

**Rotary Sensor
Industrial Grade
Hybrid Potentiometer**

Series AW360 ZE



Special features

- full 360° angular range
- excellent linearity to $\pm 0.035\%$
- repeatability to 0.007°
- 12 bit resolution
- long lifetime - to 50 million movements
- sealed to IP65

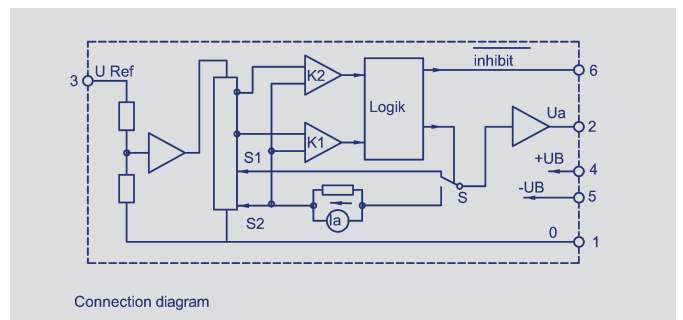
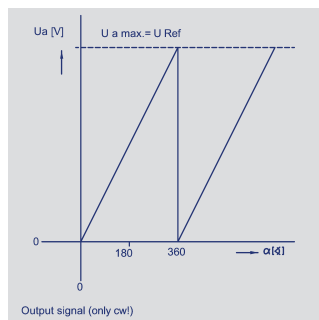
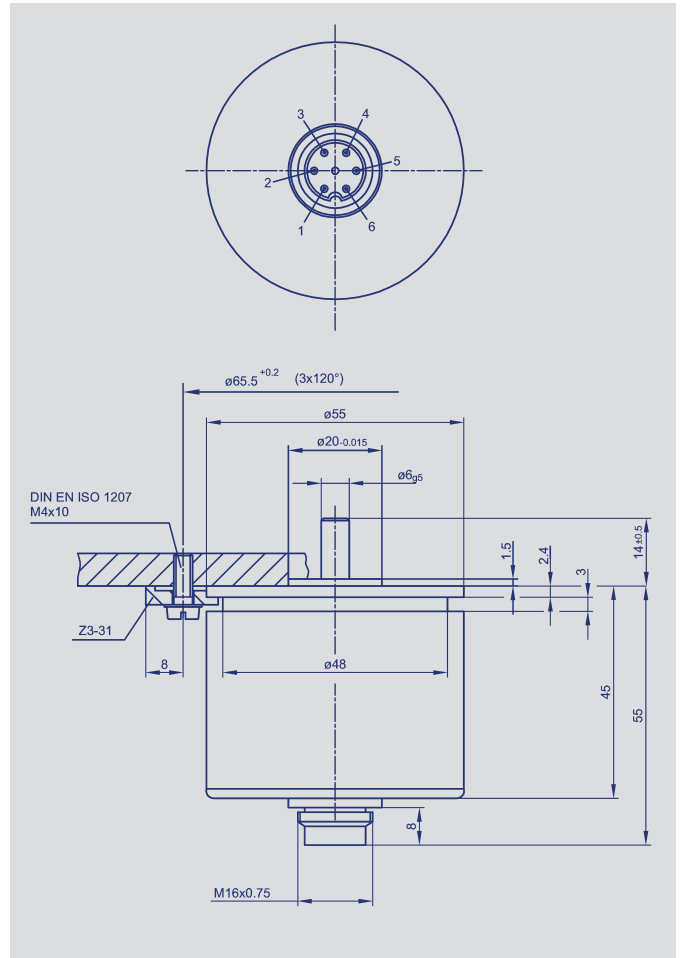
The AW360 ZE combines the best qualities of modern potentiometers with on-board electronics to offer a high-precision device with a full 360° angular range. There is no dead band, as with conventional potentiometers.

The on-board electronics offers well-defined minimum and maximum output voltages. In addition, the AW360ZE delivers a logical output during its reset / power-up period, which can be used by the application controller to disable A/D and avoid measurement errors during that period.

Rotating the shaft clockwise results in an increase in the output voltage. Other output signal characteristics available upon request.

The anodized aluminum housing is sealed to IP65.

The AW360ZE is well-suited for stringent requirements in machine and manufacturing plant applications.



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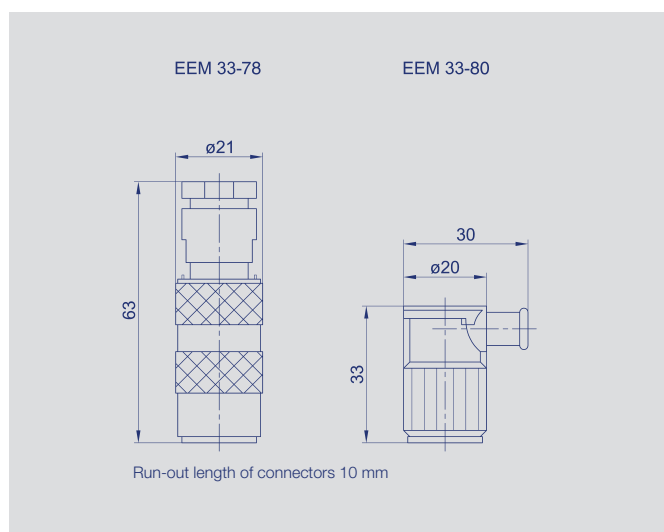
Description		
Case	aluminium, anodized; sealed shaft	
Shaft	stainless steel	
Bearings	stainless ball bearings	
Resistance element	conductive plastic	
Wiper assembly	precious metal multi-finger wiper	
Electrical circuitry	hybrid circuit integrated into housing	
Connections	7pin connector (see „Accessories“)	
Mechanical Data		
Dimensions	see drawing	
Mounting	with 3 mounting clamps Z-3-31	
Mechanical travel	360, continuous	°
Permitted shaft loading (axial and radial) static or dynamic force	45	N
Starting torque	< 1.5	Ncm
Maximum operational speed	2000	RPM
Weight	170	g
Electrical Data		
Actual electrical travel	360	°
Absolute linearity AW_360_ZE-10	±0.07	%
AW-360_ZE-11	±0.035	%
Repeatability	0.002 (~0.007°)	%
Effective temperature coefficient of resistance	100	ppm/K
Supply for on-board electronics ($\pm U_B$)	±15 (±1)	V
Potentiometer supply voltage (U_{Ref})	≤ ±10	V
Inhibit signal from $\pm U_B$ to zero	approx. 50	µs
Zero offset	< 2	mV
Max. difference of supply voltage U_{Ref}	±2	mV
Max. output current	5, short-circuit protected	mA
Output resistance	< 0.1	Ω
Electronic circuit current (no load)	10	mA
Insulation resistance (250 VDC, 1 bar, 2 s)	≥ 10	MΩ
Dielectric strength (50 Hz, 2 s, 1 bar, 250 VAC)	≤ 100	µA
Environmental Data		
Temperature range	0...+70	°C
Vibration	10...2000	Hz
	Amax = 0.76	mm
	amax = 20	g
Shock	50	g
	11	ms
Life	50 million	movements
Protection class	IP65 (DIN 400 50 / IEC 529) (with connector EEM 33-78)	

Included in delivery

3 mounting clamps Z-3-31

Recommended accessories

Mating plug EEM 33-78
protection class IP67,
Right-angled plug EEM 33-80
protection class IP 40,
Fork couplings Z-104-G6
(backlash free),
Fork couplings Z-105-G6
(backlash free),
MAP process control indicators
with display,
MUP / MUK signal conditioners
for standardized voltage or
current output signals.



Order designations

Type	P/N
AW-360-ZE-10	011021
AW-360-ZE-11	011022