



Image with flexible flange 90.1025



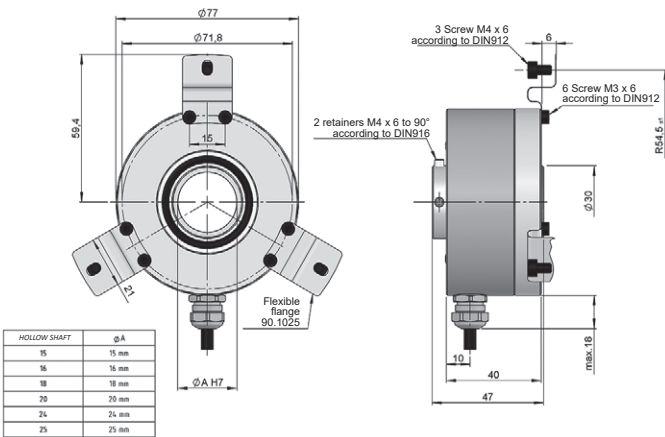
# SERIE 77

## INCREMENTAL HOLLOW SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

- Resolution up to 5.000 pulses per turn
- External diameter 77 mm
- Hollow shaft  $\varnothing$  15, 16, 18, 20, 24 or 25 mm
- Protection class IP65 according to DIN EN 60529
- Shaft fixing through front or rear setscrews
- Anti-rotation system through flexible flange
- Connection by cable (other cable length available) or industrial connector M23
- Female connector included

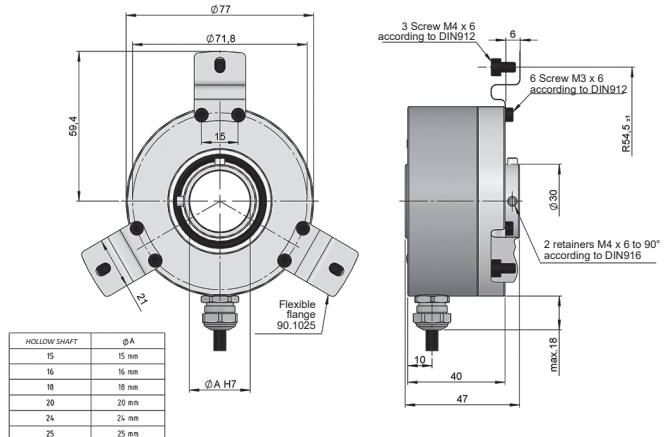
Optical Encoder	Incremental Encoder	High shaft load capacity	Vibration and shock resistant	IP65	Temperature range	Express Delivery

### Rear setscrews



Drawing hollow shaft type 25, mechanical option type 1 with anti-rotation system through flexible flange 90.1025, connection type 1

### Frontal setscrews



Drawing hollow shaft type 25, mechanical option type 2 with anti-rotation system through flexible flange 90.1025, connection type 1

### REFERENCE

Reference example: 77-125111-5000

Serie	Mechanical option	Hollow shaft	Output signals	Connection	Power Supply / Electronic output	Pulses number	Special customer
77 -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -	<input type="checkbox"/>	<input type="checkbox"/>
	1. Rear setscrews 2. Frontal setscrews	15. $\varnothing$ 15 mm 16. $\varnothing$ 16 mm 18. $\varnothing$ 18 mm 20. $\varnothing$ 20 mm 24. $\varnothing$ 24 mm 25. $\varnothing$ 25 mm	1. A $\tilde{A}$ +B $\tilde{B}$ +0 $\tilde{O}$ 2. A $\tilde{A}$ +B $\tilde{B}$	1. Radial cable 2. Radial 90.9512 M23 12p CW	0. 11...30 VDC / NPN Open collector 11..30 VDC 1. 11..30 VDC / Line driver differential Push-Pull 11..30 VDC 2. 5 VDC / RS422 5 VDC (compatible TTL) 6. 11...30 VDC / RS422 5 VDC (compatible TTL)	<input type="checkbox"/>	NT00. -40°C

**Order your reference Step file 3D**  
[info@encoderhohner.com](mailto:info@encoderhohner.com)  
 service available in 24 h

The required anti-rotation system is not included in the reference. All systems available in the sections "MOUNTING ACCESSORIES".



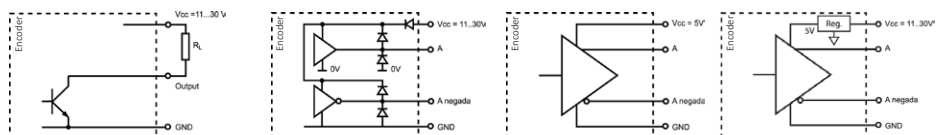
# SERIE 77

## INCREMENTAL HOLLOW SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

### MECHANICAL SPECIFICATIONS

Materials	Cover: Aluminium Housing: Aluminium Shaft: Stainless Steel
Bearings	Ballraces
Bearings lifetime	1x10 <sup>10</sup> rev.
Housing fixing	Flexible flange
Shaft fixing	Front or Rear setscrews
Hollow shaft diameter	15, 16, 18, 20, 24 or 25 mm
Maximum number of revolutions permitted mechanically	6000 rpm
Protection against dust and splashes according to DIN EN 60529	IP65
Rotor inertia moment	≤ 1 Kg cm <sup>2</sup>
Starting torque at 20°C (68°F)	≤ 0,04 Nm
Maximum load permitted on axial shaft	≤ 100 N
Maximum load permitted on radial shaft	≤ 200 N
Permitted misalignment:	±0.5 mm axial, ±0.3 mm radial (90.1025 - one) ±0.4 mm axial, ±0.2 mm radial (90.1025 - three)
Weight aprox.	0,5 Kg
Operating temperature range	-20°C to +80°C - Standard -40°C to +80°C - Special Customer NT00
Vibration according to DIN EN 60068-2-6	100 m/s <sup>2</sup> (10Hz...2000Hz)
Shock according to DIN EN 60068-2-27	1000 m/s <sup>2</sup> (6ms)
Maximum pulses per turn	5.000
Radial connection	2 meters cable or industrial connector M23 (other cable lengths available on order) <b>Female connector included</b>

### OUTPUT SIGNALS



OUTPUT CIRCUIT	NPN Open Collector	Push-Pull Differential	RS422 (TTL compatible)	RS422 (TTL compatible)
Reference code	0	1	2	6
Power supply	11...30 VDC	11...30 VDC	5 VDC ±5%	11...30 VDC
Output voltage	11...30 VDC	11...30 VDC	5 VDC	5 VDC
Consumption	40 mA	Typical: 45 mA Max: 150 mA	Typical: 70 mA Max: 150 mA	Typical: 80 mA Max: 160 mA
Max. load capability / channel	40 mA	±30 mA	±20 mA	±20 mA
Length of cable allowed	50 m (24 VDC)	100 m	1200 m	1200 m
"Low" signal level	VOL < 0,4 VDC (24 VDC)	VOL < 2.5 VDC	VOL < 0.5 VDC	VOL < 0,5 VDC
"High" signal level	VOH > 22 VDC (24 VDC)	VOH > VCC - 3 VDC	VOH > 2.5 VDC	VOH > 2.5 VDC
Frequency	100 kHz	200 kHz	300 kHz	300 kHz
Short circuit protection	Not permanent	Yes	Yes	Yes
Protection polarity inversion	Yes	Yes	No	Yes

Channel B leads (90° electric) channel A, view from the shaft, shaft rotating clockwise

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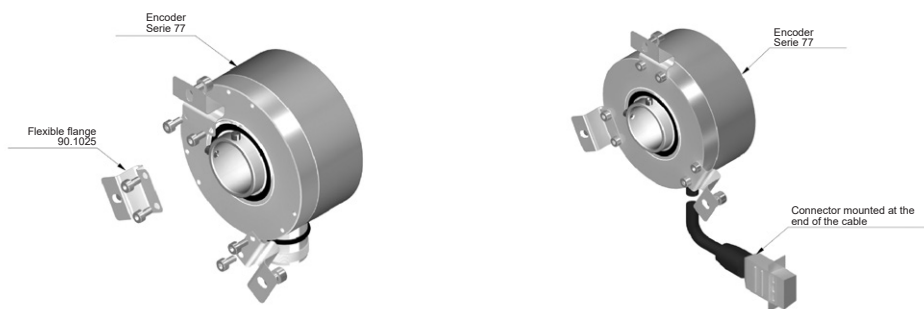
## INCREMENTAL HOLLOW SHAFT ENCODER FOR INDUSTRIAL APPLICATIONS

### CONNECTION



	95.0008003 Cable 3x2x0,14+2x0,34	90.9512 M23 12p clockwise
GND	Black	1
VCC	Red	2
A	Yellow	3
B	Green	4
$\tilde{A}$	Brown	5
$\tilde{B}$	Blue	6
0 (reference)	Grey	7
$\tilde{0}$	Orange	8

### ACCESSORIES EXAMPLES



All the accessories available in the section "MOUNTING ACCESSORIES".

### CONNECTION DIMENSIONS

Female connector included

**Connection 2**  
Radial 90.9512

**Fixation 2**  
Frontal setscrews

**90.9512**  
M23 12p  
male panel  
clockwise

