

elap MEM-BUS IO-Link

QUICK REFERENCE GUIDE



MEM40B IO-LINK ENCODER PROFILE

- Complying with the international standard IEC 61131-9
- COM3 Communication mode (230,4 kbit/s)
- IO-Link Version: 1.1
- Min Cycle Time: 1000 μ s
- SIO supported: yes
- ISDU supported: yes
- Data storage: yes
- Block parameters: yes

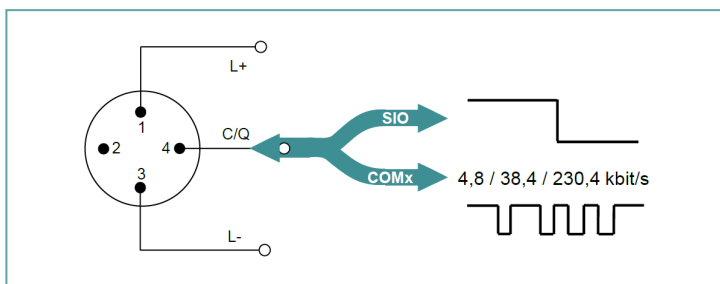
MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

MEM-Bus	540 · 520 · 620
• Materials: housing shaft	Aluminium Stainless steel
• Weight	100 g circa
• Shaft Ø	6, 8 or 10 mm
• Revolutions/minute	6000
• Starting torque	≤ 0.8 Ncm
• Inertia	≤ 25 g cm ²
• Max load	80 N axial/100 N radial
• Vibrations resistance (10÷2000 Hz)	10 G
• Shock (11 ms)	50 G
• Protection degree	IP65
• Operating temperature	-10 ÷ 80°C
• Stacking temperature	-20 ÷ 80°C

ELECTRICAL & OPERATING SPECIFICATIONS

• Operating principle	Magnetic
• Resolution/revolution	8192 steps/rev. – 13 bits
• Revolutions no.	65536/16 bits
• Initializing time	< 1 s
• Data memory	>30 years power off
• Fieldbus	IO-Link
• Supply	10÷30 Vdc Protection against polarity reversal
• Power consumption	2 W
• Accuracy	$\pm 0.2^\circ$
• Connection	M12 4-pin radial connector
• Interference immunity	EN 61000-6-2
• Emitted interference	EN61000-6-4

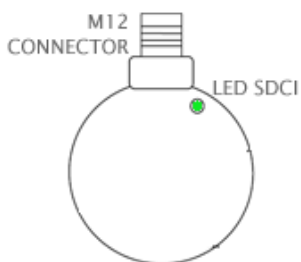
CONNECTIONS



Pin	Signal	Definition	Standard
1	L+	24 V	IEC 61131-2
2	I/Q	Not connected, DI, or DO	IEC 61131-2
3	L-	0 V	IEC 61131-2
4	Q	"Switching signal" (SIO)	IEC 61131-2
	C	"Coded switching" (COM1, COM2, COM3)	IEC 61131-9

The encoder MEM40B is equipped with one 4-pin M12 male connector.
The master and device pin assignment is based on the specifications in IEC 60947-5-2.

STATUS LED (SDCI COMMUNICATION)



The encoder avails on a **LED indicating the communication status** of the device, by flashing according to IO-Link standard timing.

The encoder status is associated with the LED flashing frequency as described in the following table

• encoder in STARTUP/PRE-OPERATE status	LED ON
• encoder in OPERATE status	900 mS ON/100 mS OFF
• activated FLASHLED function	100 mS ON / 100 mS OFF

PROGRAMMING – FILE IODD

Information about identity, configuration parameters, process data, and diagnostic data are provided to the master using an IODD (IO Device Description) file that is an XML textual description language, which ensures interoperability between different devices.

The IODD file also contains directives for the design of a "user interface" which can be loaded by an appropriate master management software.

The **IODD file and the operating manual can be downloaded at the following link:**

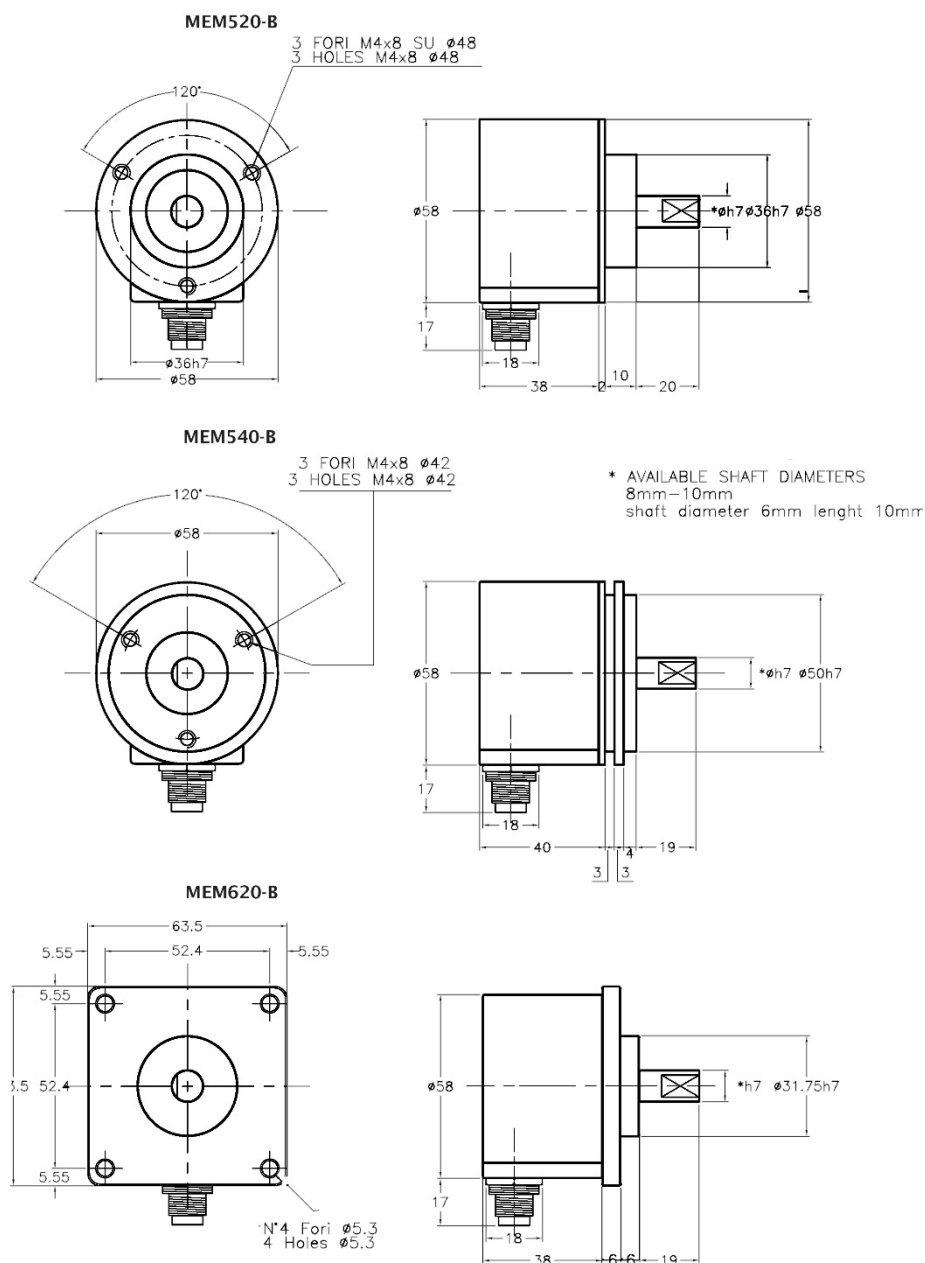
<https://www.elap.it/wp-content/uploads/2024/10/ELAP-MEM40B-20241201-IODD1.1-1.zip>

https://www.elap.it/wp-content/uploads/2025/06/MEMB_IO-LINK_instruction_mauul.pdf



DIMENSIONS

Ref. M1483V



REFERENCES

MANUALS, SOFTWARE and CATALOGUES can be downloaded at:

<https://www.elap.it/absolute-encoders/encoder-mem-bus-io-link/>



ELAP VIA VITTORIO VENETO, 4 • I-20094 CORSICO (MI) • TEL. +39.02.4519561
FAX +39.02.45103406 • E-MAIL INFO@ELAP.IT • SITE WWW.ELAP.IT