

Hollow Shaft Encoder MDG 58 H



- Rugged industrial standard encoder
- Continuous hollow shaft
- Meets protection class IP65
- Maximum mechanical and electrical safety
- High noise immunity

Specifications

Available Pulses Per Revolution PPR:

4, 6, 10, 50, 60, 100, 120, 125, 127, 150, 180, 200, 216, 240, 250, 254, 256, 300, 314, 360, 400, 500, 512, 600, 625, 720, 750, 768, 800, 810, 900, 1000, 1024, 1200, 1250, 1270, 1440, 1500, 1800, 2000, 2048, 2400, 2500, 3000, 3600, 4000, 4096, 5000

Mechanical Data

Housing	
- Flange:	Aluminium
- Encoder body:	Aluminium, powdercoated
- Torque Support:	
1. Springplate Compensation:	(Accessories) axial: max. 1,5mm radial: max. 0,1mm
Operating speed:	max. 6.000rpm at 60°C operating temperature
2. Cylinder pin Compensation:	
Operating speed:	(Accessories) axial: max. 1mm radial: max. 0.3mm 3.000rpm

Hollow shaft	
- Material:	Stainless steel
- Diameter:	8, 10 or 12mm, H7
- Loading on shaft end:	max. 80N radial max. 60N axial
- Starting torque:	approx. 2,2Ncm at ambient temperature
Attachment:	permanently attached clamping ring
Bearings	
- Type:	2 precision ball bearings
- Service life:	
	10 ⁹ revs. at 100% of full rated shaft load
	10 ¹⁰ revs. at 40% load
	10 ¹¹ revs. at 20% load
Weight:	approx. 220g
Connection:	Shielded cable or Connector

Optics

Light source:	IR-LED
Service life:	typ. 100.000hrs.
Scanning:	differential

Accuracy

Quadrature phasing:	90° ± 7,5%
Pulse on/off ratio:	50% ± 7%

Environmental Data

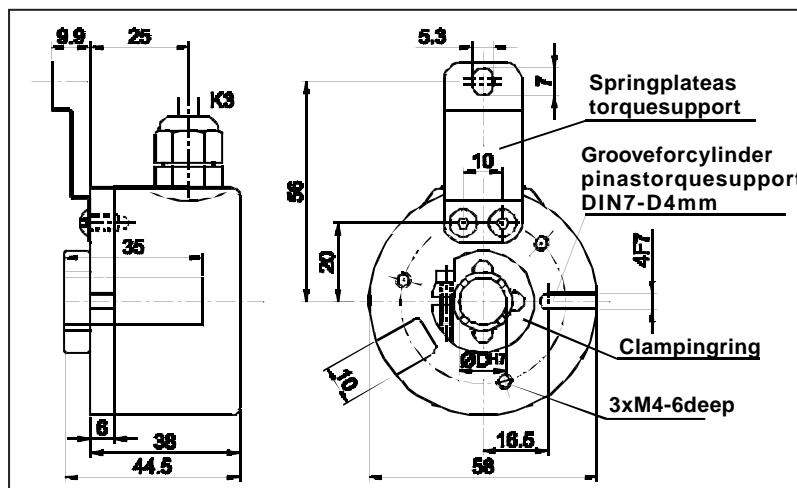
Measured mounted and housing grounded.	
ESD (DIN EN 61000-4-2):	8 kV
Burst (DIN EN 61000-4-4):	2kV
Protection rating:	IP65
(EN 60529) Vibration	50m/s ² (10-2000Hz)
(DIN EN 60068-2-6): Shock	1000m/s ² (6ms)
(DIN EN 60068-2-27): Operating temperature:	-10°C to +70°C
Storage temperature:	-30°C to +80°C

Customer-specific adaptations on request.

Electrical Data:	G24/I24	G05/I05
Design according to:	DIN VDE 0160	DIN VDE 0160
Power supply:	10 - 30 VDC	4,75 - 5,5 VDC
Current consumption:	max. 70mA	max. 70mA
Channels:	see pulsed diagram	
Output:	push-pull	push-pull
Load:	max. 40mA	max. 40mA
Signal level:	at 20mA	at 20mA
	H > U ₀ = 2,5 VDC	H > 25 VDC
	L < 2,5 VDC	L < 0,5 VDC
Impulse frequency:	max. 200kHz	max. 200kHz
Circuit protection:	yes	no
Early-warning output:	conducting when defective	
Cable length:	max. 100m	max. 100m

G24/I24

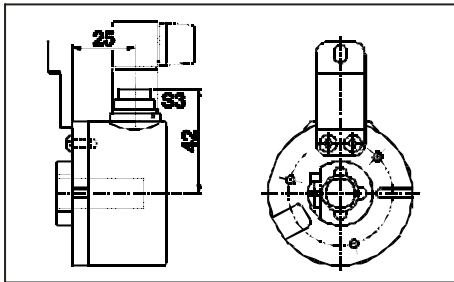
G05/I05



Dimensional drawing MDG 58 H with K3, dimensional specifications in mm

Encoder MDG 58 H: Cable and Connector Details

Connector, 7-pin

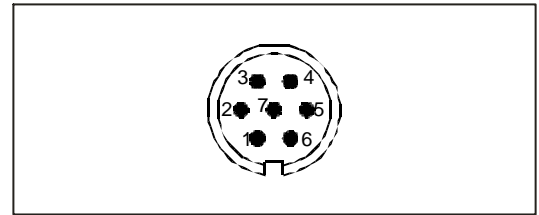


S3:radial

Circuit Function	G24, G05 Pin
Negative	1
Positive	2
A	3
B	4
N	5
Early-warning Output	6
n.c.	7

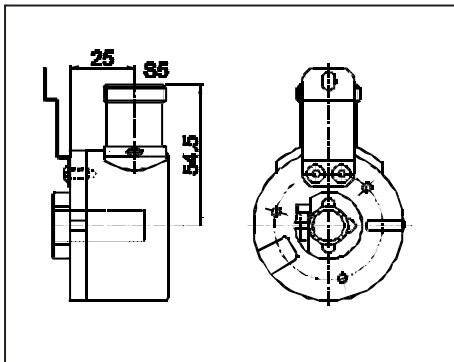
Connectorhousing electrically connected to encoderhousing.

Pin Identification



Pinarrangement on encoder.

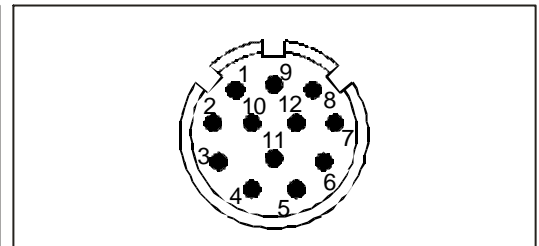
Connector, 12-pin



S5:radial

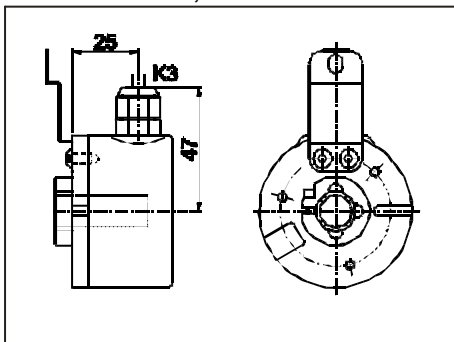
Circuit function	G24, G05 Pin	24, I05, 245 Pin
Negative	10	10
Positive	12	12
A	5	5
B	8	8
N	3	3
Early-warn. Output	11	11
Ainv.	-	6
Binv.	-	1
Ninv.	-	4
n.c.	1,2,4, 6,7,9	2,7,9

Connectorhousing electrically connected to encoderhousing.



Pinarrangement on encoder.

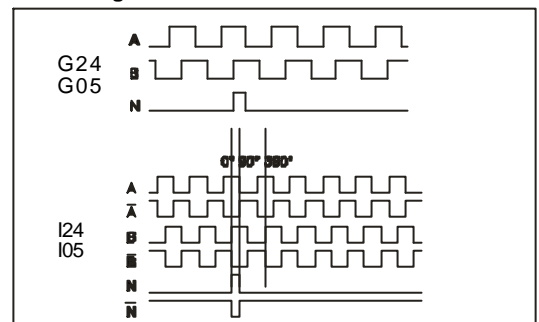
Cable connection, 2 m shielded cable



K3:radial, shield not connected (standard)
L3:radial, shield connected to encoderhousing

Circuit function	G24, G05 Colour	24, I05, 245 Colour
Negative	white	white
Positive	brown	brown
A	green	green
B	yellow	yellow
N	grey	grey
Early-warn Output	pink	pink
Ainv.	-	red
Binv.	-	black
Ninv.	-	violet
Shield	cablebraiding	

Pulsediagram



View from the shaft end, shaft rotating clockwise.

Options:

1. Alternative cable lengths

Please ask about other available options.

Ordering Information:

Channels:	A, AB, ABN
Pulses per revolution	4, 6, 10, 50, 60, 100, 120, 125, 127, 150, 180, 200, 216, 240, 250, 254, 256, 300, 314, 360, 400, 500, 512, 600, 625, 720, 750, 768, 800, 810, 900, 1000, 1024, 1200, 1250, 1270, 1440, 1500, 1800, 2000, 2048, 2400, 2500, 3000, 3600, 4000, 4096, 5000 Other PPRs on request
Hollow shaft diameter in mm	8, 10, 12 Other diameter on request
Output circuit:	G24 = 10-30VDC G05 = 5VDC Only for K3, L3, S5: I24 = 10-30VDC (inv.) I05 = 5VDC (inv.)
Electrical connections:	Cable K3 = radial, 2m, shield not connected (standard) L3 = radial, 2m, shield connected to encoderhousing Connector S3 = 7-pin, radial S5 = 12-pin, radial

Example: MDG 58 H - 10 - 1024 - ABN - G24 - K3

Your Encoder: MDG 58 H - [] - [] - [] - [] - []