frequency
- High accuracy, robust structure, long service life
- IP67 protection class



More information

# Absolute Rotary Encoders Selection Table

		Body Diameter (mm)	Measurement Range	Accuracy	Resolution max. (bit)	Magnetic	Optical	Analog Interface <sup>(1)</sup>	CANopen Interface <sup>(2)</sup>	Parallel Interface <sup>(3)</sup>	Shaft (mm)	Semi Hollow Shaft (mm)	Hollow Shaft (mm)	Operating Speed (RPM)	Operating Temp. (°C)	Protection Class	Electrical Connection
	<b>SAS S 37</b> Single Turn Absolute Rotary Encoder	37	0...360	±0,1°	14	✓	-	4-20 mA 0-10V 0.5-4.5V 0-5 V	✓	-	6...10	-	-	3000	-20...+70	IP 67	cable M12
	<b>SAS B 37</b> Single Turn Absolute Rotary Encoder	37	0...360	±0,1°	14	✓	-	4-20 mA 0-10V 0.5-4.5V 0-5 V	✓	-	-	6...10	-	3000	-20...+70	IP 67	cable M12
	<b>SAS K 37</b> Single Turn Absolute Rotary Encoder	37	0...360	±0,1°	14	✓	-	4-20 mA 0-10V 0.5-4.5V 0-5 V	✓	-	8	-	-	3000	-20...+70	IP 67	cable M12
	<b>SAS S 50</b> Single Turn Absolute Rotary Encoder	50	0...360	±0,1°	14	✓	-	-	-	✓	6...8	-	-	3000	-20...+85	IP 67	cable
	<b>MAS S 50</b> Multi Turn Absolute Rotary Encoder	50	2...2 <sup>17</sup> tur	±0,5°	16	✓	-	4-20 mA 0-10V 0.5-4.5V 0-5 V	✓	-	6...8	-	-	3000	-20...+70	IP 64	cable M12
	<b>MAS B 50</b> Multi Turn Absolute Rotary Encoder	50	2...2 <sup>17</sup> tur	±0,5°	16	✓	-	4-20 mA 0-10V 0.5-4.5V 0-5 V	✓	-	-	6...15	-	3000	-20...+70	IP 64	cable M12
	<b>MAS S 58</b> Multi Turn Absolute Rotary Encoder	58	2...2 <sup>17</sup> tur	±0,5°	16	✓	-	4-20 mA 0-10V 0.5-4.5V 0-5 V	✓	-	6...10	-	-	3000	-20...+70	IP 64	cable M12
	<b>MAS B 58</b> Multi Turn Absolute Rotary Encoder	58	2...2 <sup>17</sup> tur	±0,5°	16	✓	-	4-20 mA 0-10V 0.5-4.5V 0-5 V	✓	-	-	6...15	-	3000	-20...+70	IP 64	cable M12
	<b>MAH B 58</b> Multi Turn Absolute Rotary Encoder	58	2...2 <sup>17</sup> tur	±0,5°	16	✓	-	4-20 mA 0-10V 0.5-4.5V 0-5 V	✓	-	-	6...15	-	3000	-20...+70	IP 68	cable M12
	<b>MAH S 58</b> Multi Turn Absolute Rotary Encoder	58	2...2 <sup>17</sup> tur	±0,5°	16	✓	-	4-20 mA 0-10V 0.5-4.5V 0-5 V	✓	-	-	6...17	-	3000	-45...+85	IP 68	cable M12
	<b>MAH S 50</b> Multi Turn Absolute Rotary Encoder	50	2...2 <sup>17</sup> tur	±0,5°	16	✓	-	4-20 mA 0-10V 0.5-4.5V 0-5 V	✓	-	-	6...17	-	3000	-45...+85	IP 68	cable M12



# ABSOLUTE ROTARY ENCODERS

## SAS Series Singleturn Rotary Encoders

**Single Turn Absolute Rotary Encoder, 37 or 50 mm Body Diameter, IP67 Protection, CANopen, Analog or Parallel Output**

SAS series encoders operate absolute. In other words, unlike the incremental systems, they do not lose their positions in power outages and continue to measure from where they left off.

They offer a maximum resolution of 14 bits per rotation. The angle increase direction can be selected to be clockwise (cw) or counterclockwise (ccw). Thanks to the reset function, the desired position can be determined as the 0 point.

Speed and position accuracy in one application; If it is more important than fault tolerance and system simplicity, absolute encoders should be used. Absolute encoders provide precise operation in applications.

- Identifying multi-axis orientation in CNC machines used in component manufacturing
- Automatically determine the height of the scissor bearings used in hospitals
- Correct placement of multiple stabilizers for large vehicles such as cranes or air lifts
- Automatic doors or slots to move without limiting key
- Continue robotic movement even after a power failure



- Absolute measurement with magnetic principle
- 14-bit resolution per revolution
- Analog, CANopen or parallel output options
- Redundant output
- 37 mm or 50 mm body diameter
- 6 mm, 8 mm or 10 mm shaft diameter
- 3000 RPM operating speed
- High signal capacity
- Robust structure, long service life
- Easy mounting
- IP67 protection class

### SAS 37 Series

- 37 mm body diameter
- Shaft, semi hollow shaft or sleeved options
- Analog or CANopen output



### SAS 50 Series

- 50 mm body diameter
- 6 or 8 mm shaft diameter
- Analog, CANopen or Parallel output



Model	Shaft Type	Body Dia.	Shaft Dia.	Output	Resolution	Supply Voltage	Electrical Conn.	Operating Temp.	Protection Class
SAS S 37	Shaft	37 mm	6, 8, 10 mm	CANopen or Analog: 4-20 mA, 0-10V, 0.5-4.5V, 0-5V	CANopen: Singleturn :1...14 bit Multiturn : 1...31 bit  Analog: 16 Bit	CANopen: 15...30 VDC  Analog: 15...26 VDC	Cable or M12 connector	-25...+85 °C	IP67
SAS B 37	Semi hollow shaft								
SAS K 37	Sleeved								
SAS S 50	Shaft	50 mm	6, 8 mm	Parallel (push-pull, open collector)	1...1684 pulse	5...30 VDC	Cable		

# ABSOLUTE ROTARY ENCODERS

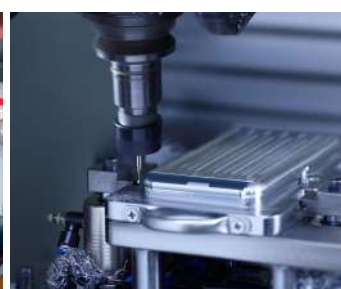
## MAS Series Multiturn Rotary Encoders

**Multiturn Absolute Rotary Encoder, 50 mm Body Diameter, IP64 Protection, Shaft or Semi Hollow Shaft, CANopen or Analog Output**

The MAS series encoders operate absolute. In other words, unlike the incremental systems, they do not lose their positions in power outages and continue to measure from where they left off.

Speed and position accuracy in one application; If it is more important than fault tolerance and system simplicity, absolute encoders should be used. Absolute encoders provide precise operation in applications.

- Identifying multi-axis orientation in CNC machines used in component manufacturing
- Automatically determine the height of the scissor bearings used in hospitals
- Correct placement of multiple stabilizers for large vehicles such as cranes or air lifts
- Automatic doors or slots to move without limiting key
- Continue robotic movement even after a power failure



- Absolute measurement with magnetic principle
- 50 mm or 58 mm body diameter
- Analog or CANopen output options
- Programmable analog output
- Shaft or semi hollow shaft options
- 3000 RPM operating speed
- High accuracy
- Robust structure, long service life
- IP64 protection class



More Information

### MAS S 50

- 50 mm body diameter
- 6 or 8 mm shaft diameter

### MAS S 58

- 58 mm body diameter
- 6, 8 or 10 mm shaft diameter

### MAS B 50

- 50 mm body diameter
- 6, 8, 10, 12, 14 or 15 mm shaft diameter

### MAS B 58

- 58 mm body diameter
- 6, 8, 10, 12, 14 or 15 mm shaft diameter



Model	Shaft Type	Body Diameter	Shaft Diameter	Output	Resolution	Supply Voltage	Electrical Connection	Operating Temp.	Protection Class
MAS S 50	Shaft	50 mm	6, 8 mm	CANopen or Analog: 4-20 mA, 0-10V, 0.5-4.5V, 0-5V	CANopen: Single turn: 1...14 bit Multi turn: 1...31 bit Analog: 16 Bit	CANopen: 15...30 VDC Analog: 15...26 VDC	Cable or M12 connector	-25...+85 °C	IP64
MAS S 58		58 mm	6, 8, 10 mm						
MAS B 50	Semi hollow shaft	50 mm	6, 8, 10, 12, 14, 15 mm	CANopen or Analog: 4-20 mA, 0-10V, 0.5-4.5V, 0-5V	CANopen: Single turn: 1...14 bit Multi turn: 1...31 bit Analog: 16 Bit	CANopen: 15...30 VDC Analog: 15...26 VDC	Cable or M12 connector	-25...+85 °C	IP64
MAS B 58		58 mm	6, 8, 10, 12, 14, 15 mm						

# ABSOLUTE ROTARY ENCODERS

## MAH Series

**Multiturn Absolute Rotary Encoder, 50 or 58 mm Body Diameter, Shaft or Semi Hollow Shaft  
IP68 Protection, CANopen or Analog Output**

The MAH series encoders operate absolute. In other words, unlike the incremental systems, they do not lose their positions in power outages and continue to measure from where they left off.

With its IP68 high protection class, it is resistant to harsh environmental conditions and vibrations.

Speed and position accuracy in one application; If it is more important than fault tolerance and system simplicity, absolute encoders should be used. Absolute encoders provide precise operation in applications.

- Identifying multi-axis orientation in CNC machines used in component manufacturing
- Automatically determine the height of the scissor bearings used in hospitals
- Correct placement of multiple stabilizers for large vehicles such as cranes or air lifts
- Automatic doors or slots to move without limiting key
- Continue robotic movement even after a power failure



- Absolute measurement with magnetic principle
- 50 mm or 58 mm body diameter
- Analog or CANopen output options
- Programmable analog output
- Shaft or semi hollow shaft options
- 3000 RPM operating speed
- High accuracy
- Robust structure, long service life
- IP68 protection class

### MAH S 50

- 50 mm body diameter
- 6, 8, 10, 12, 14, 15 or 17 mm shaft



### MAH S 58

- 58 mm body diameter
- 6, 8, 10, 12, 14, 15 or 17 mm shaft



### MAH B 58

- 58 mm body diameter
- 6, 8, 10, 12, 14 or 15 mm hollow shaft



Model	Shaft Type	Body Diameter	Shaft Diameter	Supply Voltage	Output	Resolution	Electrical Connection	Operating Temp.	Protection Class
MAH S 50	Shaft	50 mm	6, 8, 10, 12, 14, 15, 17 mm	CANopen: 8...32VDC  Analog: 15...26VDC	CANopen	CANopen: Single turn 1...14 bit Multi turn 1...31 bit  Analog: 16 bit	Cable or M12 connector	-45...+85 °C	IP68
MAH S 58	Shaft	58 mm	6, 8, 10, 12, 14, 15, 17 mm		Analog: 4-20 mA, 0-10V, 0.5-4.5V, 0-5V				
MAH B 58	Semi Hollow Shaft	58 mm	6, 8, 10, 12, 14, 16 mm						



# ABSOLUTE SIN/COS ROTARY ENCODERS

## ARF S 58

**Optical or Magnetic Measurement, 59.6 mm Body Diameter, 1:10 Tapered Shaft, IP54 Protection, SinCos Output**



More information

ARF S 58 series SinCos rotary encoders measure with magnetic and optical principle. They offer 2048 pulse resolution per revolution.

They are particularly suitable for applications in the field of elevator and drive technology. Thanks to their high signal quality, they work stably without being affected by noise.

Designed for high accuracy feedback control, Atek series rotary encoders have a comprehensive selection range according to your needs.



### General Features

- Magnetic or optical measurement
- Incremental 2048 pulse resolution
- Absolute Sin/Cos output signals
- 59.6 mm body diameter
- 1:10 tapered shaft
- 3000 RPM operating speed
- M type flange
- High accuracy
- Robust structure, long service life
- IP54 protection class

Model	Shaft Type	Body Diameter	Resolution	Supply Voltage	Output	Electrical Connection	Speed (max)	Flange Type	Shaft Diameter	Operating Temp.	Protection Class
ARF (Opti cal and Magnetic )	Shaft	59.6 mm	2048 pulse	5 VDC	1 Vpp Analog	Cable	3000 RPM	FM flange	1:10 Tapered	-25...+85 °C	IP54



**WHEEL TYPE  
ENCODERS**



# WHEEL TYPE ENCODERS

ATE series wheel type encoders are used to measure the length and speed of moving targets with their wheel structure.

Designed for highly accurate feedback control, ATE series wheel type encoders allow sensitivity selection according to your needs. Also available in double or single wheel models.

## Applications

- Measuring position, velocity and path in linear motion applications
- Various packing machines
- Sheet manufacturing
- Textile machinery and general industrial machinery
- Conveyor bands
- Wood industry



## ATE 10 Series

### Single Wheel Spring Type Incremental Rotary Encoder

- Spring system to compensate for uneven parts of the measuring surface
- Wide variety of mounting possibilities thanks to the spring lever
- 250 or 256 mm wheel circumference
- Push-pull or TTL output
- 3000 RPM operating speed
- 300 kHz response frequency
- High accuracy
- Robust structure, long service life
- Easy mounting
- IP54 protection class



More information

## ATE 20 Series

### Double Wheel Type Incremental Rotary Encoder

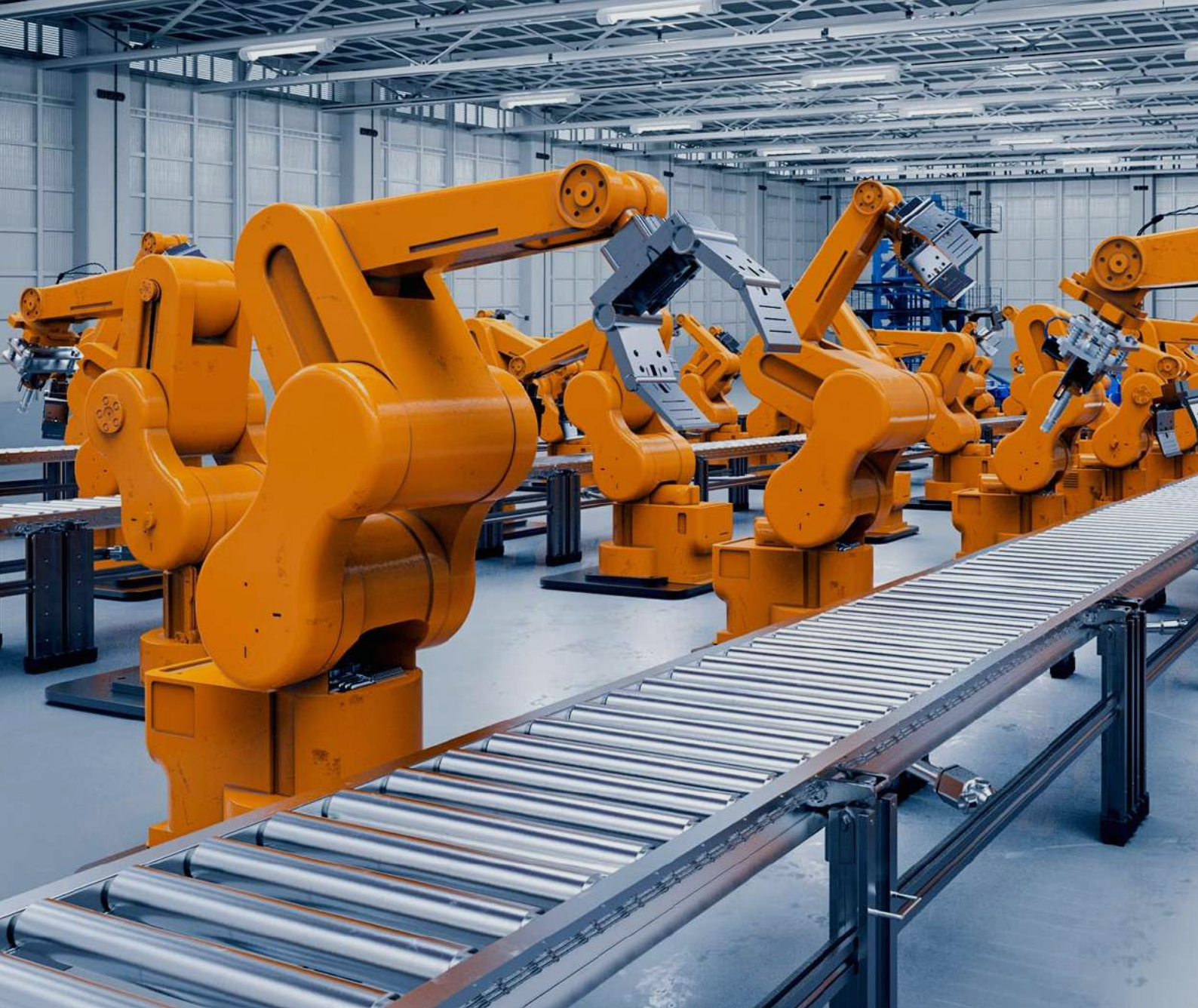
- 250 or 256 mm wheel circumference
- Push-pull or TTL output
- 3000 RPM operating speed
- 300 kHz response frequency
- High accuracy
- Robust structure, long service life
- Easy mounting
- IP54 protection class



More information

Model	Number of Wheel	Wheel Circumference	Wheel Diameter	Resolution	Output Signal	Supply Voltage	Operating Speed	Operating Temp.	Protection Class
ATE 10	1	250 mm	79,6 mm	Options from 1 to 5000 pulse	Push-Pull TTL Line Driver NPN Open Collector PNP Open Collector	10...30VDC or 5VDC	3000 RPM max	-25...+85 °C	IP54
		256 mm	81,5 mm	256, 512, 1024 pulse					
ATE 20	2	250 mm	79,6 mm	Options from 1 to 5000 pulse					
		256 mm	81,5 mm	256, 512, 1024 pulse					





**NON-CONTACT  
ANGLE SENSORS**

# Angle Sensors Selection Table

		Measuring Range	Linearity	Resolution	Repeatability	Output Signal	Supply Voltage (VDC)	Max. Working Speed (RPM)	Body Diameter (mm)	Shaft or Hollow Dia. (mm)	Electrical Connection	Operating Temperature(°C)	Protection Class
	<b>SAS T Angle Sensor</b>	0...360°	±0,1°	14 bit	0,1°	CANopen	12...30	Mechanically unlt.	40	6...12	cable M12	-25...+85	IP 67
	<b>RCS 29 Angle Sensor</b>	0...360°	±%0.3 FS	12 bit	0,1°	0.5-4.5V 0-10V 0-5V 4-20mA	5V 15...32 15...32 9...32	120	29	5	cable DT04-3P	-25...+85	IP 67
	<b>RCS 2100 Angle Sensor</b>	0...360°	±%0.3 FS	12 bit	0,1°	0.5-4.5V 0-10V 0-5V 4-20mA	5V 15...32 15...32 9...32	Mechanically unlt.	28	6	cable	-25...+85	IP 67
	<b>RCS 2200 Angle Sensor</b>	0...360°	±%0.3 FS	12 bit	0,1°	0.5-4.5V 0-10V 0-5V 4-20mA	5V 15...32 15...32 9...32	Mechanically unlt.	22	6	cable	-25...+85	IP 67
	<b>RCS 3100 Angle Sensor</b>	0...360°	±%0.3 FS	12 bit	0,1°	0.5-4.5V 0-10V 0-5V 4-20mA	5V 15...32 15...32 9...32	120	28	6	cable	-25...+85	IP 54
	<b>RCS 3700 Angle Sensor</b>	0...360°	±%0.3 FS	12 bit	0,1°	0.5-4.5V 0-10V 0-5V 4-20mA	5V 15...32 15...32 9...32	120	36,5	6	cable	-25...+85	IP 67
	<b>RCS 9200 Angle Sensor</b>	0...360°	±%0.5 FS	12 bit	0,1°	0.5-4.5V 0-10V 0-5V 4-20mA	5V 15...32 15...32 9...32	3000	68	10	cable	-25...+85	IP 67
	<b>RCS K 37 Angle Sensor</b>	0...360°	±%0.3 FS	12 bit	0,1°	0.5-4.5V 0-10V 0-5V 4-20mA	5V 15...32 15...32 9...32	3000	37	6	cable	-25...+85	IP 67
	<b>RCB 3100 Spring Return Angle Sensor</b>	0...360° (cont.) 124±3° (mechanical stop)	±%0.5 FS	12 bit	0,1°	0.5-4.5V 0-10V 0-5V 4-20mA	5V 15...32 15...32 9...32	120	28	8	cable superseal socket	-25...+85	IP 67



# NON-CONTACT ANGLE SENSORS

## RCS Series

### Magnetic Non-contact Measurement, Analog Output Options, Protection Up to IP67

RCS series non-contact angle sensors use the direction of the magnetic field to determine the measuring angle. Magnetic field direction is captured by an integrated circuit and indicated by analog output signals. Angle measurement information between 0-360° can be obtained from RCS series angle sensors. Measurement limits can be adjusted between 0-360 ° depending on the user's request. Analog or CANopen output options are available.

RCS series angle sensors with high accuracy, compact design and robust construction; offers suitable solutions for angle measurement in industrial areas like crane and lifting systems, robotic systems, solar energy, wind power plants, auto parts etc.

- Non-contact measurement
- User-selectable angle values between 0-360°
- Analog or CANopen output options
- Resistant to harsh environmental conditions and vibration
- IP54 or IP67 protection class
- Long service life
- Compact design
- High accuracy



### SAST

- 40 mm body diameter
- Rotor hole diameter from 6 to 12 mm
- CANopen output
- 14 bit resolution
- Mechanically unlimited operating speed
- IP67 protection class



More information



### RCS 29

- 29 mm body diameter
- 5 mm push-on shaft
- 0.5-4.5V Ratiometric, 0-10V, 0-5V, 4-20mA output
- 12 bit resolution
- 120 RPM operating speed
- IP67 protection class



More information



### RCS 2100

- 28 mm body diameter
- 6 mm magnet hole diameter
- 0.5-4.5V Ratiometric, 0-10V, 0-5V, 4-20mA output
- 12 bit resolution
- Mechanically unlimited operating speed
- IP67 protection class



More information







### RCS 2200

- 22 mm body diameter
- 6 mm magnet hole diameter
- 0.5-4.5V Ratiometric, 0-10V, 0-5V, 4-20mA output
- 12 bit resolution
- Mechanically unlimited operating speed
- IP67 protection class



More information



### RCS 2300

- Shaft type with lever or without lever
- 0.5-4.5V (Ratiometric or non-ratiometric), 0-10V, 4-20mA output
- Inverted output option
- 12 bit resolution
- Industry standard AMP connector
- IP69K protection class



More information



### RCS 3100

- 28 mm body diameter
- 6 mm shaft diameter
- 0.5-4.5V Ratiometric, 0-10V, 0-5V, 4-20mA output
- 12 bit resolution
- 120 RPM operating speed
- IP54 protection class



More information



### RCS 3700

- 36,5 mm body diameter
- 6 mm shaft diameter
- 0.5-4.5V Ratiometric, 0-10V, 0-5V, 4-20mA output
- 12 bit resolution
- 120 RPM operating speed
- IP67 protection class



More information



### RCS 9200

- 68 mm body diameter
- 10 mm shaft diameter
- 0.5-4.5V Ratiometric, 0-10V, 0-5V, 4-20mA output
- 12 bit resolution
- 3000 RPM operating speed
- IP67 protection class



More information



### RCS K 37

- 37 mm body diameter
- Mechanical connection with sleeve
- 0.5-4.5V Ratiometric, 0-10V, 0-5V, 4-20mA output
- 12 bit resolution
- 3000 RPM operating speed
- IP67 protection class



More information

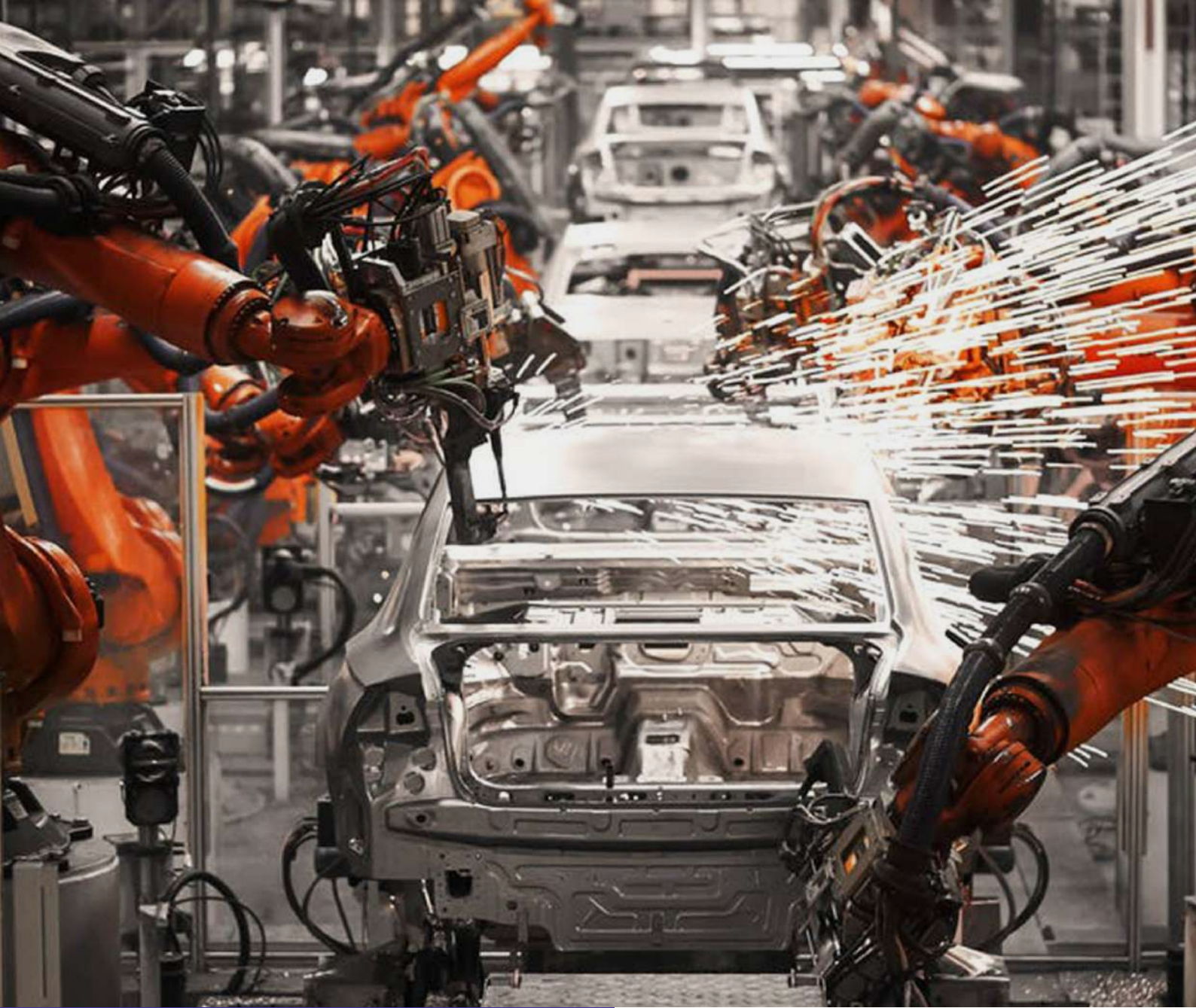


### RCB 3100

- 28 mm body diameter
- Spring or mechanical stop option for 120° (mechanical 124°)
- 0.5-4.5V Ratiometric, 0-10V, 0-5V, 4-20mA output
- 12 bit resolution
- 120 RPM operating speed
- IP54 protection class



More information



## ROTARY POTENTIOMETERS



# ROTARY POTENTIOMETERS

Atek series rotary potentiometers working with the principle of resistive carbon are used in many applications in the industry due to their durability, very long life and precision.

They do not deteriorate and wear easily thanks to their sensitive roller bearing, resistive carbon path and spring contacts, and have a long life up to 10 million movements.

There are different resistance options such as 5 or 10 Kohm in the specified electrical measurement area.

In addition, there are various signal output options, analog and potentiometric.

## Applications

- Textile machinery
- Automatic door control systems
- Automotive
- All kinds of control and measurement



## RHP Series

Precise Potentiometric Measurement, Hollow Shaft, Infinite and Continuous Rotation

### RHP 30 Series

- 20°, 45°, 150°, 180°, 270°, 354° electrical angle
- Hollow shaft options from 6 to 8 mm
- 30.1 mm body diameter
- Potentiometric, 0-10V, 4-20 mA or 0-20 mA output
- High linearity up to  $\pm 0.5\%$
- Long life up to 10 million movements
- IP63 protection class
- No mechanical rotation limitation



More information

### RHP 60 Series

- 150° or 350° electrical angle
- 20 mm hollow shaft
- 59.8 mm body diameter
- Potentiometric output
- High linearity up to  $\pm 0.5\%$
- Long life up to 10 million movements
- IP63 protection class
- No mechanical rotation limitation



More information



# ERP Series

Precise Potentiometric Measurement, With Shaft, Infinite and Continuous Rotation

## ERP 13 Series

- 300° electrical angle
- 3 mm shaft diameter
- 13 mm ultra small body for confined spaces
- Potentiometric output
- High linearity up to  $\pm 1\%$
- Lifetime up to 10 million movements
- IP40 protection
- No mechanical rotation limitation
- Optional rear shaft and center tap



More information

## ERP 50 Series

- 60°, 90°, 345°, 350°, 355° electrical angle
- 6 mm or 6,34 mm shaft diameter
- 50.8 mm body diameter
- Potentiometric, 0-10V, 4-20 mA or 0-20 mA output
- High linearity up to  $\pm 0.5\%$
- Lifetime up to 10 million movements
- IP40 protection
- No mechanical rotation limitation



More information

# RDP Series

Precision Dual Potentiometer with Shaft, Limited Mechanical Angle

- R1: 70° / R2: 70° electrical angle
- 325° limited mechanical angle
- 6 mm or 6.34 mm shaft diameter
- 50.8 mm body diameter
- Potentiometric output
- High linearity up to  $\pm 1\%$
- Lifetime up to 10 million movements
- IP54 protection
- Mechanical limitation



More information

Model	Gövde Çapı	Şaft Tipi ve	Çıkış Tipi	Besleme	Elektriksel Aç	Mekanik Aç	Direnç Değerleri	Linearite	Tekrarlanabilirlik	Max.Çalışma Hızı	Çalışma Sıcaklığı	Koruma Sınıfı
ERP 13	13 mm	Şaftlı 3mm	Potansiyometrik	42V max.	300°	360° sürekli	5K 10K	±%1 FS	0.1° max.	400 RPM	-25... +75 °C	IP40
ERP 50	50.8 mm	Şaftlı 6 veya 6.34mm	Potansiyometrik	42V max.	345°, 350°, 355°			±%0.5 FS		1000 RPM		
			0-10V, 4-20 mA, 0-20 mA	12...30VDC	30°, 45°, 90°, 120°, 150°, 180°, 270°, 345°. 350°							
RHP 30	30.1 mm	Hollow şaftlı 6mm	Potansiyometrik	42V max.	45°, 150°, 354°			IP63				
			0-10V, 4-20 mA, 0-20 mA	12...30VDC	30°, 45°, 90°, 120°,150°,180°,270°, 345°, 350°							
RHP 60	59.8 mm	Hollow şaftlı 20mm	Potansiyometrik	42V max.	150°, 340°							
RDP	50.8 mm	Şaftlı 6.34mm	Potansiyometrik	42V max.	R1: 70° / R2: 70°	325° Mekanik Limitli	±%1 FS	IP40				



## Rotary Potentiometers

Atek series rotary potentiometers do not deteriorate and wear easily thanks to the sensitive bearing housing and resistive carbon path. Due to their durability, very long life and precision, they are used in textile machinery, automotive, automatic door control systems, etc. in the industry. are used in many applications. With its high linearity, it is ideal for precise angle and position measurement at high speeds.












## INCLINOMETERS / TILT SENSORS



# Tilt Sensors Product Selection Table

	Measurement Axis	Measuring Range	Accuracy	Resolution	Dimensions (mm)	Analog Output	Transistor Output	Relay Output	CANopen Output	Supply Voltage (VDC)	Electrical Connection	Operating Temp.(°C)	Protection Class
 <b>INS 110 Tilt Sensor</b>	2 axis	±90° (1)	±0,15°	±0,05°	72 x 61 x 29	-	PNP OCL	✓	-	12...24	cabl M12	-30...+70	IP 67
 <b>INS 120 Tilt Sensor</b>	1 axis	360°	±0,15°	±0,05°	72 x 61 x 29	0-5V 0-10V 4-20 mA *Opt. two analog out	PNP OCL	-	-	12...24	cabl M12	-30...+70	IP 67
 <b>INS 130 Tilt Sensor</b>	2 axis	360°	±0,15°	±0,05°	72 x 61 x 29	0-5V 0-10V 4-20 mA	PNP OCL	-	-	12...24	cabl M12	-30...+70	IP 67
 <b>INC 110 Tilt Sensor</b>	1 axis	360°	±0,2°	±0,05°	66 x 49 x 26	0-5V 0-10V 4-20 mA	-	-	✓	12...24 15...24 (2)	cabl M12	-30...+70	IP 67
	2 axis	±90°											
 <b>INC 210 Tilt Sensor</b>	1 axis	360°	±0,1°	±0,05°	89 x 45	0-5V 0-10V 4-20 mA	-	-	✓	12...24 15...24 (2)	cabl M12	-30...+70	IP 67

(1) INS 110 series have 4 different set option (Adjustable between ±90°). These options must be specified at the order stage.

(2) For INC 110 and INC 210 series sensors, the supply voltage is 12...24VDC for 4-20mA and CANopen outputs, 15...24VDC for 0-10V output.

# TILT SENSORS / INCLINOMETERS

## INS Series

Single or Dual Axis Measurement, Analog, PNP Open Collector or Relay Output Options, IP 67 Protection Class

INS series inclinometers are used for inclination measurement for single or dual axis. They have  $\pm 90^\circ$  dual axis and 0-360° single axis programmable measurement range. Analog, open collector or relay output options are available. They can in harsh ambient conditions with its high IP67 protection class.

INS series angle and inclination sensors with high precision, compact design and durable structure are used in crane and lifting systems, construction machinery and special purpose vehicles, solar energy and photovoltaic systems, wind power plants etc. offers suitable solutions for angle measurement in industrial areas. Thanks to their IP protection classes, they can work easily in outdoor environments.

- $\pm 90^\circ$  dual axis measurement range or 0-360° single axis measurement range option
- Programmable measurement limits
- Compensated axis sensitivity
- Analog, PNP open collector or relay output
- High accuracy:  $\pm 0.15^\circ$
- Easy installation
- IP67 protection class
- Small and robust housing
- Compact structure

### INS 110

- Dual axis  $\pm 90^\circ$  measurement range
- Four different set options (Adjustable between  $\pm 90^\circ$ )
- Model option with relay or PNP Open Collector output



More information

### INS 120

- Single axis 360° measurement range
- Analog output options : 0-5VDC, 0-10VDC or 4-20mA (Dual analog output options)
- 2xPNP Open Collector output



More information

### INS 130

- Dual axis 0...360° measurement range
- Analog output options : 0-5VDC, 0-10VDC or 4-20mA
- Programmable Switching output ( $\leq 300$  mA)
- PNP Open Collector output



More information

## Applications

- Agricultural and forestry machinery
- Construction machinery and special-purpose vehicles
- Solar thermal energy and photovoltaics
- Automated guided systems
- Crane and lifting technology
- Wind power plant



Model	Number of Axis	Measuring Range	Accuracy	Supply Voltage	Output Type	Electrical Connection	Operating Temp.	Protection Class
INS 110	2 axis	$\pm 90^\circ$	$\pm 0.15^\circ$	12...24VDC	PNP Open Collector or Relay	Cable or M12 connector	-30...+70°C	IP67
INS 120	1 axis	0...360°			0-5V, 0-10V, 4-20mA, 2xPNP Open Collector			
INS 130	1 axis 2 axis	0...360° $\pm 90^\circ$			0-5V, 0-10V, 4-20mA, PNP Open Collector			

# TILT SENSORS / INCLINOMETERS

## INC Series

Single or Dual Axis Measurement, Analog or CANopen Output, IP 67 Protection Class

INS series inclinometers are used for inclination measurement for single or dual axis. They have  $\pm 90^\circ$  dual axis and  $0-360^\circ$  single axis measurement range. These sensors with 0-10VDC voltage output, 4-20mA current output or CANopen signal output option, can take measurement with  $\pm 0.1^\circ$  accuracy. Thanks to its compensated axis sensitivity, the effect of the axes on each other is minimized.

These sensors, especially used in machine and crane industries, can operate in outdoor environments with their high IP protection classes.

- $\pm 90^\circ$  dual axis measurement range or  $0-360^\circ$  single axis measurement range option
- 4-20 mA, 0-10V or CANopen signal output option
- Redundant output option
- Compensated axis sensitivity
- High accuracy :  $\pm 0.1^\circ$
- Ability to specify  $0^\circ$  point
- Easy installation
- IP67 protection class
- Small and robust housing
- Compact structure

### INC110

- $\pm 90^\circ$  dual axis measurement range or  $0-360^\circ$  single axis measurement range option



More information

### INC210

- $0-360^\circ$  single axis measurement



More information

### Kullanım Alanları

- Agricultural and forestry machinery
- Construction machinery and special-purpose vehicles
- Solar thermal energy and photovoltaics
- Automated guided systems
- Crane and lifting technology
- Wind power plant



Model	Number Of Axis	Measuring Range	Accuracy	Supply Voltage	Output Type	Electrical Connection	Operating Temp.	Protection Class
INC 110	1 or 2 Axis	1 axis : $360^\circ$ 2 axis : $\pm 90^\circ$	$\pm 0,2^\circ$	15...24 VDC	0-10 V, 4-20 mA or CANopen	Cable or M12 connector	-30...+70°C	IP67
INC 210	1 Axis	1 axis : $360^\circ$	$\pm 0,1^\circ$					





**PRESSURE  
SENSORS**

# Pressure Sensors Product Selection Table

	Measuring Range	Max Pressure	Accuracy (@25°C)	Response Time (max)	O-Ring	Analog Output	Supply Voltage (VDC)	Body Material	Mechanical Connection	Electrical Connection	Operating Temp. (°C)	IP Protection Class
<b>BCT-22 Pressure Sensor</b> 	100 mbar ... 600 bar & -100 mbar ... -1 bar	%300FS $\leq 700\text{mbar}$ %200FS $< 250\text{Bar}$ %150FS $\geq 250\text{Bar}$	$\pm 0,5 \text{ FS}$ or $\pm 0,3 \text{ FS}$	1ms	NBR FKM EPDM	4-20 mA	8...32	1.4305 (AISI 303)	G1/4 G1/8 G1/2 NPT1/4 NPT1/8 NPT1/2 M14x1 7/16"-20 UNF	DIN43650 M12 PACKARD cable	-40...+85	IP65 or IP67
						0-10V 1-6V 0-5V	12...30					
						Ratiometric	5					
<b>BCT-26 Pressure Sensor</b> 	100 mbar ... 600 bar & -100 mbar ... -1 bar	%300FS $\leq 700\text{mbar}$ %200FS $< 250\text{Bar}$ %150FS $\geq 250\text{Bar}$	$\pm 0,3 \text{ FS}$	1ms	NBR FKM EPDM	4-20 mA	8...32	1.4305 (AISI 303)	G1/4F	DIN43650 M12 cable	-40...+85	IP65 or IP67
						0-10V 1-6V 0-5V	12...30					
						Ratiometric	5					
<b>BLT-22 Pressure Sensor</b> 	10 bar ... 16 bar	%300FS $\leq 700\text{mbar}$ %200FS $< 250\text{Bar}$ %150FS $\geq 250\text{Bar}$	$\pm 0,5 \text{ FS}$	1ms	NBR FKM EPDM	4-20 mA	8...32	1.4305 (AISI 303)	G1/4 G1/8 G1/2 NPT1/4 NPT1/8 NPT1/2 M14x1 7/16"-20 UNF	DIN43650 M12 PACKARD cable	-40...+85	IP65
<b>BT10-214 High Temp. Pressure Sensor (Flush Diaphragm)</b> 	-1bar...0~0.1 bar...600bar	300%F.S. $(\leq 0.7\text{bar})$ 200%F.S. $(\geq 1\text{bar})$ 150%F.S. $(\geq 60\text{bar})$	$\pm 0,5 \text{ FS}$	1ms	NBR	4-20 mA 0-10V 0-5V 0.5-4.5V	12...24	304 stainless steel	G1/2 G1	DIN43650	-40...+85 (*)	IP65
<b>BT10-212 Pressure Sensor (Flush Diaphragm)</b> 	-1bar...0~0.02bar...100 bar	300%F.S. $(\leq 0.7\text{bar})$ 200%F.S. $(\geq 1\text{bar})$ 150%F.S. $(\geq 60\text{bar})$	$\pm 0,5 \text{ FS}$	1ms	NBR	4-20 mA HART	12...24	304 stainless steel	DN25 DN50 DN80	DIN43650	-30...+80	IP65
<b>EPT-22 Pressure Sensor</b> 	10 bar 16 bar 0...-1 bar -1...0 bar		$\pm 1 \text{ FS}$		NBR	0-10V	12...30	303 stainless steel	G1/4 G1/8 NPT1/4 NPT1/8	DIN43650 cable	-20...+85	IP65
						4-20 mA	12...30					
						Ratiometric	5					

(\*) -40~85°C (without cooling fan)  
 -40~150°C (with 3 cooling fan)  
 -40°C~250°C (with 5 cooling fan)

# Pressure Sensors Product Selection Table

	Measuring Range	Max Pressure	Accuracy (@25°C)	Response Time (max)	Analog Output	Supply Voltage (VDC)	Body Material	Mechanical Connection	Electrical Connection	Operating Temp. (°C)	IP Protection Class
<b>BFT-210 Differential Pressure Sensor</b> 	100 mbar ... 25 bar		±%0.5 FS	1ms	4-20 mA	16...36	304 stainless steel	G1/2 1/4-18 NPT M20x1.5	DIN43650 cable	-10...+70	IP65
					0-5V	12...36					
					1-5V	12...36					
<b>BHT-26 Flush Diaphragm Pressure Sensor</b> 	100 mbar ... 25 bar	%200≥1Bar %300≤350mBar	±%0.5 FS	1ms	4-20 mA	8...32	316L stainless steel	Flush	DIN43650 cable	-40...+120	IP65
					0-20 mA	12...30					
					0-5V 0-10V 1-6V	12...30					
					Ratiometric	5					
<b>EPD-20 LCD Pressure Sensor with Display</b> 	100 mbar ... 600 bar	%150FS≥250Bar %200<250Bar %300≤700mBar	±%0.3 FS ±%0.5 FS	1ms	MODBUS RTU	18...36	Aluminum	G1/4 G1/8 G1/2 NPT1/4 NPT1/8 NPT1/2 M14x1 7/16"-20 UNF	Terminal	-30...+70	IP65
					4-20mA HART	12...32					
<b>EPD-30 LCD Pressure Sensor with Display</b> 	100 mbar ... 600 bar	%150FS≥250Bar %200<250Bar %300≤700mBar	±%0.3 FS ±%0.5 FS	1ms	MODBUS RTU	18...36	Delrin	G1/4 G1/8 G1/2 NPT1/4 NPT1/8 NPT1/2 M14x1 7/16"-20 UNF	Terminal	-30...+70	IP55
					4-20mA HART	12...32					
<b>BSS Series Pressure Sensor Cooling Element</b> 	-	400 Bar	-	-	-	-	316L	G1/4F-G1/2M G1/4F-G1/4M G1/2F-G1/2M G1/2F-G1/4M	-	250 max.	-



# PRESSURE SENSORS

Atek series Pressure transmitters offer high performance for demanding commercial and heavy industry applications.

Our products with piezoresistive working principle can be used in water, air, oil etc. applications. The standard stainless steel housing with IP65 / IP67 protection can work in harsh environments.

Pressure transmitters, which is not affected by electrical fluctuations and reverse connections due to over voltage and reverse polarity protection, has a long life.



- Pneumatic Systems
- Machine Equipments
- Water Technologies
- Hydraulic Systems
- Air Cooling – Heating Systems
- Automation Applications

## BCT 22

Piezoresistive Measuring Principle, Analog Output Options,  
IP 65 or IP 67 Protection Class

- Piezoresistive pressure sensor
- 22 mm body diameter
- Long-term excellent work
- Stainless steel body
- EMC and reverse polarity protection
- 4...20mA / 0...10VDC etc. different outputs
- Different models from 100 mBar to 600 Bar



More information

Model	Measuring Range	Max. Pressure	Accuracy	Supply Voltage	Output Signal	Body Material	Electrical Connection	Mechanical Connection	Operating Temp.	Protection Class
BCT 22	Different models between 0...100mbar and 0...600Bar	300%F.S. ≤700mbar 200%F.S. <250Bar 150%F.S. ≥250Bar *Can be 3 or 5 times	±%0,5 F.S. or ±%0,3 F.S. @25° C	4-20 mA and 0-10V: 12 ... 30 VDC	4...20mA, 0...20mA, 0...10VDC, 1...6VDC, 0...5VDC, Ratiometric etc.	1.4305 (AISI303)  Optional 316L or Titanium	DIN43650-A, DIN43650-C, M12, Packard or PVC cable (Optional PUR cable)	G1/4, G1/8, G1/2, NPT1/4, NPT1/8, NPT1/2, M14, UNF7/16X20M, UNF7/16X20F	-40...+85 °C	IP65 or IP67*
	Different models between 0... -100mbar and 0... -1Bar			Ratiometric: 5 VDC						

\*IP67 protection is provided if M12 socket models are equipped with press-printed.

## BCT 26

Piezoresistive Measuring Principle, Analog Output Options,  
IP 65 or IP 67 Protection Class

- Piezoresistive pressure sensor
- 26 mm body diameter
- Long-term excellent work
- Stainless steel body
- EMC and reverse polarity protection
- 4...20mA / 0...10VDC etc. different outputs
- Different models from 100 mBar to 600 Bar



More information

Model	Measuring Range	Max. Pressure	Accuracy	Supply Voltage	Output Signal	Body Material	Electrical Connection	Mechanical Connection	Operating Temp.	Protection Class
BCT 26	Different models between 0...100mbar and 0...600Bar	300%F.S. ≤700mbar 200%F.S. <250Bar 150%F.S. ≥250Bar *Can be 3 or 5 times	±%0,3 F.S. @25° C	4-20 mA and 0-10V: 12 ... 30 VDC	4...20mA, 0...20mA, 0...10VDC, 1...6VDC, 0...5VDC, Ratiometric etc.	1.4305 (AISI303)  Optional 316L or Titanium	DIN43650A, DIN43650C, M12 or PVC cable (Optional PUR cable)	G1/4F	-40...+85 °C	IP65 or IP67*
	Different models between 0... -100mbar and 0... -1Bar			Ratiometric: 5 VDC						

# BLT 22

Piezoresistive Measuring Principle, 4-20mA Output,

IP 65 Protection Class

- Piezoresistive pressure sensor
- 24 mm body diameter
- Long-term excellent work
- Stainless steel body
- EMC and reverse polarity protection
- 4...20mA analog output
- 0...10Bar or 0...16Bar pressure ranges



More information

Model	Measuring Range	Max Pressure	Accuracy	Supply Voltage	Output Signal	Body Material	Electrical Connection	Mechanical Connection	Operating Temp.	Protection Class
BLT 22	0...10 Bar 0...16 Bar	%200F.S.	±%0,5 F.S.	8 ... 32 VDC	4...20mA	1.4305 (AISI303)  Optional stainless 316L or Titanium	DIN43650-A, DIN43650-C, M12, Packard or PVC cable (Optional PUR cable)	G1/4, G1/8, G1/2, NPT1/4, NPT1/8, NPT1/2, M14, UNF7/16X20M, UNF7/16X20F	-40...+85 °C	IP65

# BT10-214

Flush Pressure Transmitter for Sanitary Applications, Analog Output,

Cooling Fans for High Temperature, IP 65 Protection Class

- 316L flush diaphragm structure
- Sanitary, anti-fouling
- EMC and reverse polarity protection
- Analog output options
- Wide pressure range
- IP65 protection class
- Good seal, long-term stable work
- With cooling fans, excellent performance for high temperature medium application
- Affordable price, economical solution



More information

Model	Measuring Range	Overpressure	Accuracy	Supply Voltage	Output Signal	Body Material	Electrical Connection	Mechanical Connection	Operating Temp.	Protection Class
BT10-214	1bar ... 0~0.1bar ... 600bar	300%F.S. (≤0.7bar) 200%F.S. (1...25bar) 150%F.S. (60...100bar) 120%F.S. (250...400bar)	±%0,5 F.S.	12...30 VDC	4...20 mA 0...10 VDC 0...5 VDC 0.5...4.5 VDC	Stainless 304 (316L diaphragm)	DIN43650 female connector	G1, G1/2	-40...+85 °C (without fan) -40°C...250°C (with 5 fans)	IP65

# BT10-212

With Flange and Flush Diaphragm, 4-20mA and HART Output,

Suitable for High Temperature and Sanitary Applications, IP 65 Protection Class

- 3051 or 2088 housing is optional
- Flange mounting
- Double-wire mode, 4~20mA analog output, HART® protocol
- Intelligent LCD gauge outfit with backlight
- Diaphragm with large size, all-welded sealing, long-term reliable and durable
- Used for the pressure measurement for gas, liquid, steam
- Optional anticorrosion diaphragm (Tantalum, Hastelloy C, 316L, 316L sprayed with PTFE)
- Especially suitable for high temperature viscous liquid



More information

Model	Measuring Range	Max. Pressure	Accuracy	Supply Voltage	Output Signal	Body Material	Electrical Connection	Mechanical Connection	Operating Temp.	Protection Class
BT10-214	1bar ... 0~0.1bar ... 600bar	300%F.S. (≤0.7bar) 200%F.S. (1...25bar) 150%F.S. (60...100bar) 120%F.S. (250...400bar)	±%0,5 F.S.	12...30V DC	4...20 mA 0...10 VDC 0...5 VDC 0.5...4.5 VDC	Stainless 304 (316L diaphragm)	DIN43650	G1, G1/2	-40...+85 °C (without fan) -40°C...250°C (with 5 fans)	IP65

# EPT 22

## Piezoresistive Measuring Principle, Analog Output Options, IP65 Protection Class

- MEMS technology
- Piezoresistive measurement principle
- Small and compact housing
- Long-term excellent work
- Stainless steel housing
- EMC and reverse polarity protection
- Analog Output (4...20mA, 0...10VDC or Ratiometric)
- IP65 protection class



More information

Model	Measuring Range	Accuracy	Supply Voltage	Output Signal	Body Material	Electrical Connection	Mechanical Connection	Operating Temp.	Protection Class
EPT 22	10 Bar, 16 Bar, 0...1 Bar, -1...0 Bar	%1	0-10V or 4-20 mA: +12...30VDC Ratiometric: 5VDC	4...20mA (2Wire), 0...10VDC (3Wire), Ratiometric	303 Stainless Steel	DIN43650A, DIN43650C connector or cable	G1/4, G1/8, NPT1/4, NPT1/8	-20...+85 °C	IP65

# BFT-210

## Differential Pressure Sensor, Piezoresistive Measuring Principle Analog Output Options, IP65 Protection Class

- Piezoresistive silicon pressure sensor produced by MEMS technology
- Differential pressure measurement
- Long life, excellent stability for many years
- EMC, short circuit and reverse polarity protection
- 4...20mA, 0...5VDC or 1...5VDC analog output options
- High accuracy: %0,5FS
- IP65 protection class
- Easy installation



More information

Model	Measuring Range	Static Pressure	Accuracy	Supply Voltage	Output Signal	Body Material	Electrical Connection	Mechanical Connection	Operating Temp.	Protection Class
BFT 210	Different options from 100 mBar to 25 Bar	100 Bar max.	±%0,5 F.S.	4~20mA (16~36VDC) 1~5V, 0~5V (12~36VDC)	4...20 mA 0...5 VDC 1...5 VDC	Stainless Steel 304	DIN43650 Female connector	G1/2 or 1/4-18 NPT or M20x1.5	-10...+70 °C	IP65

# BHT 26

## Flush Diaphragm for Sanitary Applications, Analog Output Options, IP65 Protection Class

- SS316L isolation diaphragm structure
- 26 mm diameter stainless steel housing
- Different options from 100 mBar to 25 Bar
- 4...20mA / 0...10VDC etc. Different analog output options
- Suitable for process temperature up to 120°C
- EMC and reverse polarity protection
- High accuracy and stability
- IP65 protection class



More information

Model	Measuring Range	Max Pressure	Accuracy	Supply Voltage	Output Signal	Body Material	Electrical Connection	Operating Temp.	Protection Class
BHT 26	Models between 0...100 mBar and 0...25 Bar	300%F.S. (≤0.35bar) 200%F.S. (1...25bar)	±%0,5 F.S.	4-20 mA and 0-10V: 12 ... 30 VDC Ratiometric: 5 VDC	4...20mA, 0...20mA, 0...10VDC, 1...6VDC, 0...5VDC, Ratiometric etc.	316L stainless steel	DIN43650-A or PVC cable	-40...+120 °C	IP65



# EPD 20

## Intelligent Pressure Transmitter with LCD Display, HART or MODBUS RTU Output, IP65 Protection Class

- 100 milibar....600 BAR pressure range
- Easy configuration with LCD module buttons
- 24VDC supply voltage
- 4...20mA/HART or MODBUS RTU output
- 4...20mA/HART output model: LCD with backlight, displaying 5 bits, and 4 decimal places
- MODBUS RTU output model: LCD with backlight, displaying 6 bits, and 5 decimal places
- Many measurement unit options adjustable from the menu
- High accuracy up to  $\pm 0,3$  FS
- Short circuit and reverse polarity protection
- Aluminum alloy case
- Excellent long-term work
- IP65 protection class



More information

Model	Measuring Range	Max Pressure	Accuracy	Supply Voltage	Output Signal	Body Material	Electrical Connection	Mechanical Connection	Operating Temp.	Protection Class
EPD 20	Different models between 0...100mbar and 0...600Bar	300%T.S. $\leq$ 700mbar 200%T.S. $<$ 250Bar 150%T.S. $\geq$ 250Bar *Can be 3 or 5 times	$\pm 0,5$ F.S. or $\pm 0,3$ F.S. @25° C	HART: 12...32VDC  MODBUS: 18...36VDC	HART  MODBUS RTU	Transmitter: 1.4305 (AISI303)  Housing: Aluminum alloy	Terminal	G1/4, G1/8, G1/2, NPT1/4, NPT1/8, NPT1/2, M14, UNF7/16X20M, UNF7/16X20F	-30...+70 °C	IP65
	Different models between 0... -100mbar and 0...-1Bar									

# EPD 30

## Intelligent Pressure Transmitter with LCD Display, HART or MODBUS RTU Output, IP65 Protection Class

- 100 milibar....600 BAR pressure range
- Easy configuration with LCD module buttons
- 24VDC supply voltage
- 4...20mA/HART or MODBUS RTU output
- 4...20mA/HART output model: LCD with backlight, displaying 5 bits, and 4 decimal places
- MODBUS RTU output model: LCD with backlight, displaying 6 bits, and 5 decimal places
- Many measurement unit options adjustable from the menu
- High accuracy up to  $\pm 0,3$  FS
- Short circuit and reverse polarity protection
- Delrin case
- Excellent long-term work
- IP55 protection class



More information

Model	Measuring Range	Max Pressure	Accuracy	Supply Voltage	Output Signal	Body Material	Electrical Connection	Mechanical Connection	Operating Temp.	Protection Class
EPD 30	Different models between 0...100mbar and 0...600Bar	300%T.S. $\leq$ 700mbar 200%T.S. $<$ 250Bar 150%T.S. $\geq$ 250Bar *Can be 3 or 5 times	$\pm 0,5$ F.S. or $\pm 0,3$ F.S. @25° C	HART: 12...32VDC  MODBUS: 18...36VDC	HART  MODBUS RTU	Transmitter: 1.4305 (AISI303)  Housing: Delrin	Cable or M12 Connector	G1/4, G1/8, G1/2, NPT1/4, NPT1/8, NPT1/2, M14, UNF7/16X20M, UNF7/16X20F	-30...+70 °C	IP55
	Different models between 0... -100mbar and 0...-1Bar									



## Pressure Sensor

Atek series pressure sensors with piezoresistive working principle can be used in water, air, oil etc. can be used in applications. With its stable operation and robust structure, it offers high performance for demanding commercial and heavy industry applications.







**MELT PRESSURE  
SENSORS**



# MELT PRESSURE TRANSMITTERS

## MPTS Series

**Rigid or Flexible Body, 4-20 mA, 0-10V or 3.33 mV/V Output, Model Option With Thermocouple**

MPTS series melt pressure sensors are used to measure the pressure and temperature of hot fluids in the plastics, rubber, food, etc. sectors. In this way, the quality of the production is higher and damage due to the high pressure is provided to the machine. They are ideal for the measurement of melt pressure in extrusion processes at temperatures of up to 400°C.

The MPTS series are low cost and high quality products. The MPTS makes mercury measurements in the series. In products in the health and food sector, oily measurements are made.

Designed to work directly with DCS and PLC thanks to analog output signals. EPA Series Process Control Devices are also available with the measured value being displayed.



### General Features

- Rigid or flexible body
- Model option with thermocouple
- Better than  $\pm 0.5\%$  accuracy
- 4 - 20mA, 0 - 10V or 3.33mV/V output options
- 0-35 to 0-2000 bar / 0-500 to 0-30000 psi
- Internal 80% shunt calibration
- Standard Inconel diaphragm
- Optional auto-zero function
- Applications with process temperature of up to 400°C
- Maximum Torque: 30Nm (22lbf ft)

**MPTS 112 (Rigid Body)**



More information

**MPTS 123 (Flexible Body)**



More information

**MPTS 133 (Flexible Body and Thermocouple)**



More information

Model	Pressure Measuring Range	Max. Diaphragm Temp.	Max. Pressure	Accuracy	Supply Voltage	Output Signal	Body Material	Electrical Connection	Max. Torque
MPTS	From 0~35 to 2000 bar	400°C	1.5 x FS (<1000bar)	$\pm 0.5\%$ FS	For 4-20 mA and 0-10V: 9...36 VDC	4-20 mA 0-10 V 3.33mV/V	Titanium Nitride	6 pin, 7 pin, 8 pin connector	30Nm
			1.2 x FS (>1000bar)		For 3.33mV/V: 6...12 VDC				



**TEMPERATURE  
SENSORS**

# TEMPERATURE SENSORS

## AST Series

### Wide Temperature Measurement Range and Immersion Length Options, Analog or RTD Output

AST series temperature sensors are designed for precise temperature measurement of liquid and gaseous medias. The detection principle is based on the variation of the electrical resistance of the conductor with temperature. The resistance signal receiving from the RTD element is converted into various analog output signals (4-20 mA, 0-10V etc.) and integrated into automation systems.

They have a wide range of user-selectable specifications such as measuring range, process connection type, immersion length, output signal, connector type etc.

- Models capable of measuring between -195 to +650 °C
- Resistant up to 600Bar
- Immersion length options ranging from 15 mm to 300 mm
- Analog output options or RTD (PT100, PT1000) output
- G1/4, G1/2, NPT1/4, NPT1/2, M14x1, M20x1,5 etc. process connection options



### AST 10 Series Temperature Transmitter

- Selectable measuring range from -50 to +200 °C
- Immersion length options ranging from 15 mm to 300 mm
- 0-20 mA, 4-20mA, 0-5V, 0-10V, 1-5V, 0.5-4.5V analog output or RTD (PT100, PT1000) output options
- G1/4, G1/2, NPT1/4, NPT1/2, M14x1, M20x1,5 etc. process connection
- IP65 protection



More information

### AST 20 Series High Temperature Transmitter

- Selectable measuring range from -195 to +650 °C
- Immersion length options ranging from 15 mm to 300 mm
- 0-20 mA, 4-20mA, 0-5V, 0-10V, 1-5V, 0.5-4.5V analog output or RTD (PT100, PT1000) output options
- G1/4, G1/2, NPT1/4, NPT1/2, M14x1, M20x1,5 etc. process connection
- IP65 protection



More information

### AST 30 Series Head Type Industrial Temperature Sensor

- Selectable measuring range from -195 to +650 °C
- Immersion length options ranging from 25 mm to 500 mm
- RTD (PT100, PT1000) output
- G1/4, G1/2, NPT1/4, NPT1/2, M14x1, M20x1,5 etc. process connection
- IP65 protection



More information

### AST 40 Series Head Type Industrial Temperature Sensor

- Selectable measuring range from -195 to +650 °C
- Immersion length options ranging from 25 mm to 500 mm
- 0-20 mA, 4-20mA, 0-5V, 0-10V, 1-5V, 0.5-4.5V analog output
- G1/4, G1/2, NPT1/4, NPT1/2, M14x1, M20x1,5 etc. process connection
- IP65 protection



More information



## AST 80 Series Temperature Sensor

- -50 ... +250 °C measuring range
- 31 mm immersion length
- PT1000 output
- M14x1,5 process connection
- IP67 protection



More information

## AST 90 Series Temperature Sensor

- -50 ile +250 °C measuring range
- 55 mm immersion length
- PT100, PT1000 output
- M14x1,5 process connection
- IP67 protection



More information

Model	Measuring Range	Immersion Length	Max Pressure	Linearity	Supply	Output Signal	Process Connection	Electrical Connection	Operating Temp.	Protection
AST 10	-50...+200°C	15...300 mm	600 Bar	±%0.1 FS	16 ... 30 VDC	0-20 mA, 4-20mA, 0-5V, 0-10V, 1-5V, 0.5-4.5V, RTD	G1/4, G1/2, NPT1/4, NPT1/2, M14x1, M20x1,5 (Optional other)	DIN 43650-A, M12 Connector	-40 ... 85 °C	IP65
AST 20	-195...+650°C									
AST 30	-195...+650°C	25...500 mm			-	PT100, PT1000		Terminal		
AST 40	-195...+650°C				16 ... 30 VDC	0-20 mA, 4-20mA, 0-5V, 0-10V, 1-5V, 0.5-4.5V				
AST 80	-50...+250°C	31 mm	-	-	-	PT1000	M14x1.5mm	Connector		IP67
AST 90	-50...+250°C	55 mm				PT100, PT1000		VG95234A-10SL-3PN connector		



# Temperature Sensors

AST series temperature sensors with wide temperature measurement range, immersion length, mechanical connection and output signal options; meets all the requirements you need for temperature measurement in liquid and gaseous environments.







## SUBMERSIBLE LEVEL TRANSMITTERS



# SUBMERSIBLE LEVEL TRANSMITTERS

## PTL Series

### Piezoresistive Measurement Principle, 4-20 mA or 0-10V Output, IP68 Protection Class

PTL series level control transmitters are used for level measurement in applications like streams, reservoirs, water tanks etc.

With its stainless steel housing with IP68 protection class, it can work in harsh environments. Thanks to the surge voltage and reverse polarity protection, the PTL series are unaffected by electrical fluctuations and reverse connections

Optionally configurable pressure ranges, analog output and mechanical connection options offer solutions suitable for various applications.

- Piezoresistive measurement principle
- Long-term stable operation
- EMC and Reverse Polarity protection
- 4-20 mA or 0-10 V analog
- Different level measuring between 1 meter and 100 meters
- IP68 protection class
- High quality
- Reasonable price, economical solution

### PTL-110

- Different models from 100 mbar to 25 bar
- 1.4434 (AISI316L) body material (Ø29)
- Suitable for general applications such as wells, water tanks, reservoirs, etc.



More information

### PTL-120

- Different models from 600 mbar to 25 bar
- 1.4462 (dublex), 1.4434(AISI316L) or titanium body material (Ø29)
- Suitable for sea water, salt water, marine applications



More information

### PTL-130

- Different models from 100 mbar to 25 bar
- 1.4434 (AISI316L) body material (Ø29)
- Suitable for applications such as oils and fuels etc.



More information

### PTL-190

- Different models from 100 mbar to 25 bar
- 1.4434 (AISI316L) body material (Ø19)
- Suitable for general applications such as wells, water tanks, reservoirs, etc.



More information



Model	Measuring Range	Body Diameter	Max Pressure	Accuracy	Supply	Output Signal	Body Material	Electrical Connection	Operating Temp.	Protection
PTL 110	100 mbar..25 bar	Ø29	%200 FS	%0,3	12 ... 30 VDC	4...20 mA 0...10 VDC	1.4404 (AISI316L)	PE cable	-25 ... 85 °C	IP68
PTL 120	400 mbar..25 bar	Ø29					1.4462 (dublex) 1.4404 (AISI316L) Titanium	PE cable		
PTL 130	100 mbar..25 bar	Ø29					1.4404 (AISI316L)	PTFE cable		
PTL 190	100 mbar..25 bar	Ø19					1.4404 (AISI316L)	PE cable		



**ULTRASONIC LEVEL  
CONTROL SENSORS**

# ULTRASONIC LEVEL CONTROL SENSORS

## ULS and ULT Series

### Accurate Non-Contact Measurement, Analog and CANopen Output, IP67 Protection Class

The ultrasonic sensor sends and detects high-frequency ultrasonic sound with a piezoelectric transducer. A part of the reflected sound wave by hitting the measuring surface is detected by the transducer, depending on the speed of the signal in the air, the distance of the objects is determined. When the specified switching point is reached, the output is switched. The measured value is given as analog (0 ... 10 V / 4 ... 20 mA) or CANopen signal.

With ultrasonic sensors, objects can be reliably detected and measured regardless of material, color, transparency and surface properties.

ULS series ultrasonic sensors are used in non-contact, level and volume measurement of liquid and solid materials in open and closed tanks. There is also an open canal flow measurement option.

- Ultrasonic working principle
- Non-contact and high precision measurement
- $\pm 0.2\%$  FS accuracy
- RS-232, RS-485, CANopen serial connection options
- 4-20 mA, 0-20 mA or 0-10V analog output options
- 2 pcs. switch outputs
- IP67 high protection class
- Economical and maintenance-free design

### Applications

- Level measurement, pump control in tank, warehouse etc.
- Occupancy rate calculation in product warehouses
- Treatment plants
- Food industry
- Chemical industry



### ULS Series

- 0.4 - 9 meters measuring range which can be calibrated from the menu
- Delrin® POM-C EN 10204 body
- Single line 5 digit LCD display and 4 sealed keypads for configuration
- Display of measured value in level, distance (cm, m, inch or feet) or volume (liters, imp, gallons, m<sup>3</sup>)



More information

### ULT Series

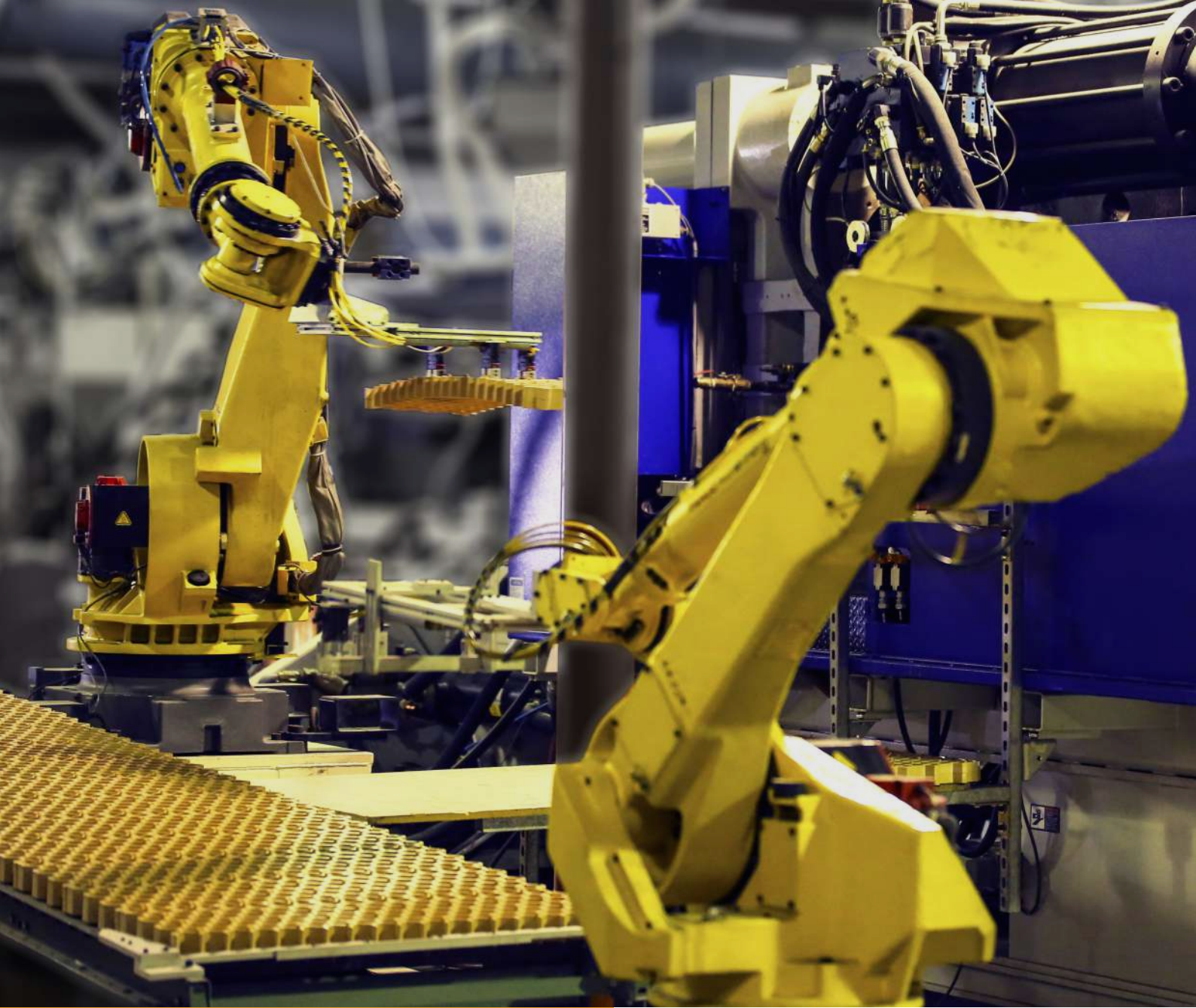
- Measuring range up to 6 meters
- 316L stainless steel, delrin or teflon acid-proof body options
- Small structure



More information




Model	Max. Distance	Blind Zone	Frequency	Angle	Body Material	Accuracy	Supply	Switch Output	Serial Comm.	Analog Output	Operating Temp.	Protection
ULS	9000 mm	400 mm	40 Khz	30°	Delrin	$\pm 0.2\%$ FS	16...30VDC	2 x PNP Open Collector Output	RS-232 RS-485 CANopen	0-10 V 4-20 mA 0-20 mA	-40 ... 75°C	IP67
ULT30-40	6000 mm	400 mm	40 Khz	30°	316L, Delrin							
ULT30-75	4000 mm	200 mm	75 Khz	12°	316L, Delrin							
ULT30-75A	4000 mm	200 mm	75 Khz	12°	Teflon (acid proof)							





## PROCESS CONTROL DEVICES

# Process Control Devices Product Selection Table

		Display	Supply Voltage	Refresh Rate	Resolution	Analog Input <sup>(1)</sup>	Relay Output	Analog Output <sup>(2)</sup>	Serial Communication <sup>(3)</sup>	Electrical Connection	Operating Temp. (°C)	IP Protection Class
	<b>EPA 100 Process Control Device</b>	2 lines 5 digits	24 VAC/DC 85-265 VAC	3.5 kHz	16 bit	✓	2 x 250 VAC 3A	✓	✓	2,5 mm <sup>2</sup> Socket Terminal	0...+50	IP60 Front Panel IP20 Back Panel
	<b>EPA 200 Process Control Device</b>	2 lines 5 digits	24 VAC/DC 85-265 VAC	3.5 kHz	16 bit	✓	2 x 250 VAC 3A (Opt. 3 pcs)	✓	✓	2,5 mm <sup>2</sup> Socket Terminal	0...+50	IP60 Front Panel IP20 Back Panel
	<b>EPA 300 Process Control Device</b>	1 lines 5 digits	24 VAC/DC 85-265 VAC	3.5 kHz	16 bit	✓	2 x 250 VAC 3A (Opt. 4 pcs)	✓	✓	2,5 mm <sup>2</sup> Socket Terminal	0...+50	IP60 Front Panel IP20 Back Panel

## EPA 100 series:



- (1) Potentiometer, 0.5-4.5 V, 0-5 V, 0-10 V, 4-20 mA, 0-20 mA, 3.33 mV/V, 2mV/V, 2.5mV/V Ratiometric
- (2) 0-10 V, 0-5 V, 0.5- 4.5 V, 4-20 mA, 0-20 mA
- (3) RS-232, RS-485, USB, CANopen

## EPA 200 series:

- (1) Potentiometer, 0.5-4.5 V, 0-5 V, 0-10 V, 4-20 mA, 0-20 mA, 3.33 mV/V, 2mV/V, 2.5mV/V Ratiometric, Thermocouple, RTD
- (2) 0-10 V, 0-5 V, 0.5- 4.5 V, 4-20 mA, 0-20 mA
- (3) RS-232, RS-485, USB, CANopen

## EPA 300 series:

- (1) Potentiometer, 0.5-4.5 V, 0-5 V, 0-10 V, 4-20 mA, 0-20 mA, 3.33 mV/V, 2mV/V, 2.5mV/V Ratiometric
- (2) 0-10 V, 0-5 V, 0.5- 4.5 V, 4-20 mA, 0-20 mA
- (3) RS-232, RS-485, USB, CANopen

		Display	Supply Voltage	Refresh Rate	Inputs	Relay Output	Serial Communication	Electrical Connection	Operating Temp. (°C)	IP Protection Class
	<b>ALC 77 Process Control Device</b>	2 lines 7 digits	24 VAC/DC 85-265 VAC	600 kHz	A/B Encoder pulse, Z (reset), Hold	2 x 250 VAC 3A	RS-232	2,5 mm <sup>2</sup> Socket Terminal	0...+50	IP60 Front Panel IP20 Back Panel
	<b>ALC 94 Process Control Device</b>	1 lines 6 digits	24 VAC/DC 85-265 VAC	600 kHz	A/B Encoder pulse, Z (reset), Hold	2 x (opt. 4 pcs) 250 VAC 3A	RS-232	2,5 mm <sup>2</sup> Socket Terminal	0...+50	IP60 Front Panel IP20 Back Panel



# PROCESS CONTROL DEVICES

## EPA Series

### Multifunctional Universal Process Control Devices

EPA series process control devices are used to instantly display the output of each device with potentiometric, voltage, current or CANopen output and to give a signal output in terms of 4-20mA current, 0-10V voltage or CANopen according to the information obtained from them. There are also relay outputs that can be adjusted to different functions.

They are designed to meet all your needs with its compact design, different analog input functions and output options.



### General Features

- Load Cell can also be connected
- RS-232, RS-485, USB or CANopen communication
- Relay outputs which can be set in different functions
- Analog output options (0-10V, 0-5V, 0.5-4.5V, 4-20mA, 0-20mA)
- Invertible analog output (eg, 20-0 mA)
- High refresh rate: 3.5 kHz
- Fast and easy parameter configuration via USB
- Converting analogue signals (4-20 mA, 0-20 mA, 0-10 V, potentiometric, ratiometric) to CANopen signals, and CANopen signals to analogue signals
- Compact design
- User friendly and easy interface
- Tare function (scaling to zero)
- Password protection and Hide function for menu

### EPA-100 Series

- 4 different analogue input on one device
- 2 relay outputs which can be set in different functions
- Two lines display;  
The first line shows the analog process value from the sensor and the second line shows the unit or relay set point for the measured value
- Small size



More information

### EPA-200 Series

- Process and temperature measurement at the same time
- Two lines display;  
The first line shows the analog process value from the sensor and the second line shows the temperature information from the thermocouple
- PT100, PT1000 or Thermocouples can be connected
- Thermocouple type K, J, N, R, S, T, E and B can be selected from menu
- Temperature can be shown as °C, °K and °F
- 2 relay outputs (optional 3), adjustable for different functions



More information

### EPA-300 Series

- 4 different analog input functions in one device
- Single line large display
- Scalable bargraph
- 2 relay outputs (optional 4), adjustable for different functions



More information



# PROCESS CONTROL DEVICES

## ALC 77

### Multifunctional Digital Pulse Counter for Encoders

ALC 77 series are multi-functional digital pulse counter which can be connected sensors that is giving digital pulse signal like encoders and NPN-NPN proximity etc. These devices with 73.5 x 73.5 x 96 mm dimensions and 2 line / 7 digit display have counter, tachometer and batch sub-models.

The device is very easy to use with the help of the keys on it and its settings can be made easily. Relay contact outputs can be set in 11 different modes.

Sensors such as rotary encoders, linear encoders, limit switches, which are frequently used by the machine and automation industry, can be connected.



### ALC 77 C (Counter)

- 600 KHz input frequency
- Functional External Z (Reset) Input
- Functional External Hold Input
- Quadrature Mode Up-Down Counter
- Selectable multiplier value (between 0.000001 - 9999999)
- 5 VDC or 12 VDC Encoder Power Output
- 2 relay outputs, can be set in 11 different modes
- Ability to enter offset value

### ALC 77 T (Tachometer)

- 5 kHz input frequency
- Encoder input (A and B signal input)
- Display range: -999999....9999999
- Programmable 2 set points
- 2 relay outputs
- 5 VDC or 12 VDC sensor output

### ALC 77 B (Batch)

- Functional External Z (Reset) Input
- Functional External Hold Input
- Encoder input (A and B signal input)
- 10 Different Control Modes (6 Counter + 4 Batch)
- 2 relay outputs
- 5 VDC or 12 VDC Encoder Power Output
- Ability to enter offset value



ALC 77 C  
More information



ALC 77 T  
More information



ALC 77 B  
More information

Model	Display	Supply Voltage	Sensor Supply Voltage	Inputs	Outputs	Serial Comm.	Operating Temp.	Protection Class
ALC 77 C	2 lines, 7 digits	24 VAC/DC 50/60 Hz 85-265 VAC 50/60 Hz	5 VDC 100 mA (TTL Sensor) 12 VDC 100 mA (PP Sensor)	A/B Encoder Pulse Inputs (600 KHz)	2 x 250 VAC 3A (For resistive load) Relay	RS-232 (opt.)	0...+50 °C	IP60 Front Panel, IP20 Back Panel
ALC 77 B				Z (External Reset) Input (Edge selection from menu) Hold Input (Edge selection from menu)		-		
ALC 77 T				A/B Encoder Pulse Inputs		-		

# PROCESS CONTROL DEVICES

## ALC 94

### Multifunctional Digital Pulse Counter for Encoders

ALC 94 Series are counters that perform up / down counting at high input frequency of 600 KHz in quadrature mode (4 multiplier) to which sensors that give digital pulse signals such as encoders are connected. Thanks to the high input frequency, encoders with high resolution and high speed can be connected. A and B encoder pulse signals or NPN / PNP signals are input.

The device is very easy to use with the help of the keys on it and its settings can be made easily. Relay contact outputs can be set in 11 different modes.

Sensors such as rotary encoders, linear encoders, limit switches, which are frequently used by the machine and automation industry, can be connected.



### General Features



- 600 KHz input frequency
- 6 digits display
- 96 x 88 x 48 mm boyut
- Functional External Z (Reset) Input
- Functional External Hold Input
- Quadrature Mode Up-Down Counter
- Prescale Can Be Adjustable (0,00001 – 999999)
- 5 VDC or 12 VDC Encoder Power Output
- 11 Different Control Modes
- Offset Value

Model	Display	Supply Voltage	Sensor Supply Voltage	Inputs	Outputs	Serial Connection	Operating Temp.	Protection Class
ALC 94	2 lines, 6 digits	24 VAC/DC 50/60 Hz 85-265 VAC 50/60 Hz	5 VDC 100 mA (TTL Sensor) 12 VDC 100 mA (PP Sensor)	A/B Encoder Pulse Inputs (600 KHz) Z (External Reset) Input (Edge selection from menu) Hold Input (Edge selection from menu)	2 x (opt. 4 pcs.) 250 VAC 3A (For resistive load) Relay	RS-232 (opt.)	0...+50 °C	IP60 Front Panel, IP20 Back Panel



More information





## Process Control Devices

EPA series process control devices, which are programmed to display the signals received from the sensor connected to it in the most accurate way with special algorithms, meet all the requirements you need in your measurement and control applications with many input and output options.







**JOYSTICKS**

# JOYSTICKS

## AJS Series

**Single or Dual Axis, Configurable Button and Grip Options,  
Analog/CANopen/Potentiometric Output**

AJS series joysticks provide precise control in single or dual axes. They are available in small-sized finger-type models for mounting on low-profile panels, or large-type models for off-road mobile vehicles.

They can be easily integrated into systems with analog or CANopen interface options and can work in harsh environments with high IP protection class.



### AJS 110 Series Finger Type Joysticks

- Potentiometric measurement technology
- Single-axis, forward and backward finger operated
- Potansiyometrik çıkış
- Small design and easy installation
- Resistant to electromagnetic field
- IP66 protection



More information

### AJS 120 Series Finger Type Joysticks

- Non-contact hall-effect measurement technology
- Single-axis, forward and backward finger operated
- 0-5VDC analog output
- Small design and easy installation
- Long operating life up to 5 million cycles thanks to non-contact measurement
- IP66 protection



More information

### AJS 200 Series Joysticks

- Non-contact hall-effect measurement technology
- Dual axis
- Special design for mobile machines
- Robust structure, long service life
- Model with button or without button
- Optional deadman switch
- 5 million cycles mechanical life
- 0-10V, 0-5V, 0.5-4.5V, 0-20mA, 4-20mA or CANopen output
- IP67 protection



More information

### AJS 600 Series Joysticks

- Non-contact hall-effect measurement technology
- Dual axis
- Special design for mobile machines
- Robust structure, long service life
- Configurable button and grip options
- Optional Dead man switch
- 5 million cycles mechanical life
- Resistant to electromagnetic field
- 0-10V, 0-5V, 0.5-4.5V, 0-20mA, 4-20mA or CANopen output
- IP67 protection



More information





## PROXIMITY SENSORS



# PROXIMITY SENSORS

## IPS Series

Inductive Sensing, DC 2-wire or 3-wire PNP/NPN Output

LED Display, IP67 Koruma

IPS series inductive proximity sensors are used to detect ferrous metal objects.

These sensors basically contain oscillators for sensing. A magnetic field is created in front of the oscillator windings. When a metal object enters this magnetic field, the oscillations stop and detection takes place. Thus, the output is driven and NO (normally) or NC (normally closed) output signal is generated depending on the sensor type.

### Applications

In the automation industry;

- Position monitoring of machine parts
- Counting metal objects



### IPS 100 Series Inductive Proximity Sensors

- Ø8, Ø12, Ø18 or Ø30 mm models
- DC 2-wire or 3-wire
- Non-flush
- High sensitivity, fast feedback
- LED status indicator
- IP67 protection class
- Long service life



More information

### IPS 200 Series Inductive Proximity Sensors

- 17x17mm, 25x25mm and 30x30mm models
- DC 2-wire or 3-wire
- High sensitivity, fast feedback
- LED status indicator
- IP67 protection class
- Long service life



More information



**COUNTING  
SENSORS**



# COUNTING SENSORS

## ACS Series



More information

### Thru-beam Sensor For Counting Small Objects, IP67 Protection

ACS series frame type counting sensors with high sensitivity, compact structure, easy installation and use are designed for counting freely-falling small objects.

The product consists of a receiver and transmitter mounted on a frame. Thanks to this structure consisting of one housing, there is no need to adjustment of the receiver and transmitter separately. This provides a lot of convenience for the user during installation and use.



#### Applications:

- Agriculture Industry (eg: counting seeds)
- Production and packaging lines
- Pharmaceutical and chemical industry
- Packaging machines etc.



### General Features

- Counting objects with a minimum size of 1 mm in the 55 x 34 mm detection area
- Easy installation and use as the transmitter and receiver are in one housing
- PNP switching output
- Status LED
- Robust structure
- IP67 protection
- Suitable for both metal and non-metal parts

Model	Wave Length	Sensing Area	Min. Detectable Object	Output And Supply	Working Environment Light	Electrical Connection	Operating Temp.	Protect ion
ACS	940 nm	34x55 mm	1 mm	PNP 10...30VDC	5.000lx	3x0,14 mm <sup>2</sup> PUR cable (opt. others)	-40...+60°C	IP67





**TAP  
SENSORS**

# TAP SENSORS

## ITS Series

### Infrared Detection, High Sensitivity, Stable Operation

The purpose of the ITS series tap sensors is to inform the valve when to start or stop the flow depending on the presence or absence of your hands. It has infrared sensing principle. The active infrared non-contact sensor uses the emission and reception of infrared rays to detect the presence and/or movement of objects or people in the sensing areas.



### General Features

- Suitable for use in non-contact faucets
- User selectable detection range
- Variable connection options
- Automatic stop of water after 1 minute of continuous flow
- Low power consumption
- Strong moisture-proof property
- High anti-interference and anti-vibration performance

TECHNICALFEATURES	
Type	IR sensor
IR Wavelength	940 nm
Supply	DC 4V – 6.5V
Power Consumption	≤0.016mw (≤2.5uA)
Object Detection Distance	10 mm - 300 mm adjustable (Object : hand)
	50 mm - 380 mm adjustable (Object : white paper)
Sensor range error	±%10 of rated sensor range
Maximum output current	750 mA
Output pulse width	48 ms
Safety stop	60 sn
Material	ABS



**EARTHQUAKE /  
SIESMIC SENSORS**



# EARTHQUAKE / SEISMIC SENSORS

## ASM 10 Serisi

### 3-Axis Quake Detection, Automatic Gas and Power Cut-off in case of Earthquake

ASM 10 Seismic Earthquake Panels have very sensitive sensors that can detect seismic movements in three axes (x, y, z). They are designed for sensing the seismic vibrations that occur during an earthquake, giving control output and automatically disable the devices like gas, generator, electrical panel, elevator etc. during an earthquake. In addition, if such movements are detected it provides audible warning with buzzer and visual warning with LCD screen and LEDs. Thus, it is ensured that the damages that may occur as a result of the earthquake are minimized.

The device has 1 12VDC Solenoid output and 2 dry contact relay outputs and various functions can be assigned to these outputs via the menu on the panel.

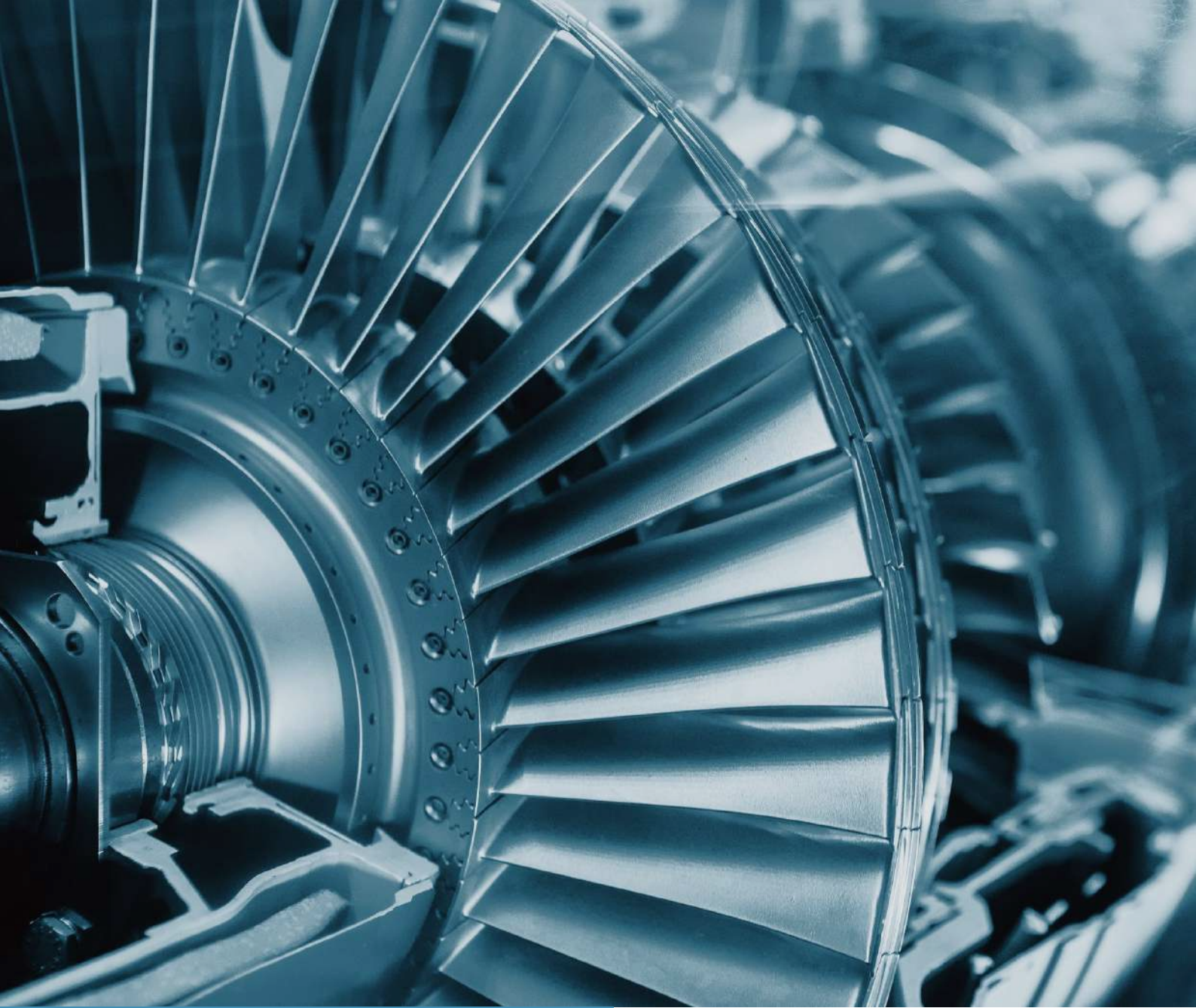


### General Features

- 3-axis quake detection
- Keeping the last 100 earthquake events in memory and viewing them from the menu
- Automatic offset
- More than 24 hours (48 hours typical) operation with internal battery in case of power failure
- Color LCD indicator and status LEDs
- Audible and visual warning in case of earthquake or fault
- To cut off gas and energy automatically in case of an earthquake;  
2 dry contact relays and 1 12V 5A solenoid output that can be adjusted in different functions
- Robust and durable construction
- Easy installation

### TECHNICAL FEATURES

<b>Supply Voltage</b>	85-305 VAC, 47440 Hz
<b>Quiescent Current</b>	19mA @ 230 VAC
<b>Power</b>	4,37W @ 230 VAC (typical)
<b>Battery Charge Voltage</b>	14V (+/-0.2V)
<b>Current Drawn from the battery</b>	12V Battery (while 100% full): Stand by: 20mA Normal operating no alarm 48mA All outputs are active earthquake alarm 118mA (except solenoid)
<b>Battery Capacity</b>	12VDC, 2.2Ah
<b>Battery Operating Time</b>	>24 hours (typical 48 saat)
<b>Detection Plane</b>	X, Y, Z (3axis)
<b>Minimum sensitive acceleration threshold</b>	+/- 40 mg
<b>Relay Output</b>	2 x dry contact relay (250V 10A)
<b>Solenoid Output</b>	1 x 12VDC 5A
<b>S. Valve energizing in case of alarm</b>	It detects in 5 seconds or less. Typically, detection is done in around 1 second.
<b>Solenoid connecting cable thickness and distance</b>	0.57mm x 2 TTR / 20m max.
<b>Audible warning</b>	85dB/1m buzzer
<b>Operating temperature</b>	0°C ... +51,5°C
<b>Humidity</b>	%10 ... %90 non-condensing
<b>Body Material</b>	Metal



**SPEED AND MOTION  
SENSORS**

# SPEED AND MOTION SENSORS

## AGS 10 Series Gear Motion Sensor

### Hall-Effect Technology, Push-Pull Output

AGS 10 Series gear motion sensors detect movement in gears with hall effect technology and output push-pull signals.

- Hall-effect measurement technology
- 5V or 10V push-pull output
- LED status indicator
- Different cable length and connector options
- Wide temperature range
- Resistant to electromagnetic field
- Easy installation and use



More information

## AGS 200 Series Speed & Direction Sensor

### Hall-Effect Technology, Quadrature Square Wave Output

Atek AGS 200 series speed and direction sensors are designed to provide both speed and direction information. Speed information is provided as a digital square wave output, and direction information is provided using a quadrature output with 90° phase-shifted signals. The target direction is determined by the

- Hall-effect measurement technology
- Quadrature square wave output
- Direction information with 90° phase shifted dual output signal
- Wide frequency range
- Different cable length and connector options
- Wide temperature range
- Resistant to electromagnetic field
- Easy installation and use
- IP67 protection



More information



### Applications

- Speed and rotation direction of gear wheels
- Mobile machinery and electric drive applications
- Speed and position control in escalators and elevators
- Wheel speed detection in material handling, agricultural and construction





**COUPLINGS**

# COUPLINGS

## GT and EC Series

- Non-rebound, flexible and durable design
- Maintenance, lubrication, etc. not required, very long life
- Fully error-free motion and power transfer
- 100% electrical and vibration isolation between the two ends of the interconnection piece separated by polyurethane
- High torque-resistant polyurethane material
- All parts are jointly centered and prestressed to protect against misalignment

### EC Series

#### Set Screw System Steel Body

- The special structure of the intermediate element flexible polyurethane connecting material from steel body, specially pure polyurethane material reduces axial misalignments to a minimum.
- 6, 8 or 10 mm hole diameter options
- 36 or 40 body length
- Set screw system



More information

### GT Series

#### Compressed / Clamped System, Aluminum Body

- Aluminum body, intermediate element special purity polyurethane spider. The pit / bump structure of the body and polyurethane intervening reduces angular, parallel and axial misalignments to a minimum
- 6, 8 or 10 mm hole diameter options
- 20 mm body diameter, 30 mm body length
- Compressed / clamped system



More information

Model	Body Diameter (D)	1. and 2. Hole Diameter	Body Length (L)
GT	20 mm	6-6 mm 8-8 mm 10-10mm	30 mm
EC	30 mm	6-6 mm 6-8 mm 8-8 mm 8-10 mm 10-10 mm	36 or 40 mm

# COUPLINGS

## PC Series

### Set Screw System, Plastic Body

- One piece
- Flexible plastic structure
- Set screw system
- High speed transmission
- 6-6, 8-8 and 6-8 mm hole diameter options
- Long life, robust



More information

## SC Series

### Set Screw System, Stainless Steel Body

- Aluminum flange
- Stainless steel flexible body
- Constant Velocity Transmission
- High torque and long life
- 6-6, 6-8, 6-10, 8-8, 8-10, 10-10, 12-12, 14-14 mm hole diameter options



More information

## HT Series

### "Squeezed / Clamped System, Aluminum Body

- One piece
- Aluminum body
- High torque and speed transmission
- 6-6, 8-8, 6-8, 8-10 mm hole diameter options
- Squeezed clamped system
- Long life, durable



More information

## HC Series

### Set Screw System, Aluminum Body

- One Piece
- Aluminum body
- High torque and speed transmission
- 6-6, 8-8, 6-8, 8-10, 10-10 mm hole diameter options
- Set screw system
- Long life, durable



More information

Model	Body Diameter (D)	1. and 2. Hole Diameter	Body Diameter (L)
PC	19 mm	6-6 / 8-8 / 6-8 mm	23 mm
SC	16 mm / 21 mm	6-6 / 6-8 / 6-10 / 8-8 / 8-10 / 10-10 / 12-12 / 14-14 mm	24 mm* / 28 mm* / 33 mm *Only for 16 mm body models
HT	16 mm / 20 mm / 25 mm	6-6 / 8-8 / 10-10 6-8 / 8-10 mm	24 mm / 28 mm / 32 mm
HC	16 mm / 20 mm / 25 mm	6-6 / 8-8 / 10-10 6-8 / 8-10 mm	24 mm / 28 mm / 32 mm





# Rotary Encoders

Leading Atek series rotary encoders in motion feedback control; It has a wide selection range to meet all the features that suit your needs, whether in the heavy industry or light-duty sector. Industrial machinery, elevators, robots, cutting machines, injection molding machines etc. Besides providing highly accurate feedback in your applications, they are stable and long-lasting.





## ABOUT US

ATEK Electronics Sensor Technologies Inc. has certainly been the market leader for position control sensors and measuring devices industries in Turkey since its establishment in 2002.

All of our sensors which are now well being used in Turkey and more than 60 countries throughout the entire world, for measuring linear and circular movements of various kinds of machinery; such as linear transducers, non-contacting magnetic encoders, rotary sensors, draw wire sensors, optical linear scales, digital readout systems, tilt sensors, pressure transmitters and potentiometers are completely hassle-free, long-lasting and outstanding quality.

Our wide product range allows us to always find the optimal customized solutions for our customers in various industries with different applications for measuring, such as plastic injection machinery, iron and steel machinery, packaging machinery, wood marble and glassworking machinery, bending machinery as press brakes, textile machinery, hydraulics, robotics etc.

Cooperation between our skilled sales team and advanced engineering team, allows us to do all electronical and mechanical design and manufacturing in our high-tech facility in Turkey; and deliver our state of the art products to beloved customers and partners in very short times. We are well prepared and excitingly interested

### “Our Vision”

To be one of the best and innovative companies in the world in our sector, to reach a wider audience with our product and service quality and always to be the first choice of consumers

### “Our Mission”

To provide the right quality / price ratio, to meet the consumer expectations at the highest level with its wide range of products and to be a “technology” company that adheres to economic and moral principles, respects society and the environment, researches, learns and develops itself continuously.

### “Our Values”

Reliability  
Sustainability  
Customer orientation  
Quality and Innovation  
Agility



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