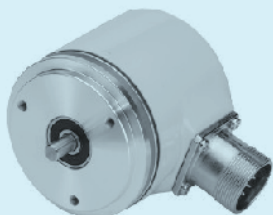


Standard HA-58



- Shape 58mm, standard industrial design, high noise immunity
- Mechanical and electrical properties with high performance
- Protection class up to IP67, good environmental resistance
- Operating temperature range -40 ° C ... + 80 ° C
- Resolution up 25000PPR, higher resolution may be set, with SinCos output
- Can be used for machine tools, printing, packaging, metallurgy, wind power and other industries

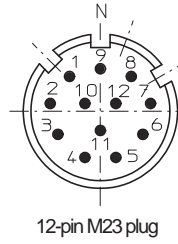
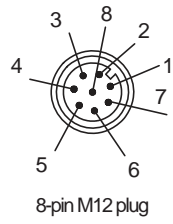


Mechanical characteristics		SinCos Output Electrical characteristics	
Max.speed	12000 min ⁻¹	Output circuit	SinCos (1Vpp)
starting torque	0.2 N.cm MAX	Power supply voltage	5 VDC
Moment of inertia	≤ 20 gcm ²	Power with inverted signals (no load)	Max.100 mA
shaft load capacity -radial	220 N	Frequency	≤100 kHz
shaft load capacity -axial	120 N	Channel load	Min.120 Ohm
Protection acc.to EN 60 529	Optional IP65/ IP67	Output short circuit protection	Yes
Operation temperature	-40 - 80°C	Reverse polarity connection protection	No
Materials	Shaft: Stainless steel	UL-approval	File
Weight	About 0.25 kg	CE compliant	EN 61326-1:2006
Shock resistance EN 60068-2-29	1000m/s ² , 6ms		EN 61000-6-2:2006
Vibration resistance EN 60068-2-27	100m/s ² , 10-2000Hz		EN 61000-6-3:2007
Electrical characteristics			
Output circuit	Drive (TTL)	Push-Pull	Push-Pull 7272
Power supply	5VDC	10-30VDC	5-30VDC
power consumption	Max. 100mA	Max. 100mA	Max. 70mA
Permissible load/channel	Max. 40mA	Max. 40mA	Max. 40mA
Pulse frequency	Max. 2 MHz	Max. 200kHz	Max. 200kHz
Signal level- High	Min. 2.5V	Min. Ub-1V	Min. Ub-2V
Signal level- Low	Max. 0.5V	Max. 0.5V	Max. 0.5V
Rising edge time t _r	Max. 1 μs	Max. 1 μs	Max. 1 μs
Falling edge time t _f	Max. 1 μs	Max. 1 μs	Max. 1 μs
Short circuit protection	Yes	Yes	Yes
Reverse polarity protection	No	Yes	Yes
UL-approval	File		
CE requirement acc.to	EN 61326-1:2006; EN 61000-6-2:2006 ; EN 61000-6-3:2007		

Terminanl assignment

Signal	Ub	GND	A	\bar{A}	B	\bar{B}	Z	\bar{Z}	Shield
Cable color	BN	WH	GN	RD	YE	BK	GY	VT	
M12 connector ,8-pin	2	1	3	6	4	7	5	8	
M23 connector ,12-pin	12	10	5	6	8	1	3	4	

Top view of the socket



Mounting Accessories

Cable Connectors: M12 cable connector with 2 m cable

EK8-2M / P00

Shaft encoder couplings: aluminum shaft diameter of 6mm
aluminum shaft diameter is 10mm

F30-2520-0606

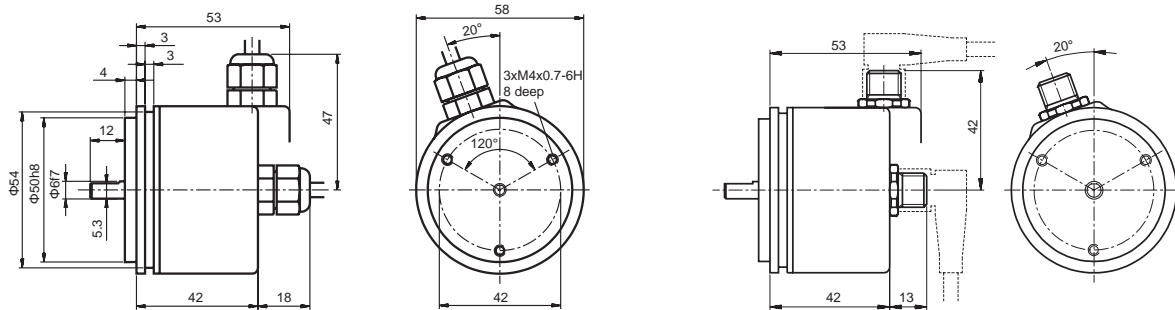
F30-3025-1010

Bushings encoder mounting accessories: spring piece connector

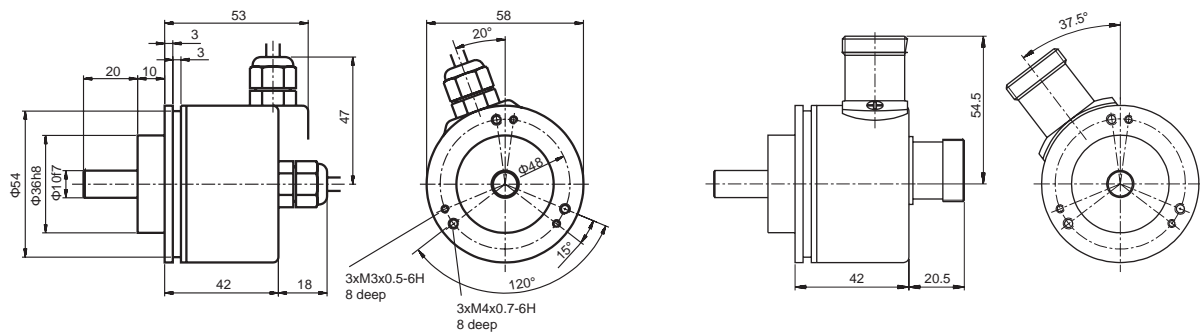
For more accessories please refer to the attached section

Axis - Dimensions

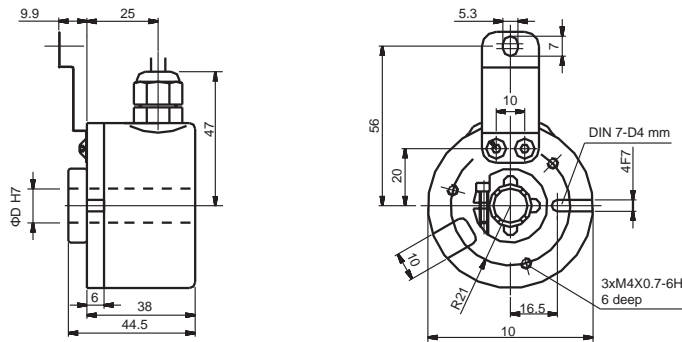
Synchro flange , Ø 6mm Shaft diameter



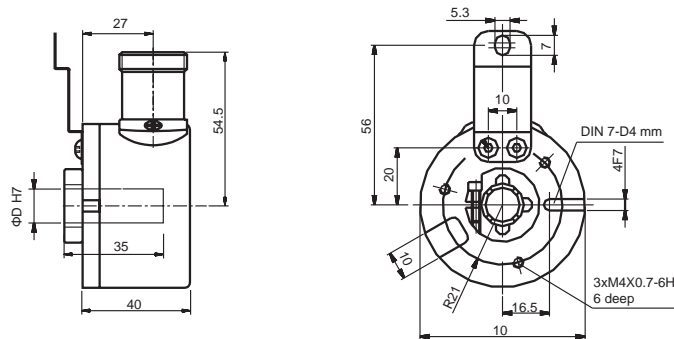
Clamping flange , Ø 10mm Shaft diameter



Hollow shaft



Blind hollow shaft



Incremental Encoders

Order code- shaft version

HA - 5 8 A X - X X X X - X X X X - X
Series - Standard A B C D E F G

A Category

BLANK = Conventional Series
 H = High temperature

B resolution

2,5,15,20,25, 100,120, 500,512,
 600,720, ... 1000,1024,1200,1250,
 3600,4096,5000, 10000
 1 Vpp Sin/Cos 1024 2048
 Other resolutions on request

C Flange Type

1 = Clamping flange ,ø58mm , IP65
 2 = Clamping flange ,ø58mm , IP67
 3 = Synchro flange ,ø58mm , IP65
 4 = Synchro flange ,ø58mm , IP67
 5 = Synchro flange ,ø63.5 mm , IP65
 6 = Synchro flange ,ø63.5 mm , IP67
 7 = Square flange , 63.5 mm , IP65
 8 = Square flange , 63.5 mm , IP67
 9 = European standard flange ,
 115 mm , IP65

D Shaft diameter

2 = ø 6 x 10 mm
 5 = ø 10 x 20 mm
 6 = ø 9.52 x 20 mm
 7 = ø 11 x 33 mm
 8 = ø 12 x 30 mm

E Output/power supply

1 = RS422 Output / 5 VDC power supply
 2 = RS422/ 10 ... 30 VDC power supply
 3 = Push-pull without inverted signals/ 10 ... 30 VDC power supply
 4 = 7272 Push-pull output (with inverted signal)
 / 5 ... 30 VDC power supply
 5 = Push-pull output (with inverted signal)/ 10 ... 30 VDC power supply
 8 = Sin/Cos 1 Vpp Output / 5 VDC power supply

F Connection

1 = Axial 2 m cable
 2 = Radial 2 m cable
 3 = Axial M23 12-pin
 4 = Radial M23 12-pin
 8 = Axial M12 8-pin
 9 = Radial M12 8-pin

G special features

BLANK = no special features

Order code- Hollow shaft

HA - 5 8 C X - X X X X - X X X X - X
Series - Standard A B C D E F G

A Category

BLANK = Conventional Series
 H = High temperature

B resolution

2,5,15,20,25, 100,120, 500,512,
 600,720, ... 1000,1024,1200,1250,
 3600,4096,5000, 10000
 1 Vpp Sin/Cos 1024 2048
 Other resolutions on request

C Flange Type

1 = Blind hollow shaft
 3 = Through hollow shaft , IP65
 8 = Flying wing with spring leaves , IP65

D Shaft diameter

4 = ø 8 mm
 5 = ø 10 mm
 6 = ø 12 mm
 7 = ø 14 mm
 8 = ø 15 mm (Blind Pass only)

E output/power supply

1 = RS422 output / 5 VDC power supply
 2 = RS422 / 10 .. 30 VDC power supply
 3 = Push-pull without inverted signals / 10 ... 30 VDC power supply
 4 = 7272 Push-pull without inverted signals / 5 ... 30 VDC power supply
 5 = Push-pull without inverted signals / 10 ... 30 VDC power supply
 8 = Sin/Cos 1 Vpp output / 5 VDC power supply

F Connection

2 = Radial 2 m cable
 4 = Radial M23 12-pin
 9 = Radial M12 8-pin

G special features

BLANK = No special features



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