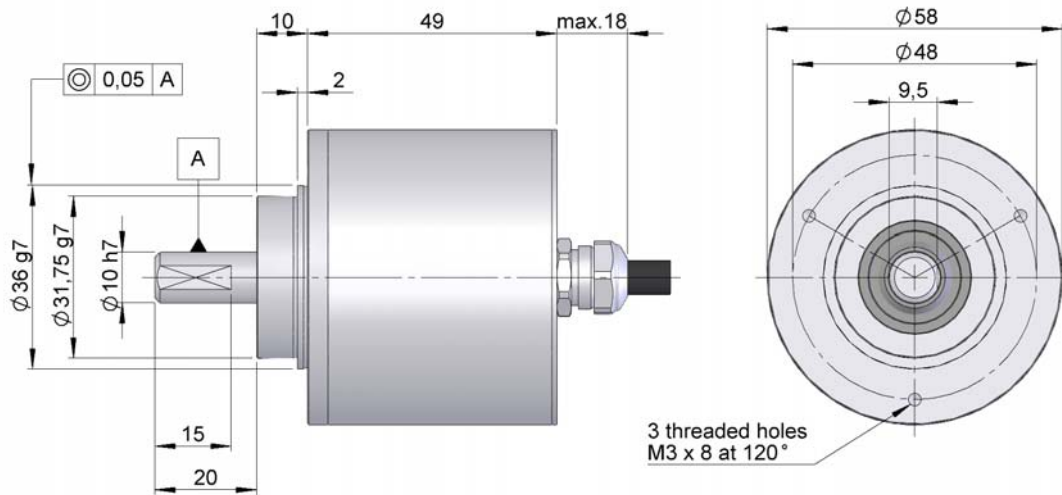
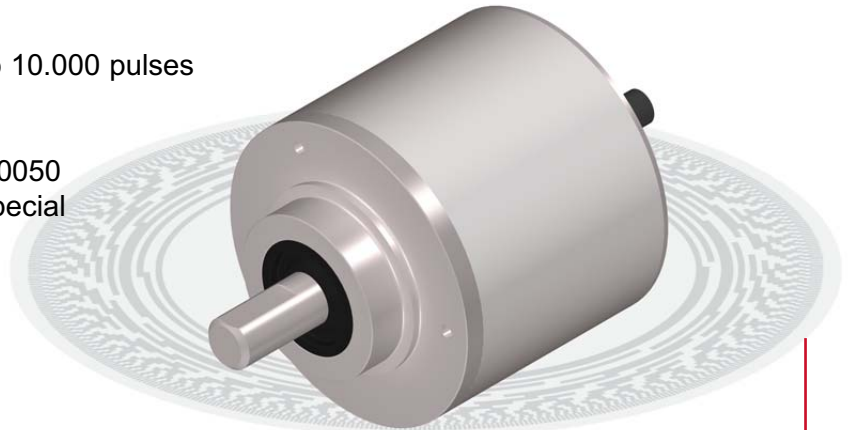


# SERIE 10 IP67

## INCREMENTAL SOLID SHAFT ENCODER FOR SEVERE INDUSTRIAL APPLICATIONS

- Any number of pulses available from 1 to 10.000 pulses
- External diameter 58 mm
- Shaft 10 mm
- Protection class IP67 according to DIN 40050
- Executions mechanical, electronic and special optics available on request
- Connection by cable (any cable length available) or industrial connector



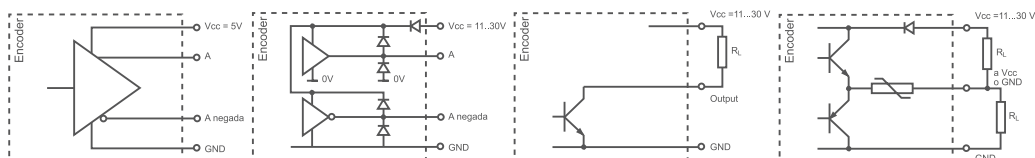
Previous mounting and installation of the encoder is recommended to read the section "TECHNICAL CONSIDERATIONS".

### MECHANICAL SPECIFICATIONS

Housing	Aluminium/Stainless steel
Shaft	Stainless steel
Bearings	Ballraces
Bearings lifetime	1x10 <sup>10</sup> rev
Maximum number of revolutions permitted mechanically	6000 rpm
Protection against dust and splashes according to DIN 40050	IP67
Rotor inertia moment	30 gcm <sup>2</sup>
Starting torque at 20°C (68°F) ,	Max. / 2,0 Ncm
Maximum load permitted on axial shaft	60 N
Maximum load permitted on radial shaft	120 N
Weight aprox.	0,5 Kg
Operating temperature range	-20°C a +80°C
Vibration	100 m/s <sup>2</sup> (10Hz...2000Hz)
Shock	1000 m/s <sup>2</sup> (6ms)
Maximum pulses per turn	10.000
Axial or radial connection	Cable 2 metres or industrial connector (other cable lengths available on order)

## ELECTRICAL SPECIFICATIONS

### OUTPUT SIGNALS



	RS422 (TTL compatible)	Push-Pull Differential	NPN Open Collector	Push-Pull without inverted
Power supply	5 V $\pm 5\%$	11...30 V	11...30 V	11...30V
Consumption	Typical: 70 mA Max: 150 mA	Typical: 45 mA Max: 150 mA	40 mA	Typical: 45 mA Max: 150 mA
Max.load capability	$\pm 20$ mA	$\pm 30$ mA	40 mA	$\pm 30$ mA
Length of cable allowed	1200 m	100 m	50 m (a 24 V)	50 m
"Low" signal level	$V_{OL} < 0,5$ V	$V_{OL} < 2,5$ V	$V_{OL} < 0,4$ V (a 24 V)	$V_{OL} < 2,5$ V
"High" signal level	$V_{OH} > 2,5$ V	$V_{OH} > V_{CC} - 3$ V	$V_{OH} > 2,2$ V (a 24 V)	$V_{OH} > V_{CC} - 3$ V
Frequency	300 kHz	200 kHz	100 kHz	200 kHz
Short circuit protection	Yes	Yes	Not permanent	Yes
Protection against polarity inversion	No	Yes	Yes	Yes
Channel B leads (90° electric) channel A				

### CONNECTION



	Cable 5x0.14	Cable 3x2x0.14+2x0.34	90.9508 M12 8p
GND	Yellow	Black	1
Vcc	White	Red	2
A	Brown	Yellow	3
B	Green	Green	4
A inverted		Brown	5
B inverted		Blue	6
0 (reference)	Grey	Grey	7
0 inverted	Grey	Orange	8

## ORDERING CODE

SERIE	SHAFT	FLANGE	OUTPUT SIGNALS	CONNECTION	ELECTRONIC OUTPUT	PULSES NUMBER	SPECIAL CUSTOMER
10I- Stainless steel 10A- Aluminium	1- $\varnothing 10$ x 20 mm	1- None	1- A 2- A + B 3- A + B + $\tilde{0}$ 5- $\tilde{A\tilde{A}}$ + $\tilde{B\tilde{B}}$ 6- $\tilde{A\tilde{A}}$ + $\tilde{B\tilde{B}}$ + $\tilde{0\tilde{0}}$ 9- A + B + 0	3- Radial cable L- Radial 90.9508 8- Axial cable K- Axial 90.9508	0- Open collector NPN 11..30V 1- Push-Pull 11..30V (without inverted)	7- Standard RS422. 5V. Compatible TTL 9- Differential line driver. Push-Pull 11..30V	

- The option 10I is only available with axial connection output (8)

## ACCESSORIES



All the accessories available in the sections "SIGNAL CONDITIONERS" and "MOUNTING ACCESSORIES".