

Hollow Shaft Encoder MDG 80 H



- Rugged and economical encoder
- Meets protection class IP65
- Continuous hollow shaft 10 to 25 mm
- Easy mounting

Application fields:

Wood and plastic machines, paper machines, mounting technology

Specifications

Available Pulses Per Revolution PPR:

50, 100, 250, 500, 1000, 1024

Mechanical Data

Housing
 - Flange: Aluminium
 - Encoder body: Aluminium, powdercoated
 - Torque support: Springplate Compensation: (Accessories) axial: max. 2mm radial: max. 0,15mm
 Operating speed: max. 3.500rpm

Hollow shaft

- Material: Stainless steel
 - Diameter: 10, 12, 15, 18, 20, 25mm
 - Hub: 6mm
 - Attachment: 2xM4, DIN913
 - Loading on shaft-end: max. 200N radial max. 100N axial
 - Starting torque: approx. 6Ncm at ambient temperature

Bearings

- Type: 2 precision ball bearings
 - Service life: 3 x 10¹⁰ revs. at 100% of full rated shaft load
 10¹¹ revs. at 40% load
 10¹² revs. at 20% load

Weight: approx. 600g
 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%

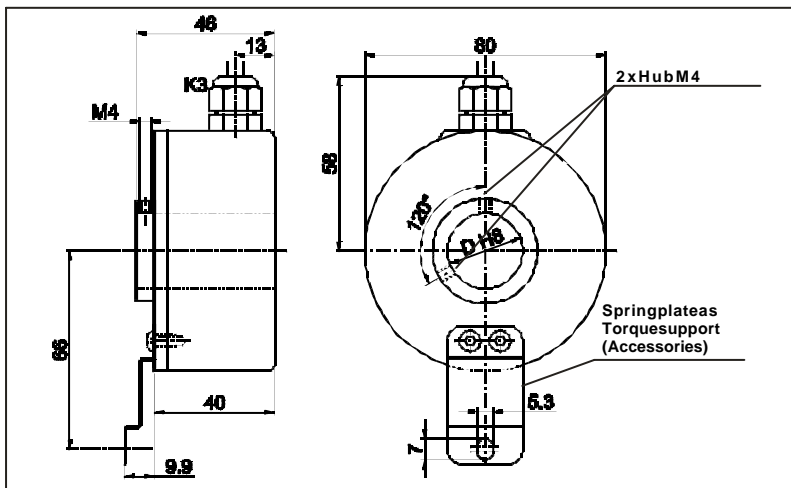
Environmental Data

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 (DIN EN 60068-2-6): 50m/s² (10-2000Hz)
 Shock (DIN EN 60068-2-27): 1000m/s² (6ms)
 Operating temperature: -10°C to +70°C
 Storage temperature: -30°C to +80°C

Electrical Data:

Design according to:	G24/I24 DIN VDE 0160	G05/I05 DIN VDE 0160
Power supply:	10-30 VDC	4,75-5,5VDC
Current consumption:	max. 70mA	max. 70mA
Channels:	see pulse diagram	
Output:	push-pull	push-pull
Load:	max. 40mA	max. 40mA
Signal level:	at 20mA	at 20mA
	H > U _s 2,5VDC	H > 25VDC
	L < 2,5VDC	L < 0,5VDC
Pulse 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

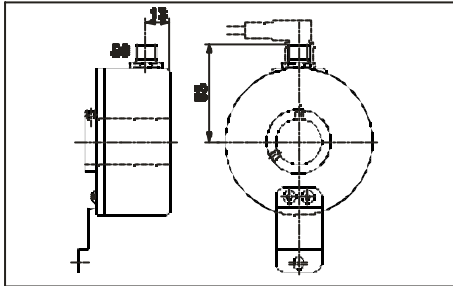


Dimensional drawing MDG 80 H with K3, dimensional specifications in mm

Customer-specific adaptation on request.

MDG 80H: Cable and Connector Details

Connector, 6-pin

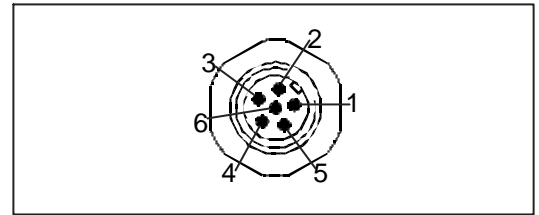


S9:radial

Circuit function	G24, G05 Pin	Farbe
Negative	1	white
Positive	2	brown
A	3	green
B	4	yellow
N	5	grey
Shield	6	braiding

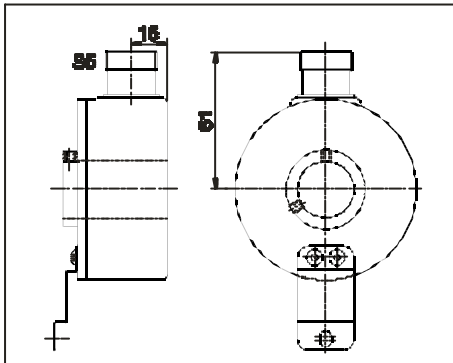
Colourcoding for cable KIA-6-67-05. Connector housing electrically connected to encoder housing.

Pin Identification



Pinarrangement on encoder.

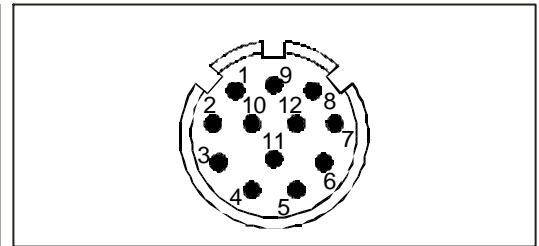
Connector, 12-pin



S5:radial

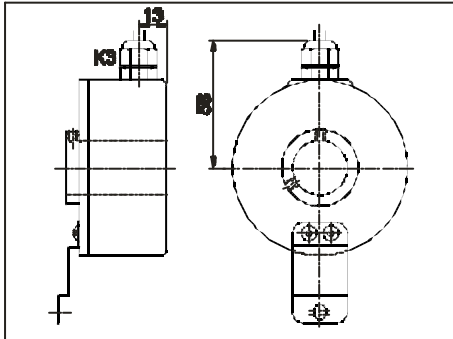
Circuit function	G24, G05 Pin	I24, I05, 245 Pin
Negative	10	10
Positive	12	12
A	5	5
B	8	8
N	3	3
Early-warn. Output	11	11
Ainv.	-	6
Binv.	-	1
Ninv.	-	4
N.c.	1,2,4, 6,7,9	2,7,9

Connector housing electrically connected to encoder housing.



Pinarrangement on encoder.

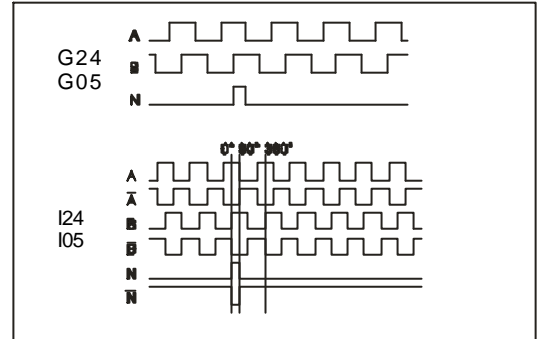
Cable connection, 2 m shielded cable



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

Circuit function	G24, G05 Colour	I24, 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	cable braiding	

Pulsed diagram



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:	50, 100, 250, 500, 1000, 1024 Other PPRs on request
Hollow shaft diameter in mm:	10, 12, 15, 18, 20, 25 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 encoder housing Connector S9=6-pin.radial S5=12-pin.radial

Example MDG 80 H - 10 - 1024 - ABN - G24 - K3

Your Encoder MDG 80 H - - - - -