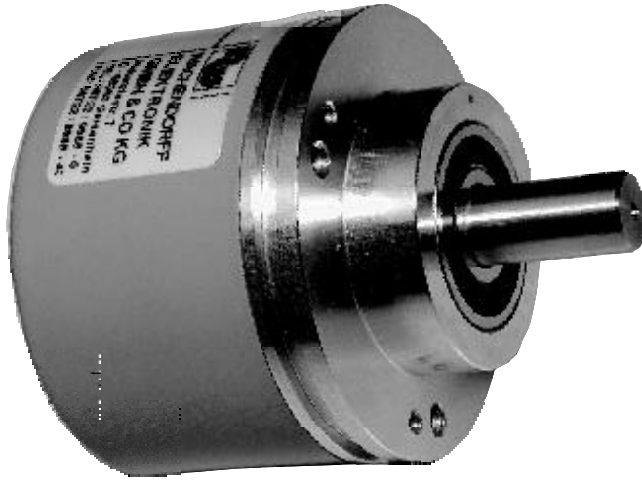


Encoder MDG 58 B



- Rugged industrial standard encoder
- Meets protection class IP67, with shaft sealed to IP65
- Maximum mechanical and electrical safety

Application fields:

Electric motors, machine tools, weigh scales, conveyors, printing machines, drives, textile machines, production lines, injection-moulding machines, test machines, elevators/lifts, doors and gates.

Specifications

Available Pulses Per Revolution PPR:

10, 48, 50, 60, 64, 72, 87, 90, 100, 120, 125, 127, 128, 150, 180, 200, 216, 240, 250, 254, 256, 300, 314, 320, 360, 400, 500, 512, 571, 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	
- Servo flange:	Aluminium
- Encoder body:	Aluminium, powdercoated
- Cam mounting:	pitch \varnothing 69mm
Shaft	
- Material:	Stainless steel
- Loading on shaft-end:	max. 220N radial max. 120N axial
- Starting torque:	approx. 1Ncm at ambient temperature
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
Operating speed:	8.000rpm
Weight:	approx. 250g
Connection:	Shielded cable or connector

Optics

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

Accuracy

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

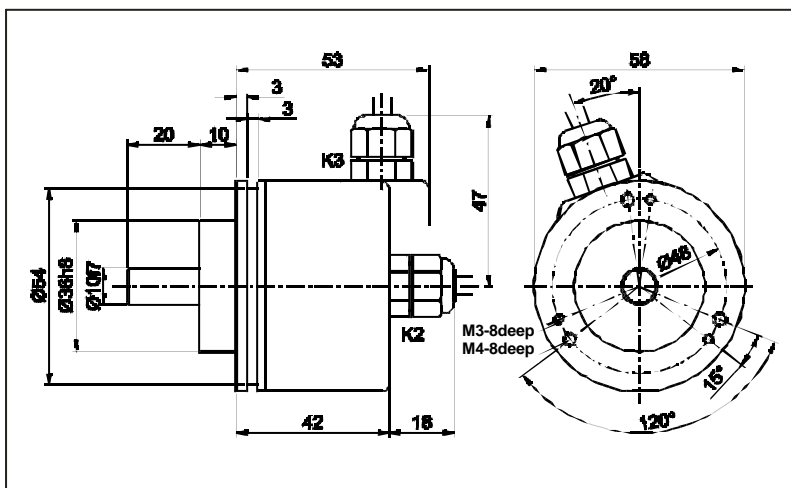
Environmental Data

Measured mounted and housing grounded.	
ESD (DIN EN 61000-4-2):	8 kV
Burst (DIN EN 61000-4-4):	2kV
Protection rating:	IP67. Shaft sealed to IP65 (EN 60529)
Vibration (DIN EN 60068-2-6):	50m/s ² (10-2000Hz)
Shock (DIN EN 60068-2-27):	1000m/s ² (6ms)
Operating temperature:	-10°C to +70°C
Storage temperature:	-30°C to +80°C

Electrical Data:	G24/I24	245	G05/I05
Design according to:	DIN VDE 0160	DIN VDE 0160	DIN VDE 0160
Power supply:	10-30VDC	10-30VDC	4,75-5,5VDC
Current consumption:	max. 70mA	max. 70mA	max. 70mA
Channels:	see pulsed diagram		
Output:	push-pull	push-pull	push-pull
Load:	max. 40mA at 20mA	max. 40mA at 20mA	max. 40mA at 20mA
Signal level:	H > U _s 2,5VDC L < 2,5VDC	H > 2,5VDC L < 1,2VDC	H > 2,5VDC L < 0,5VDC
Pulse frequency:	max. 200kHz	max. 200kHz	max. 200kHz
Circuit protection:	yes	no	no
Early-warning output:	conducting when defective		
Cable length:	max. 100m	max. 100m	max. 100m

G24/I24

G05/I05

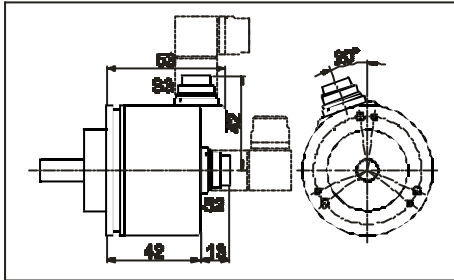


Dimensional drawing MDG 58 B with K2/K3, dimensional specifications in mm

Customer-specific adaptations on request.

MDG 58B:CableandConnector Details

Connector,7-pin

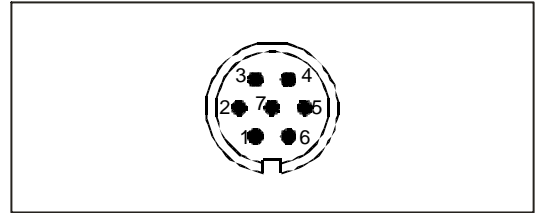


S2:axial,S3:radial

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

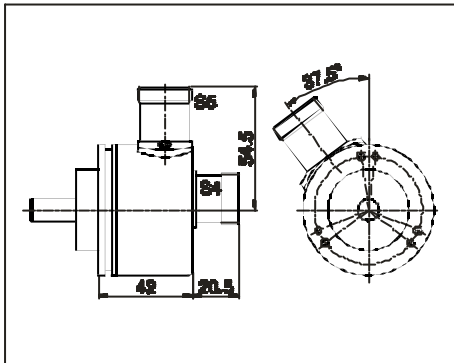
Connectorhousingelectrically connectedto encoderhousing.

PinIdentification



Pinarrangementonencoder.

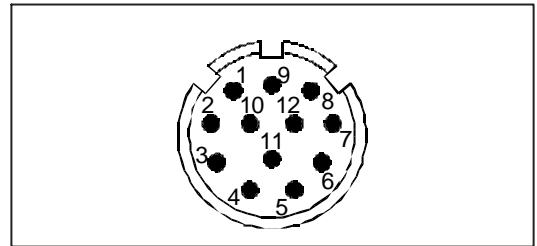
Connector,12-pin



S4:axial,S5:radial

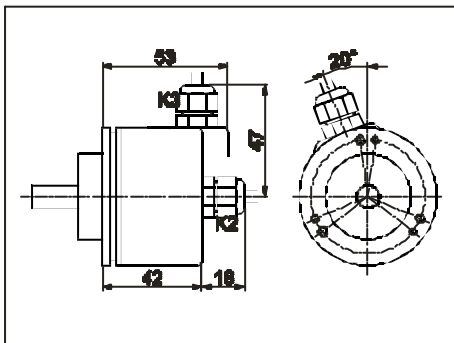
Circuit function	G24,G05 Pin	24,I05, 245 Pin
Negative	10	10
Positive	12	12
A	5	5
B	8	8
N	3	3
Early-warn. Output	11	11
Ainv.	-	6
Binv.	-	1
Ninv.	-	4
n.c.	1,2,4, 6,7,9	2,7,9

Connectorhousingelectrically connectedtoencoderhousing.



Pinarrangementonencoder.

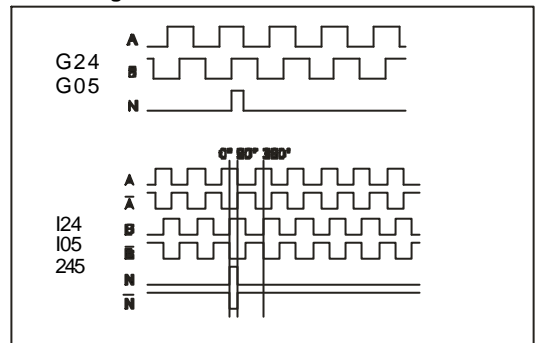
Cableconnection,2 m shielded cable



K2:axial,shieldnotconnected (standard)
L2:axial,shieldconnectedtoencoderhousing
K3:radial,shieldnotconnected(standard)
L3:radial,shieldconnectedtoencoderhousing

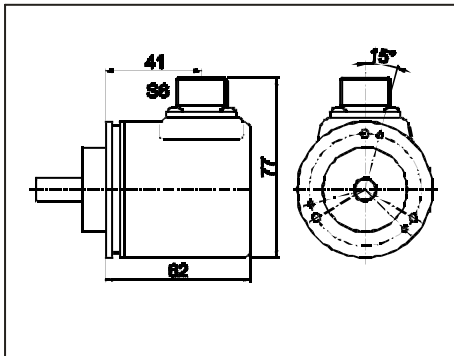
Circuit function	G24,G05 Colour	24,I05,245 Colour
Negative	white	white
Positive	brown	brown
A	green	green
B	yellow	yellow
N	grey	grey
Early-warn Output	pink	pink
Ainv.	-	red
Binv.	-	black
Ninv.	-	violet
Shield	cablebraiding	

Pulsediagram



Viewfromtheshaftend,shaftrotatingclockwise.

Connector,6-pin

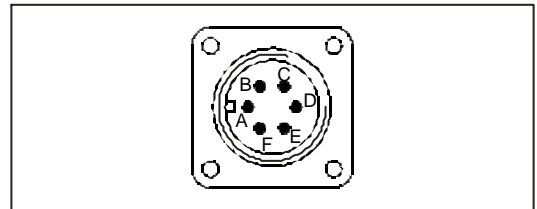


S6:radial

Circuit function	G24,G05 Pin
Negative	A
Positive	F
A	C
B	B
N	D
Early-warning Output	E

Connectorhousingelectrically connectedtoencoderhousing.

PinIdentification

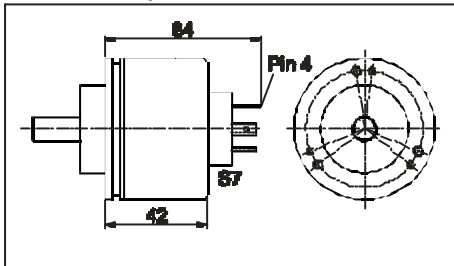


Pinarrangementonencoder.

All dimensions in mm.

MDG 58 B: Cable and Connector Details

Connector, 4-pin

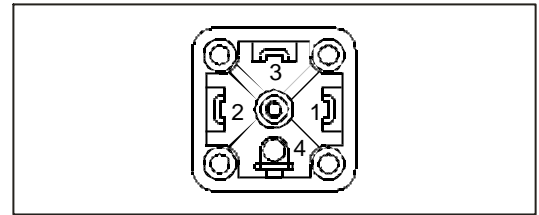


S7:axial

Circuit function	G24,G05 Pin
Negative	1
Positive	2
A	3
B	4

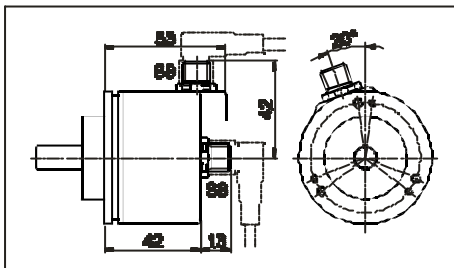
Plasticconnectorhousing.

PinIdentification



Pinarrangementonencoder.

Connector, 6-pin

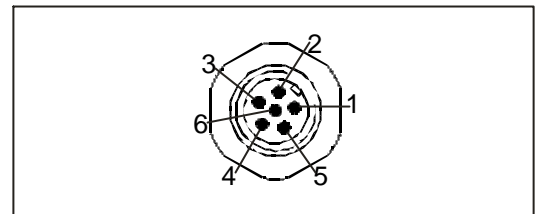


S8:axial,S9:radial

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

Colourcodingfor cableKIA-6-67-05.
Connectorhousingelectrically
connectedtoencoderhousing.

PinIdentification



Pinarrangementonencoder.

All dimensions in mm.

Options

- 1.Low-frictionencoders
- 2.Alternativecablelengths
- 3.Shaftwithflat
- 4.TotalIP67protection

Pleaseaskaboutotheravailableoptions.

OrderingInformation:

Channels: A A B, A B N	Pulses per: revolution 10, 48, 50, 60, 64, 72, 87, 90, 100, 120, 125, 127, 128, 150, 180, 200, 216, 240, 250, 254, 256, 300, 314, 320, 360, 400, 500, 512, 571, 600, 625, 720, 750, 768, 800, 810, 900, 1000, 1024, 1200, 1250, 1270, 1440, 1500, 1800, 2000, 2 048, 2400, 2500, 3000, 3600, 4000, 4096, 5000 OtherPPRsonrequest	Outputcircuit: G 24 = 10 - 30 VDC G05 = 5 VDC OnlyforK2, L2, K3, L3, S4, S5: I24 = 10 - 30VDC(inv.) I05 = 5VDC(inv.) 245 = 10 - 30VDCsupply, 5 VDC output	Electricalconnections: K2=axial,2m,shieldnotconnected(standard) L2=axial,2m,shieldconnectedtoencoderhousing K3=radial,2m,shieldnotconnected(standard) L3=radial,2m,shieldconnectedtoencoderhousing Connector S2= 7 -pin.axial S6= 6-pin.radial S3= 7 -pin.radial S7= 4-pin.axial S4=12-pin.axial S8= 6-pin.axial S5=12-pin.radial S9= 6-pin.radial
Example MDG58B - 500 - ABN - G24 - K3	YourEncoder MDG58B - - - - -		