



An absolute encoder of highest quality in the smallest possible size.

System Data

IND-ROT-045-A21-FR	
Type	Axial, frameless, true absolute INDUCTIVE encoder
Standard Resolution	19 bits, 131'072ppr 524'288cpr
ENOB in entire mounting tolerance range	18 bits
High Accuracy	$\pm 0.025^\circ$, $\pm 450\mu\text{rad}$
Standard Accuracy	$\pm 0.040^\circ$, $\pm 700\mu\text{rad}$
Thickness	7.80
Hysteresis	none
Repeatability	1 resolution count
Position update rate and signal latency	Real-time
Power-up Time	max. 0.8 sec

Electrical Data

Supply voltage	OptionAV: min.4.35Vdc.max.36Vdc
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Reverse polarity protection	yes
Current Consumption	max.100mA@ 5Vdc, max. 30mA@24Vdc

Mechanical Data

Stator Base Material	FR4 (PCB)
Stator Weight	5.50 g
Rotor Base Material	Carrier : anodized aluminum Bonded scale: FR4
Rotor Weight	5.50 g
Vibration	EN 60068-2-6, 20 g, 55 .. 2000 Hz
Shock	EN 60068-2-27, 200 g, 6 ms

Mounting Tolerances

Nominal Axial (air-gap)	0.50 mm
Axial Tolerance	0.30 mm (0.20 mm to 0.80 mm)
Radial Tolerances	0.30 mm

Environmental Data

Temperature Range - Standard Operating	-20°C .. +85°C
Temperature Range - Standard Storage	-20°C .. +85°C
Temperature Range - Extended Operating	-40°C .. +105°C
Temperature Range - Extended Storage	-55°C .. +125°C
Ingress Protection	IP00
EMC Immunity	complies with EN IEC 61000-6-2
EMC Emission	complies with EN IEC 61000-6-4

Advantages

Plug-n-play

No field calibration required

Wide mounting tolerances

High accuracy

Benefits

Low installation cost

Low integration effort

Easy installation



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