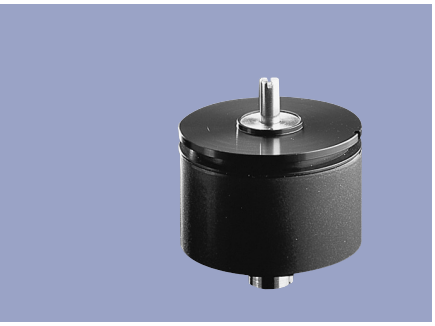
novotechnik
Siedle Group

Rotary Sensor Industrial-Grade Potentiometer with Current Interface

Series IPE6000



Special features

- standardised output current over 90° or 345°
- field-selectable output current 0...20 mA or 4...20 mA
- integrated electronics
- very good absolute linearity ±0.1 % (345°) or ±0.3 % (90°)
- very high repeatability 0.007°
- unrestricted continuous rotation
- protection class IP 65

The IPE6000 is a current output version of the precise and robust IP6000 potentiometer. It provides on-board electronics for power supply control and conversion of the angular information to output current.

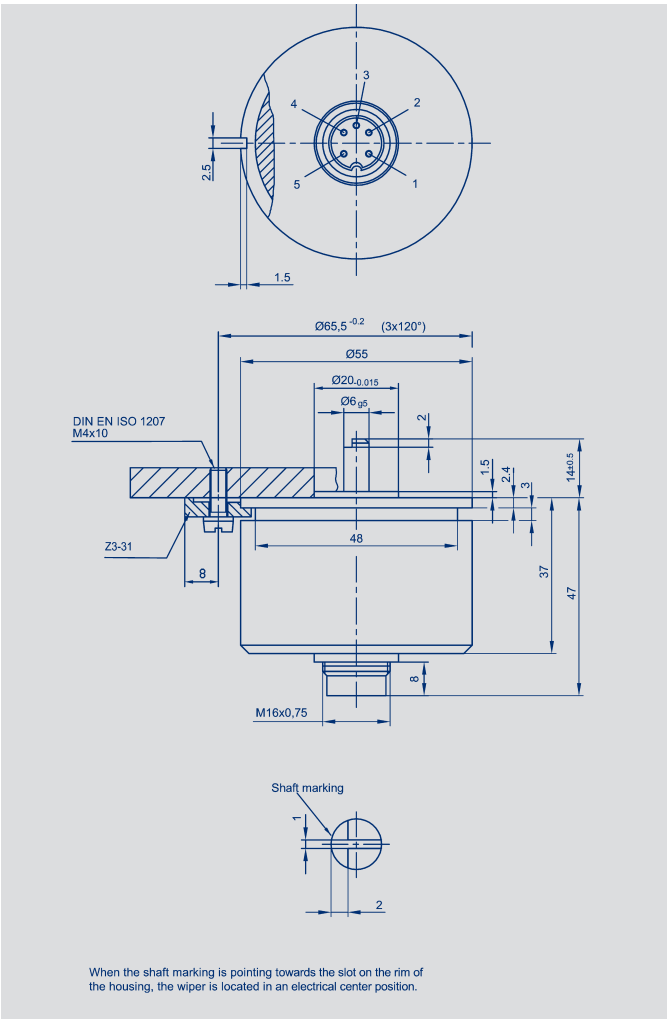
Current interfaces offer signal transmission even over long cable distances, and optimum immunity to interference.

The IPE6000 provides field-selectable outputs of either 0...20 mA or 4...20 mA. The on-board electronics allows for a wide range of supply voltage, and can operate from an unstabilized DC source.

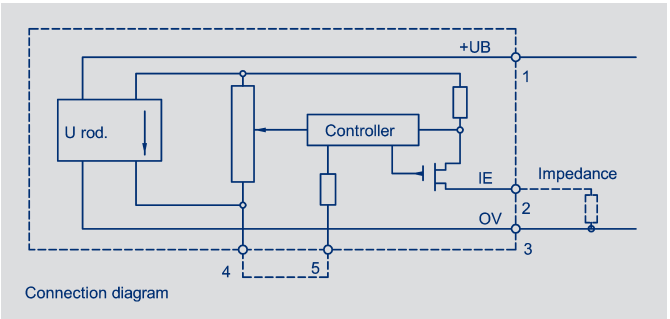
The IPE6000 is sealed to IP65, and is intended for demanding requirements in the machine, plant, and vehicle sectors.

Precision ball bearings allow for high shaft loads.

For superior EMC protection, the cable shield must be galvanically or capacitively connected to the sensor housing.



When the shaft marking is pointing towards the slot on the rim of the housing, the wiper is located in an electrical center position.



Connection diagram

novotechnik
Siedle Group

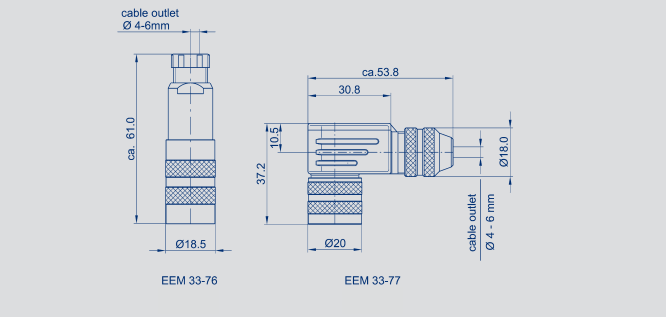
Novotechnik
Messwertaufnehmer OHG

Postfach 4220
73745 Ostfildern (Ruit)
Horbstraße 12
73760 Ostfildern (Ruit)

Telefon +49 711 4489-0
Telefax +49 711 4489-118
info@novotechnik.de
www.novotechnik.de

© 01/2025
Subject to change.
Printed in Germany.

Description		
Case	aluminium, anodized, sealed to IP65	
Shaft	stainless steel	
Bearings	stainless steel ball bearings	
Resistance element	conductive plastic	
Wiper assembly	precious metal multi-finger wiper	
Electrical connections	5pin connector (see „Accessories“)	
Reverse voltage protection	yes, by means of internal diode	
Mechanical Data		
Dimensions	see drawing	
Mounting	with 3 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	2 000	RPM
Weight	200	g
Electrical Data		
Operating voltage	24 ±6	V DC
Electrical range	90 or 345	°
Max. current consumption	35	mA
Load impedance	0-500	Ω
Absolute linearity at 345° at 90°	 ± 0.1 ± 0.3	 % %
Repeatability	0.007	°
Temperature coefficient of the zero point of the range	 ≤ 10 ≤ 15	 ppm/K ppm/K
Insulation resistance (500 VDC, 1 bar, 2 s)	≥ 10	MΩ
Dielectric strength (50 Hz, 2 s, 1 bar, 500 VAC)	≤ 100	µA
Current range fluctuations relative to operating voltage alteration	≤ 10	ppm/V
The temperature co-efficient quoted is valid for the output current. Any temperature co-efficient of the operating load resistance is additional.		
Environmental Data		
Temperature range	-25..+70	°C
Vibration	5...2000 Amax = 0.75 amax = 20	Hz mm g
Shock	50 11	g ms
Life	100 x 106	movements
Protection class	IP 65 (DIN 400 50 / ICE 529)	



Range		Pins in the receptacle
0...20 mA	open	4<--/ /-->5
4...20 mA	connected	4<------->5
Current increases as shaft is rotated clockwise		

Order designations

Type	P/N
IPE-6501-S0055 (345°)	010040
IPE-6501-S0056 (90°)	010041

Included in delivery

3 mounting clamps Z3-31
Recommended accessories
Fork coupling Z-104-G06 (backlash free), P/N 005690;
Fork coupling Z-105-G06 (backlash free), P/N 005691;
Mating plug EEM 33-76 protection class IP 67, P/N 005614
Right-angled plug EEM 33-77 protection class IP 67, P/N 005615
MAP process control indicators with display.