

Encoder DINS50



- Economic encoder with mechanical carrying of loading capacity
- Protection to IP67, IP65 on shaft

Application fields:

Machines used in the wood and plastic industries, Food processing machines, Motion Control, Machines for shoe manufacture and the Leather industry

Specifications

Available Pulses Per Revolution PPR:

9, 10, 15, 20, 25, 28, 30, 40, 50, 60, 90, 100, 120, 125, 128, 150, 160, 180, 200, 235, 250, 300, 314, 318, 360, 400, 500, 600, 625, 635, 720, 900, 1000, 1024, 1080, 1200, 1250, 1500

Mechanical Data

Housing

- Servo flange: Aluminium
- Encoder body: Aluminium, powder coated pitch \varnothing 61mm
- Cam mounting:

Shaft

- Material: Stainless steel
- Loading on shaft-end: max. 120 N radial, max. 70 N axial
- Starting torque: ca. 0,3 Ncm at Ambient temperature

Bearings

- Type: 2 precision ball-bearings
- Service life: 2×10^8 revs. at 100% of full rated shaft load, 3×10^9 revs. at 40%, 2×10^{10} revs. at 20%

Operating speed:

- Weight: 12.000 rpm, approx. 160 g
- Connection: Shielded cable or connector

Optics

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

Accuracy

- Quadrature phasing: $90^\circ \pm 7,5\%$
- Pulse on/off ratio: $50\% \pm 7\%$

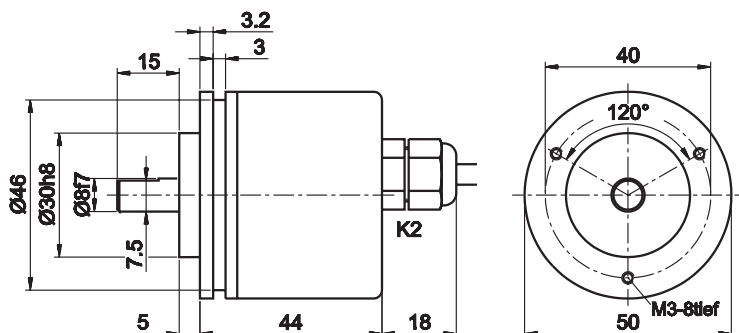
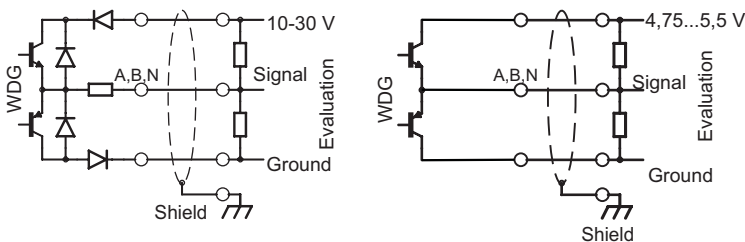
Environmental Data

Measured mounted and housing grounded.

- ESD (DIN EN 61000-4-2): 8 kV
- Burst (DIN EN 61000-4-4): 2 kV
- Protection rating: IP67. Shaft sealed to IP65. (EN 60529)
- Vibration (DIN EN 60068-2-6): 50m/s^2 (10-2000 Hz)
- Shock (DIN EN 60068-2-27): 1000m/s^2 (6 ms)
- Operating temperature: -10°C to $+70^\circ\text{C}$
- Storage temperature: -30°C to $+80^\circ\text{C}$

Electrical Data:

	G24 / I24	G05 / I05
Design according to:	DIN VDE0160	DIN VDE0160
Power supply:	10 - 30 VDC	4,75 - 5,5 VDC
Current consumption:	max. 70 mA	max. 70 mA
Channels:	see pulse diagram	
Output:	push-pull	push-pull
Load:	max. 40 mA	max. 40 mA
Signal level:	at 20 mA	at 20 mA
	$H > U_b - 2,5 \text{ VDC}$	$H > 2,5 \text{ VDC}$
	$L < 2,5 \text{ VDC}$	$L < 1,2 \text{ VDC}$
Pulse frequency:	max. 200 kHz	max. 200 kHz
Circuit protection:	yes	no
Early-warning output:	conducting when defective	
Cable length:	max. 100 m	max. 100 m

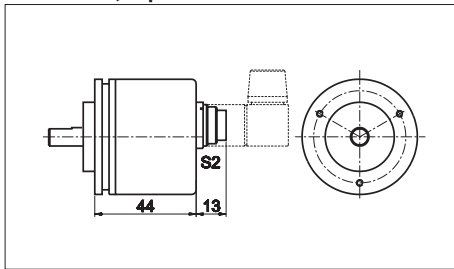


Dimensional drawing DINS50 with K2, dimensional specifications in mm

Customer-specific adaptations on request.

DINS50: Cable and Connector Details

Connector, 7-pin

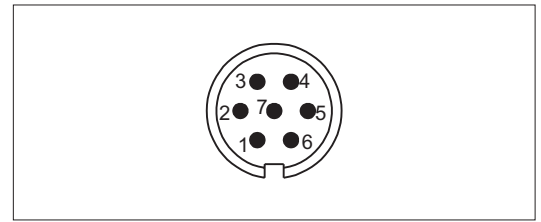


S2: axial

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

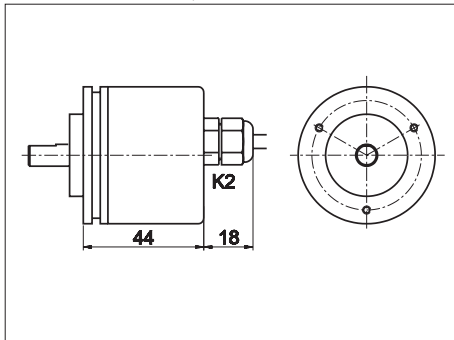
Connector housing electrically connected to encoder housing.

Pin Identification



Pin arrangement on encoder.

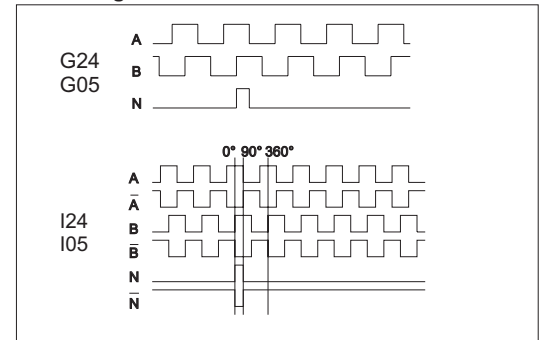
Cable connection, 2 m shielded cable



K2: axial, shield not connected (standard)
L2: axial, shield connected to encoder housing
All dimensions in mm.

Circuit Function	G24,G05 Colour	I24,I05 Colour
Negative	white	white
Positive	brown	brown
A	green	green
B	yellow	yellow
N	grey	grey
Early-warn		
Output	pink	pink
A inv.	-	red
B inv.	-	black
N inv.	-	violet
Shield	cable braiding	

Pulse diagram



View from the shaft end, shaft rotating clockwise.

Ordering Information:

Channels:	A, AB, ABN	Output circuit:	G24 = 10 - 30 VDC	G05 = 5 VDC
Pulses per: revolution	9, 10, 15, 20, 25, 28, 30, 40, 50, 60, 90, 100, 120, 125, 128, 150, 160, 180, 200, 235, 250, 288, 300, 314, 318, 360, 400, 500, 600, 625, 635, 720, 900, 1000, 1024, 1080, 1200, 1250, 1500	Only for K2, L2:	I24 = 10 - 30 VDC (inv.)	I05 = 5 VDC (inv.)
		Other PPRs on request		
		Electrical connections:		
		Cable		
		K2 = axial, 2 m, shield not connected (Standard)		
		L2 = axial, 2 m, shield connected to encoder housing		
		Connector		
		S2 = 7-pin. axial		