

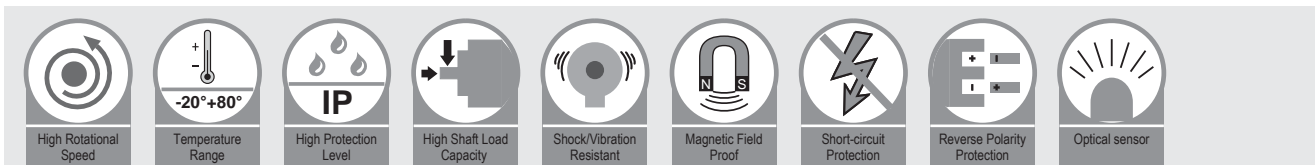
Incremental Encoders

Miniature

11-40SN / 40HN



- Outer diameter 36 mm , ideal for use in tight space
- Optical sensor technology
- Protection acc. to EN 60 529, up to IP 65, IP 67 optional



Highlight :

- Only 40 mm outer diameter
- Wide temperature range from -40°C up to +80°C
- RS422 or HTL output signal
- Solid or hollow shaft version
- Connection via cable or M12 connector
- Number of resolution up to 2500 ppr

Mechanical characteristics

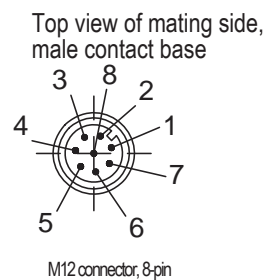
Max. Speed	12000 rpm
Starting torque	≤ 0.2 Ncm (at 20 °C)
Moment of inertia	Shaft: ≤ 4 gcm ² ; hollow Shaft: ≤ 14 gcm ²
Shaft load capacity	Shaft: Radial 80 N; Axial 50 N hollow Shaft: Radial 100 N; Axial 50 N
Weight	approx. 0.100 kg
Protection acc. to EN 60 529	IP 65, optional IP 67
Working temperature range	-40°C ... 80°C
Materials	Shaft: Stainless Steel Housing: Aluminium
Shock resistance acc. to EN 60068-2-29	1000 m/s ² (6 ms)
Vibration resistance acc. to EN 60068-2-27	50 m/s ² (10-2000 Hz)

Electrical characteristics

Output circuit	RS 422	HTL
Power supply	5 V DC	10...30 VDC
Power consumption (no load)	Max. 70 mA	Max. 70 mA
Permissible load/channel	Max. 40 mA	Max. 40 mA
Pulse frequency	Max. 200 kHz	Max. 200 kHz
Signal level(at 20mA)	High Min. 2.5 V	Min. Ub - 2.5 V
	Low Max. 0.5 V	Max. 0.5 V
Rising edge time tr	Max. 200 ns	Max. 1 µs
Falling edge time tf	Max. 200 ns	Max. 1 µs
Short circuit protection	no	yes
Reverse polarity protection	no	yes
UL approval	yes	yes
CE approval	EN 61000-6-2, EN 55011 Class B	

Terminal assignment

Signal	Ub	GND	A	\bar{A}	B	\bar{B}	Z	\bar{Z}	Shield
Cable (Colour)	BN	WH	GN	RD	YW	BK	GY	VT	
M12 connector, 8-pin	2	1	3	6	4	7	5	8	



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Order Code Shaft Version	11-40SN-X X X X - X X X X					
	Type	a	b	c	d	e
a Flange						
3 = Synchro flange, IP65						
4 = Synchro flange, IP67						
5 = M20 fixed flange, IP65						
6 = M20 fixed flange, IP67						
b Shaft						
3 = \varnothing 6 x 11,5 mm						
c Output circuit / Power supply						
1 = RS422 (with inverted signal) / 5 VDC						
3 = Push-pull (without inverted signal) / 10 ... 30VDC						
5 = Push-pull (with inverted signal) / 10 ... 30VDC						
d Type of connection						
1 = Axial cable, 2m						
2 = Radial cable, 2m						
6 = M12 connector, 8-pin, axial (without mating connector)						
e Pulse rate						
4,9,10,15 ... 100,125,128 ... 180,200						
235,250 ... 300,314,360,400,500 ...						
600,625,635,720 ... 900,1000,1024						
1080,1200,1250,1800,2000.2048						
2500						
Other pulse rates on request						

Order Code Shaft Version	11-40HN-X X X X - X X X X					
	Type	a	b	c	d	e
a Flange						
1 = with fastening arm						
b Hollow shaft (Blind , depth15 mm)						
3 = \varnothing 6 mm						
c Output circuit / Power supply						
1 =RS422 (with inverted signal) / 5 VDC						
3 = Push-pull (without inverted signal) / 10 ... 30VDC						
5 = Push-pull (with inverted signal) / 10 ... 30VDC						
d Type of connection						
1 = Axial cable, 2m						
2 = Radial cable, 2m						
6 = M12 connector, 8-pin, axial (without mating connector)						
e Pulse rate						
4,9,10,15 ... 100,125,128 ... 180,200						
235,250 ... 300,314,360,400,500 ...						
600,625,635,720 ... 900,1000,1024						
1080,1200,1250,1800,2000.2048						
2500						
Other pulse rates on request						

Accessories

Connection technology:

Connector, self-assembly

M12 self-assembly

E1-1208-0101

Mounting accessory for shaft version:

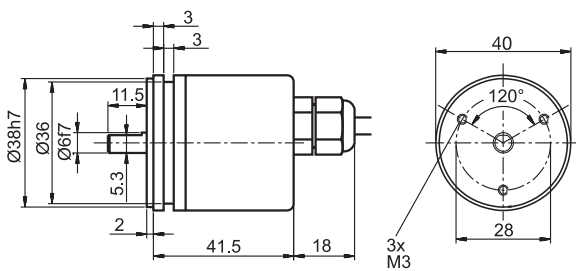
Coupling

ellows coupling (aluminium alloy) \varnothing 25mm for shaft 6 mm T1-1000-2525-0606

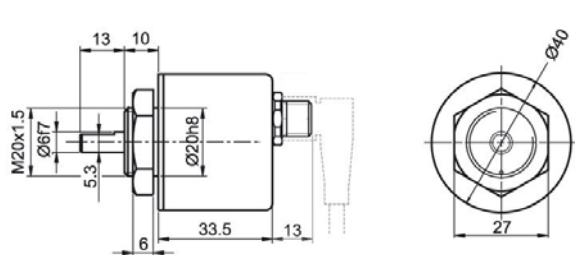
Dimensions

Shaft encoder

Synchro flange, \varnothing 6 mm Shaft, Type of connection1

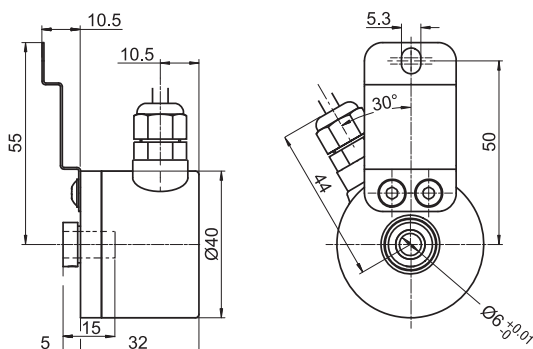


M20 fixed flange, Type of connection6



Hollow Shaft encoder

Blind hollow shaft, \varnothing 6 mm , Type of connection2



Other mounting types and accessories on your request,
please send us an email: sales@heinlanz.com