

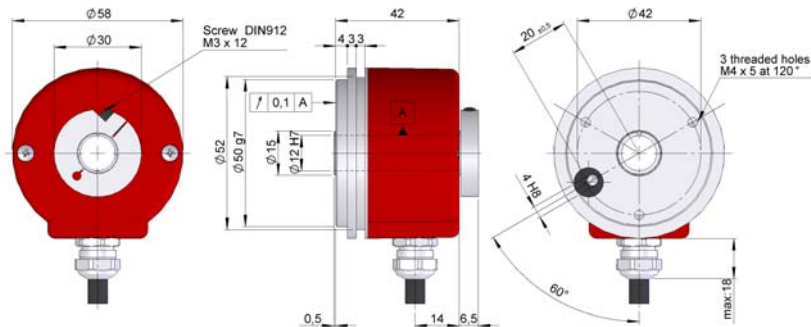
# SERIE 59

## HOLLOW SHAFT INCREMENTAL ENCODER FOR INDUSTRIAL APPLICATIONS

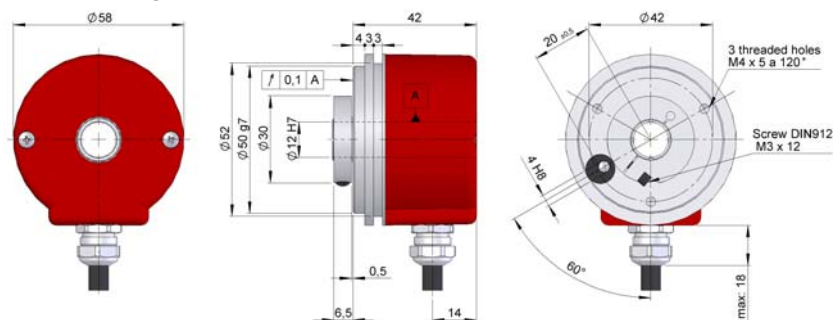
- Any number of pulses available from 1 to 10.000 pulses
- External diameter 58 mm
- Hollow shaft 10, 12 or 14 mm
- Protection class IP65 according to DIN 40050
- Cable connection (any cable length available) or industrial connector.
- Fixed to shaft with front or rear clamp
- Anti-rotation system using elastic flange or centre pin



**Rear clamp**



**Front clamp**



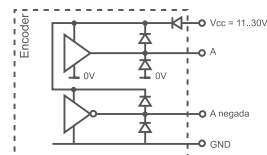
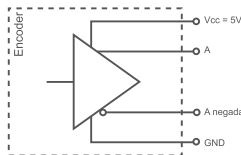
Previous mounting and installation of the encoder is recommended to read the section "TECHNICAL CONSIDERATIONS".

### MECHANICAL SPECIFICATIONS

Housing	Aluminium.
Shaft	Treated aluminium/Stainless Steel.
Bearings	Ballraces.
Bearings lifetime	1x10 <sup>10</sup> rev.
Housing fixation	Elastic flange.
Shaft fixation	Front or Rear clamp..
Hollow shaft diameter	10, 12 or 14 mm.
Maximum number of revolutions permitted mechanically	6000 rpm.
Protection against dust and splashes according to DIN 40050	IP65.
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	40 N.
Maximum load permitted on radial shaft	60 N.
Permitted misalignment :Flexible clamp 90.1014/90.1024	± 0,5mm axial, ± 0,3mm radial..
Weight aprox.	0,5 Kg.
Operating temperature range	-20°C to +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 length available on order)

## ELECTRICAL SPECIFICATIONS

### OUTPUT SIGNALS



	RS422 (TTL compatible)	Push-Pull Differential
Power supply	5 V ±5%	11...30 V
Consumption	Typical: 70 mA Max: 150 mA	Typical: 45 mA Max: 150 mA
Max. load capability	±20 mA	±30 mA
Length of cable allowed	1200 m	100 m
"Low" signal level	VO <sub>L</sub> < 0,5 V	VO <sub>L</sub> < 2,5 V
"High" signal level	VO <sub>H</sub> > 2,5 V	VO <sub>H</sub> > V <sub>cc</sub> - 3 V
Frequency	300 kHz	200 kHz
Short circuit protection	Yes	Yes
Protection against polarity inversion	No	Yes
Channel B leads (90° electric) channel A		

### CONNECTION

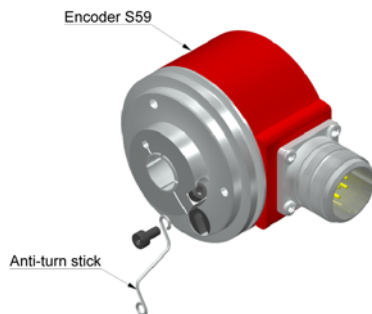
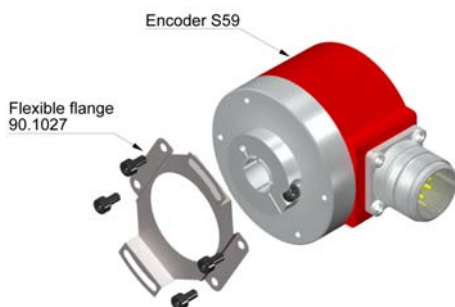


	Cable 3x2x0,14+2x0,34	90.9508 M12 8p	90.9512 M23 12p
GND	Black	1	1
Vcc	Red	2	2
A	Yellow	3	3
B	Green	4	4
A inverted	Brown	5	5
B inverted	Blue	6	6
0 (reference)	Grey	7	7
0 inverted	Orange	8	8

## ORDERING CODE

SERIE	FIXATION	HOLLOW SHAFT	OUTPUT SIGNALS	CONNECTION	ELECTRONIC OUTPUT	PULSES NUMBER	SPECIAL CUSTOMER
59	● ↓ 1- Rear clamp 2- Frontal clamp	● 1- Ø10 mm 2- Ø12 mm 3- Ø14 mm	● 1- A $\tilde{A}$ + B $\tilde{B}$ + 0 $\tilde{0}$ 2- A $\tilde{A}$ + B $\tilde{B}$	● 1- Radial cable 2- Radial 90.9512 3- Radial 90.9508	● ↓ 1- Differential line driver. Push-Pull 11..30V 2- Standard RS422. 5V	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●

## ACCESSORIES



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