

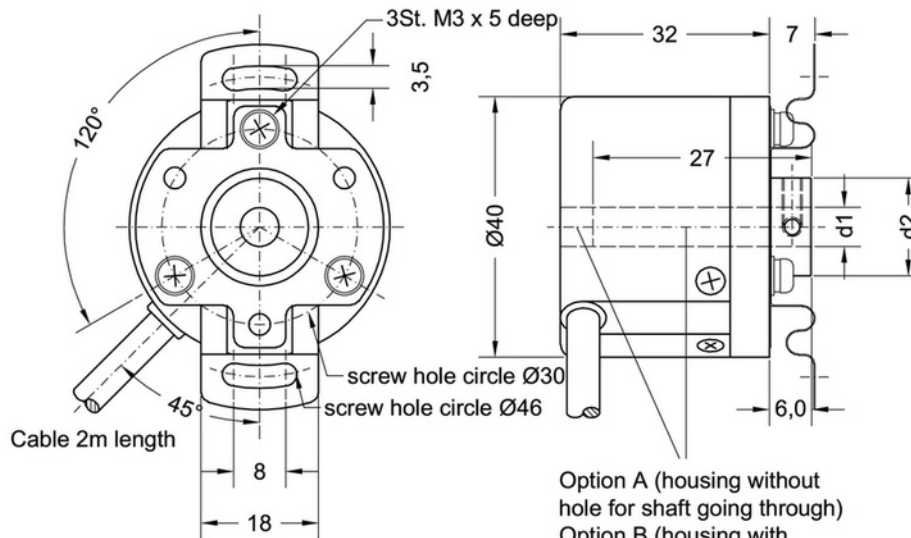
Series MHL40 / Optoelectronic Incremental Encoder

- Housing \varnothing 40mm
- 10 to 3600 ppr
- 2 channels + index
- Operating voltage 5V, 12 to 24V
- Through hole optional
- Standard versions from stock

The MHL40 is an universal hollow-shaft encoder for many applications. Available output types are Push-Pull, Open Collector, Voltage and Linedriver.



Drawing and Interfaces

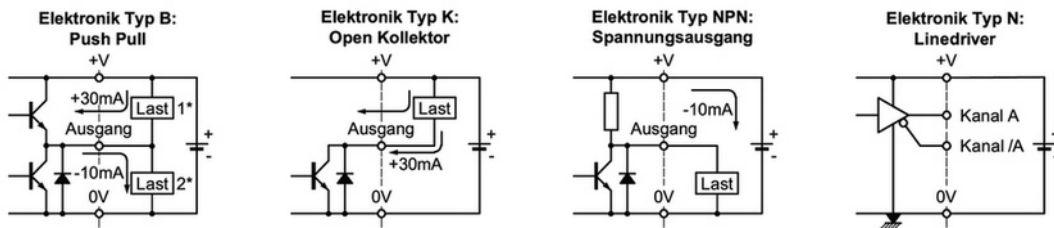


Colours of lead wires
(The shield is connected with the encoder housing)

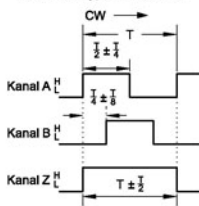
| Elektronik: K, NPN, B | | Elektronik Type N | |
|-----------------------|-----------|-------------------|------------|
| Brown | UB | Brown | UB (5V) |
| Black | Channel A | Black | Channel A |
| White | Channel B | Red | Channel /A |
| Orange | Channel Z | White | Channel B |
| Blue | GND | Grey | Channel /B |
| Shield | | Orange | Channel Z |
| | | Yellow | Channel /Z |
| | | Blue | GND |
| | | Shield | |

| | | | | |
|-----------|------------------|-----------------|------------------|------------------|
| d1 | $\varnothing 6$ | $\varnothing 8$ | $\varnothing 10$ | $\varnothing 12$ |
| d2 | $\varnothing 15$ | | $\varnothing 17$ | |
| Tolerance | +0,015 -0 | | | |

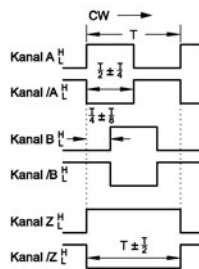
Series MHL40 / Optoelectronic Incremental Encoder



Timing und Spannungspegel
Elektronik Typen: B, K, NPN



Elektronik Typ N



Rechtsdrehende Achse (Blickrichtung auf Welle)

| Elektronik | Flankenanstieg |
|------------|-----------------------------------|
| B, K | 1µs bei Isink 20mA und 2m Kabel |
| NPN | 12-24V bei 820 Ohm |
| | 5V bei 4,7 kOhm |
| N | 0,5µs bei Isink 20mA und 2m Kabel |

| Elektronik | Signalpegel |
|------------|-----------------------------|
| B | Low bei 30mA max 0,4VDC |
| | High bei 10mA min Ub-1,5VDC |
| K | Low bei 30mA max 0,4VDC |
| NPN | Low bei 10mA max 0,4VDC |
| | Low bei 20mA max 0,5V |
| N | High bei -20mA min Ub 2,5V |

| Electrical Data | NPN, K, B | N |
|--------------------------|----------------------------------|-------------------|
| Revolution | 10 to 3600 ppr | |
| Channels | A, B, Z | A / A, B / BZ / Z |
| Frequency Response | 300 kHz | |
| Supply Voltage | 5 VDC \pm 5% / 11,4 - 25,2 VDC | 5 VDC \pm 5% |
| Supply Current (no load) | 60 mA | 50 mA |

| Mechanical Data | |
|------------------|-----------------------------------|
| Maximum Speed | 5000 rpm |
| Angular Momentum | 2×10^6 kg m ² |
| Starting Torque | 0,5 Ncm |

| Other Data | |
|-----------------------|---|
| Protection Class | IP50 / IP40 |
| Operating Temperature | -10 .. +70° C |
| Storage Temperature | -25 .. +85° C |
| Housing Material | Aluminium |
| Disc Material | Plastic |
| Vibration | 1,5mm Amplitude 10-55Hz in X, Y, Z Richtung 2 h |
| Shock | 50 g max. |
| Weight | 120 g |

Series MHL40 / Optoelectronic Incremental Encoder

Order Code and Options

| Description | Series | Options | | | | | |
|---|--------|---------------------------|--|------------------|-----------|---------------------------|---------------|
| Typ | MHL40 | | | | | | |
| Hollow shaft \varnothing 8 mm (Standard) Optional 6, 10, 12 mm | | 8 6 10 12 | | | | | |
| Revolution: 10, 60, 100, 256, 300, 360, 500, 1000 , 1024, 1200, 1500, 1800, 2000, 2048, 2500, 3000, 3600 | | | 10 ... 1000 ... 3600 | | | | |
| Supply 5V Supply 12-24V | | | | 5 1224 | | | |
| Signal: 2 channels with index | | | | | BZ | | |
| Electronics: B (Push-Pull) K (Open Collector) NPN (Spannungsausgang) N (Linedriver) | | | | | | B K NPN N | |
| Housing: A - without through-hole B - with through-hole | | | | | | | A B |
| Example Order Code: | MHL40 | 8 | 3600 | 1224 | BZ | B | A |
| Note: Linedriver is available with 5V operating voltage only. | | | | | | | |

Preference types (bold) from stock.

Our speciality are custom solutions

Examples: Mounting of gear wheels and other mechanical parts, assembling of cables, connectors and more. Please contact us.

The specifications and information in this datasheet cannot consider all special demands that are caused by the application. Because of this, they are no general description of the properties of the product.
16. May 2011. All specifications are subject to change without notice.