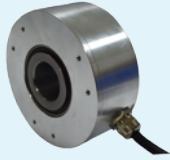


Economical HAE-90


- heavy-duty, maximum aperture of 30mm
- The number of pulses up to 5000PPR
- Polymer grating, super good shock resistance
- High degree of protection, resistance to harsh environments
- Perfect applied to various ports, metallurgy, mining machinery and automation industry


Mechanical characteristics

Max.speed	6000 min ⁻¹
Starting torque	0.05 N.m MAX
Moment of inertia	≤ 20 gcm ²
Shaft load capacity -radial	20 N
Shaft load capacity -axial	10 N
Protection EN 60 529	IP54
Operation temperature	-20 - 85°C
Materials	Shaft : Stainless steel ; flange、Housing material : aluminium alloy
Weight	About 0.850 kg
Shock resistance EN 60068-2-29	1000m/s ² , 6ms
Vibration resistance EN 60068-2-27	100m/s ² , 10-2000Hz

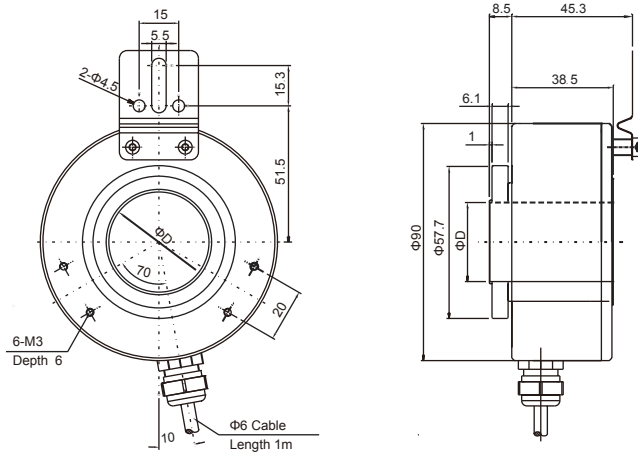
Electrical characteristics

Output circuit	Driver (TTL)	Push-Pull
Power supply	5VDC	10-30VDC
power consumption	Max. 150mA	Max. 150mA
Permissible load/channel	Max. 30mA	Max. 30mA
Pulse frequency	Max. 100kHz	Max. 100kHz
Signal level- High	Min. 2.5V	Min. Ub-2.5V
Signal level- Low	Max. 0.5V	Max. 0.5V
Rising edge time t	Max. 100 ns	Max. 100 ns
Falling edge timet	Max. 100 ns	Max. 100 ns
Power protection	No	With
UL-approval	File	
CE requirement acc.to	EN 61000-6-2:2006 ; EN 6100-6-3:2007	

Terminanl assignment:

Signal	Ub	GND	A	\bar{A}	B	\bar{B}	Z	\bar{Z}	Shield
Cable(color mark)	BN	WH	GN	YE	GY	PK	BU	RD	

Hollow shaft-dimension



Order code- Hollow shaft

HAE-90C-XXXX-XXXX
 Series - economical A B C D E

A resolution
 1024

C Shaft diameter
 B = ø 25 mm
 E = ø 30 mm

E Connection
 2 = Radial cable

B Flange Type
 4 = Through hollow shaft (lock ring on the shell side)

D Output/Power supply
 1 = TTL Line Driver / Power supply 5VDC
 3 = Push-Pull (without inverted signal) / Power supply 10~30VDC
 5 = Push-Pull (with inverted signal) / Power supply 10~30VDC