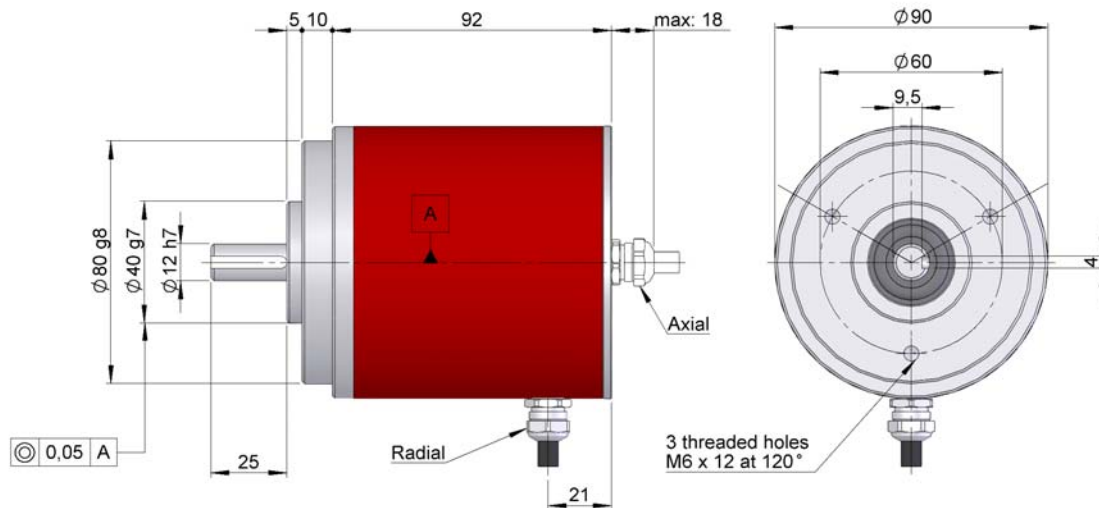


# SERIE 30

## SOLID SHAFT INCREMENTAL ENCODER FOR HEAVY DUTY INDUSTRIAL APPLICATIONS

- Any number of pulses available from 1 to 10.000 pulses
- External diameter 90 mm
- Shaft 12 mm
- Protection class IP65 according to DIN 40050
- Executions mechanical, electronic and special optics available on request
- Connection by cable (any cable length available) or industrial connector



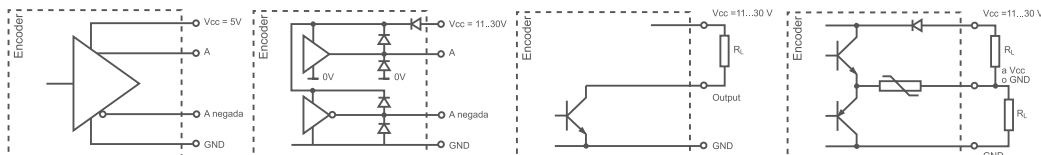
Previous mounting and installation of the encoder is recommended to read the section "TECHNICAL CONSIDERATIONS".

### MECHANICAL SPECIFICATIONS

Housing	Aluminium.
Shaft	Stainless Steel.
Bearings	Ballraces.
Bearings lifetime	$1 \times 10^{10}$ rev.
Maximum number of revolutions permitted mechanically	6000 rpm.
Protection against dust and splashes according to DIN 40050	IP65.
Rotor inertia moment	270 gcm <sup>2</sup> .
Starting torque at 20°C (68°F) ,	Max. / 5,0 Ncm.
Maximum load permitted on axial shaft	80 N.
Maximum load permitted on radial shaft	100 N.
Weight aprox.	1,2 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 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	$V_{OH} > 2.5 V$	$V_{OH} > V_{cc} - 3 V$	$V_{OH} > 22 V$ (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

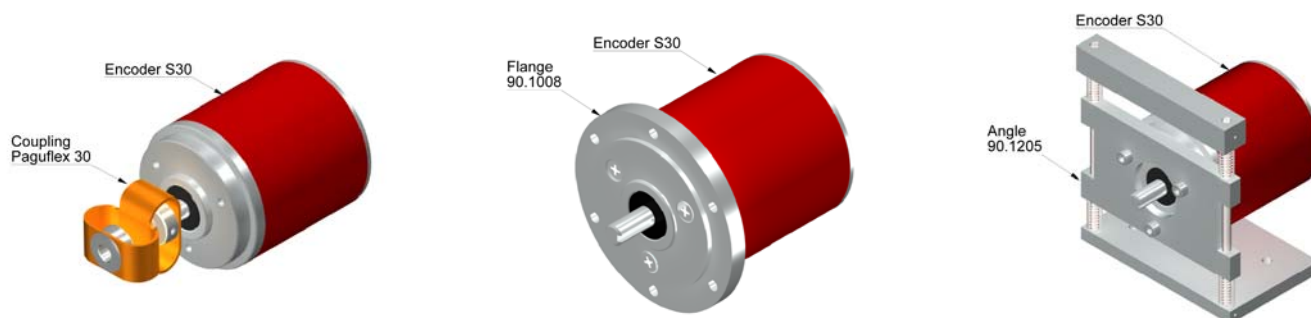


	Cable 5x0.14	Cable 3x2x0.14+2x0.34	90.9504 DIN43650 4p	90.9507 Mil 7p	90.9510 Mil 10p	90.9512 M2312p
GND	Yellow	Black	1	A	A	1
Vcc	White	Red	2	B	B	2
A	Brown	Yellow	3	C	C	3
B	Green	Green	4	D	D	4
A inverted		Brown		E	E	5
B inverted		Blue		F	F	6
0 (reference)	Grey	Grey		G	G	7
0 inverted	Grey	Orange		G	H	8

### ORDERING CODE

SERIE	OUTPUT SIGNALS	CONNECTION	ELECTRONIC OUTPUT	PULSES NUMBER	SPECIAL CUSTOMER
30	●	●	●	●●●●●●●	●●●●●●●
30- A	30- A	0- Axial cable	0- Open collector NPN 11..30V		
40- A + B	40- A + B	1- Axial 90.9504	1- Push-Pull 11..30V (without inverted)		
42- A + B + 0	42- A + B + 0	3- Axial 90.9507	7- Standard RS422. 5V. Compatible TTL		
43- A + B + 0	43- A + B + 0	4- Axial 90.9512	9- Differential line driver. Push-Pull 11..30V		
35- AA + BB	35- AA + BB	5- Radial cable			
36- AA + BB + 00	36- AA + BB + 00	6- Radial 90.9504			
		8- Radial 90.9507			
		9- Radial 90.9512			
		M- Axial 90.9510			
		N- Radial 90.9510			

### ACCESSORIES



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