

MAIN FEATURES

Miniaturized encoder series for general factory automation applications, small AC motors and gearmotors.

- 3 channel encoder (A / B / Z) with resolution up to 14400 ppr
- Power supply up to +30 V DC with several electrical interfaces available
- Up to 500 kHz output frequency
- Cable output, connectors available on cable end
- Metal cover for high IP enclosure rating
- Blind hollow shaft diameter up to 10 mm with collar clamping
- Mounting by stator coupling or torque pin

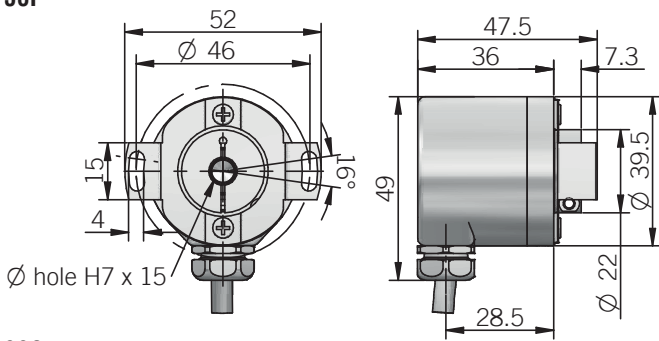


ORDERING CODE

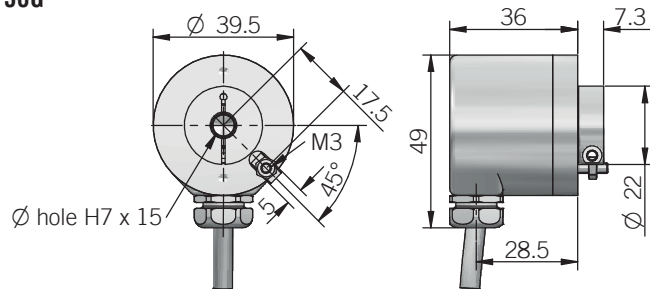
ER 38F 500 S 5/30 P 10 X X PR .XXX

SERIES incremental encoder series ER													
MODEL blind hollow shaft with stator coupling 38F blind hollow shaft with torque pin 38G													
RESOLUTION ppr from 100 to 14400 refer to the available pulses list													
ZERO PULSE without zero pulse S with zero pulse Z													
POWER SUPPLY (with L electrical interface) 5 V DC 5 5 ... 30 V DC 5/30													
ELECTRICAL INTERFACE NPN open collector C push-pull P line driver L power supply 5/30 V DC - output RS-422 RS													
BORE DIAMETER mm 4 mm 5 mm 6 (1/4") mm 6,35 mm 8 mm 10													
ENCLOSURE RATING IP 66 shaft side / IP67 cover side X													
OPTION to be reported X													
OUTPUT TYPE radial cable (standard length 0,5 m) PR preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)													
VARIANT custom version XXX													

38F

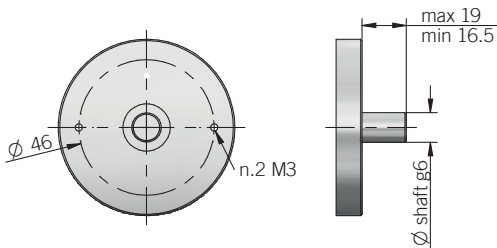


38G

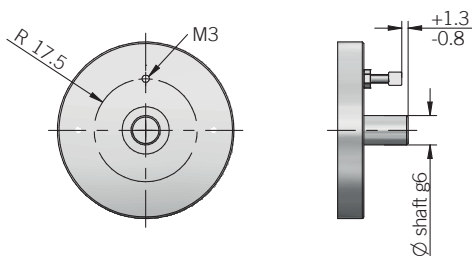


RECOMMENDED INTERFACE FLANGE DESIGN

38F



38G



dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	from 100 to 14400 ppr
Power supply¹	5 = 4,5 ... 5,5 V DC 5/30 = 4,5 ... 30 V DC (reverse polarity protection)
Power draw without load typical	5 = 200 mW 5/30 = 800 mW
Max load current	C / P = 50 mA / channel L / RS = 20 mA / channel
Electrical interface²	NPN open collector (AEIC-7273, pull-up max +30 V DC) push-pull / line driver HTL (AEIC-7272 or similar) line driver RS-422 (AELT-5000 or similar)
Max output frequency	250 kHz up to 3600 ppr / 500 kHz from 4000 ppr
Counting direction	A leads B clockwise (shaft view)
Index signal	180°e (gated A)
Mean time to dangerous failure (MTTF_d)³ according to EN ISO 13849-1	263 years
Mission time (T_m)³	20 years
Diagnostic coverage (DC)³	0%
Cable type	shielded - fixed installation conductors section 0,22 mm ² / AWG 24 bending radius min 60 mm
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive
UL / CSA	file n. E212495

MECHANICAL SPECIFICATIONS

Bore diameter	Ø 4* / 5* / 6* / 6,35* (1/4") / 8* / 10 mm * with supplied shaft adapter
Enclosure rating IEC 60529	IP 66 shaft side / IP 67 cover side
Max rotation speed	6000 rpm
Max shaft load⁴	5 N (1,12 lbs) axial / radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	0,8 x 10 ⁻⁶ kgm ² (19 x 10 ⁻⁶ lbf ²)
Starting torque (at +20°C / +68°F)	< 0,01 Nm (1,42 Ozin)
Bearing stage material	aluminum
Shaft material	stainless steel
Shaft adapter material	bronze
Housing material	painted aluminum
Bearings	n.2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature^{5, 6}	-25° ... +85°C (-13° ... +185°F)
Storage temperature⁶	-25° ... +85°C (-13° ... +185°F)
Weight	150 g (5,29 oz)

¹ as measured at the transducer without cable influences

² for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

³ this product is not a safety component, for further details refer to TECHNICAL BASICS section

⁴ maximum load for static usage

⁵ measured on the transducer flange

⁶ condensation not allowed

RESOLUTIONS

100 - 120 - 128 - 150 - 200 - 240 - 250 - 256 - 300 - **360** - 400 - 480 - **500** - 512 - 600 - 625 - 720 - 800 - 900 - **1000** - **1024** - 1200 - 1250 - 1440 - 1600 - 1800 - **2000** - **2048** - **2500** - 3000 - **3600** - 4000- 4096 - **5000** - 6000 - **7200** - 8000 - 8192 - 10000 - 12000 - 14400

please directly contact our offices for other pulses, preferred resolutions in bold