



elap MEM-BUS EtherCAT

GUIDA RAPIDA

EtherCAT
Conformance tested

UL US LISTED
CERTIFICATE NO. E510647

PROFILO ENCODER MEM-BUS EtherCAT IEC61158-1-6 & IEC61784-2

- Profilo del dispositivo **CANOpen su EtherCAT (CoE), CiA DS-406**
- Livello fisico EtherCAT 100Base-TX, Fast Ethernet, ISO/IEC 8802-3
- Codifica dati in uscita: binaria
- Tempo di ciclo ≥ 1 ms • Velocità di trasmissione 100 Mbit/s
- Trasmissione: Cavo CAT-5, schermato (STP), ISO/IEC 11801

CARATTERISTICHE MECCANICHE ED AMBIENTALI

MEM-Bus	620/520/540	440/450
• Materiali: custodia albero	Alluminio Acciaio inox	
• Peso	500 g circa	
• Foro albero/albero cavo	6, 8, 10 mm	8, 10, 12, 14, 15 mm
• Giri/minuto	6000	
• Coppia avviamento	$\leq 0,8$ Ncm	
• Momento di inerzia	≤ 25 g cm ²	
• Carico ammesso	80 N assiale/100 N radiale	
• Resistenza alle vibrazioni (10÷2000 Hz)	100 m/sec ²	
• Resistenza all'urto (11 ms)	50 G	
• Grado di protezione	IP67 - lato albero IP65	
• Temperatura di esercizio	-30 ÷ 70°C	
• Temperatura ambiente (certificato UL)	Max 60°C	
• Temperatura di immagazzinaggio	-30 ÷ 85°C	

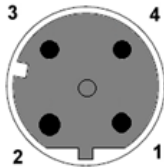
CARATTERISTICHE ELETTRICHE E FUNZIONALI

• Funzionamento	Magnetico
• Risoluzione/giro	8192 posizioni/giro - 13 bit
• Numero giri multigirotto	65536 / 16 bit
• Tempo di inializzazione	< 1 s
• Mantenimento dato	>20 anni ad albero fermo in assenza di alimentazione
• Bus di campo	EtherCAT
• Alimentazione	10 ÷ 30 Vdc Protezione all'inversione di polarità
• Assorbimento	2,5 W
• Precisione	$\pm \frac{1}{2}$ LSB
• Tipi di connessione	2 connettori M12 femmina D-coding +1 connettore M12 maschio
• Immunità alle interferenze	EN 61000-6-2
• Interferenze emesse	EN61000-6-4

COLLEGAMENTI

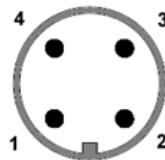
Connettori porte IN e OUT
Tipo M12 femmina D code

Pin	Segnale
1	Tx +
2	Rx +
3	Tx -
4	Rx -



CONNETTORE ALIMENTAZIONE
Tipo M12 maschio A code

Pin	Segnale
1	+ Valim. (10 - 30 V DC)
2	N.C.
3	GND (0V)
4	N.C.



PARAMETRIZZAZIONE VIA EtherCAT

- Direzione del conteggio
- Numero di passi per giro
- Intervallo di misura globale
- Valore di preset
- Unità di misura della velocità

RIFERIMENTI

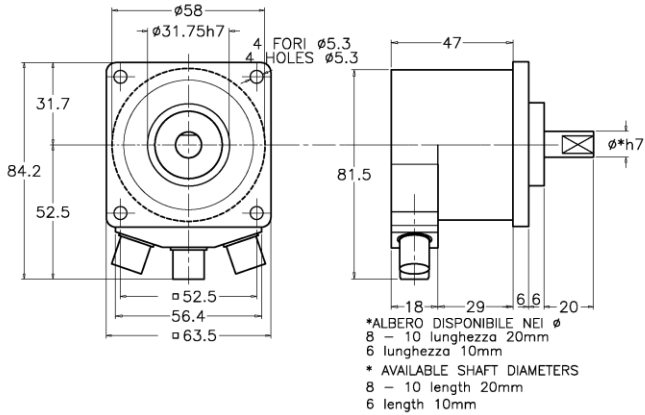
MANUALI, SOFTWARE e DISEGNI DIMENSIONALI scaricabili all'indirizzo:

<https://www.elap.it/it/encoder-assoluti/encoder-mem-bus-ethercat/>

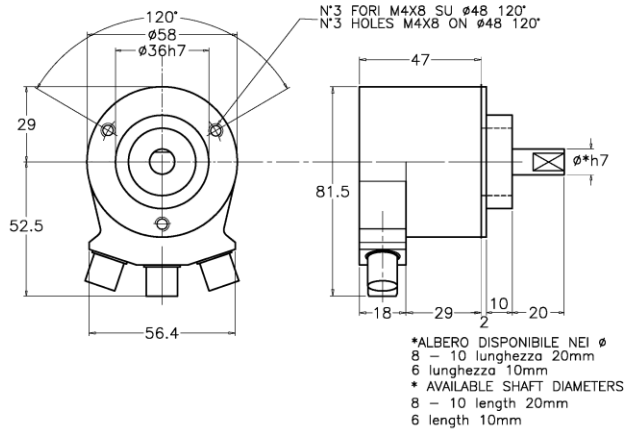


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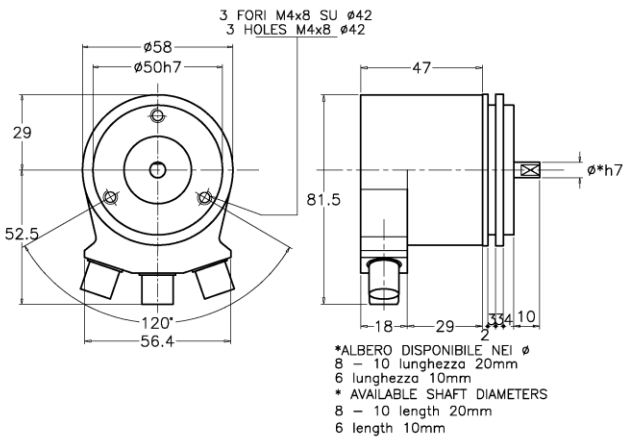
MEM620Bus



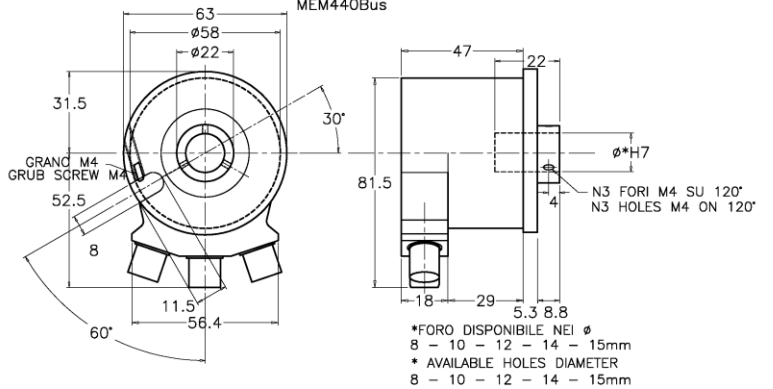
MEM540Bus



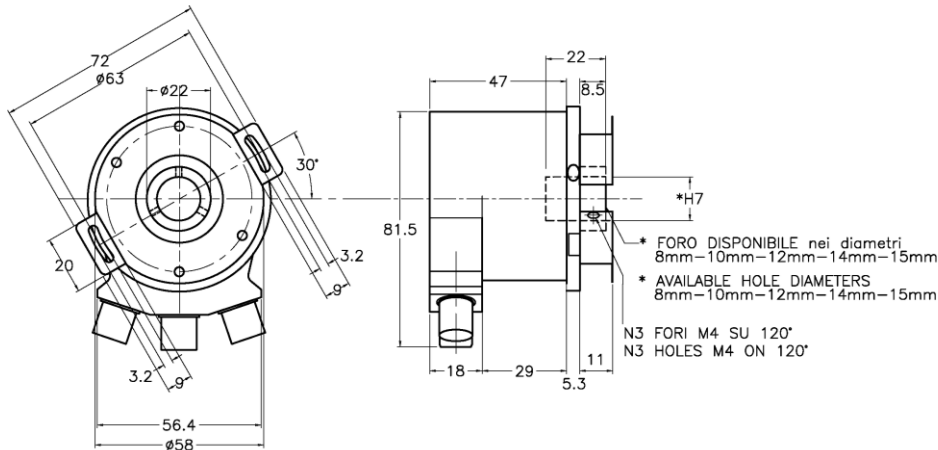
MEM520Bus

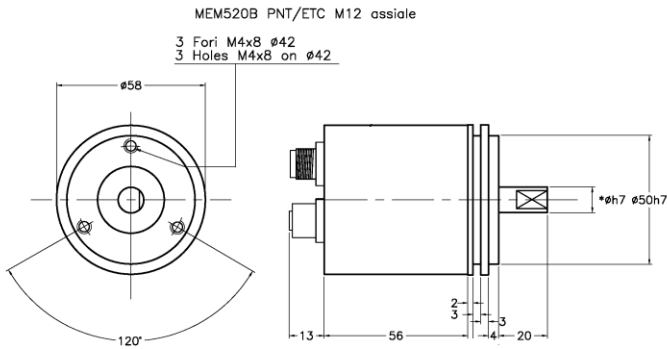


MEM440Bus

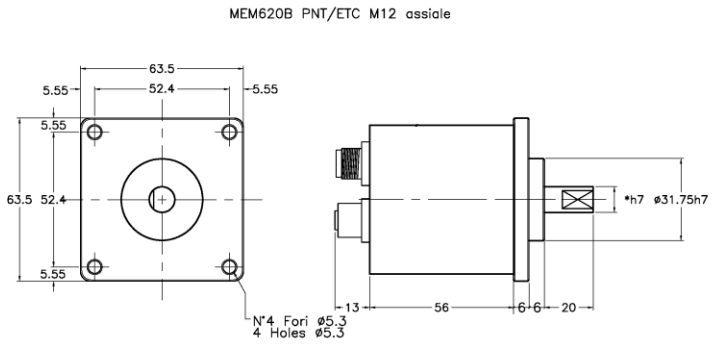


MEM450Bus

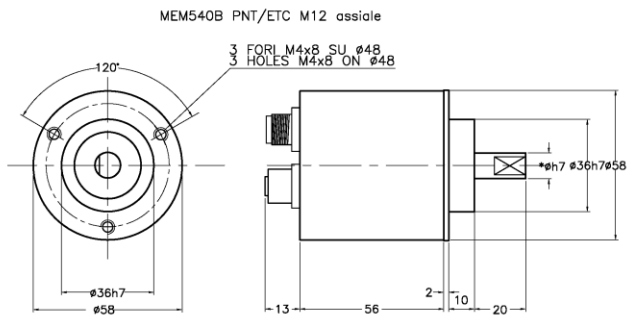




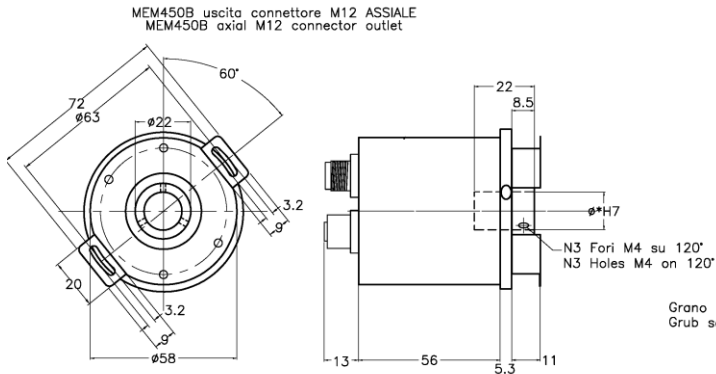
- * ALBERO DISPONIBILE
Nei diametri 8mm-10mm
diametro 6mm lunghezza 10mm
- * AVAILABLE SHAFT DIAMETERS
8mm-10mm
shaft diameter 6mm length 10mm



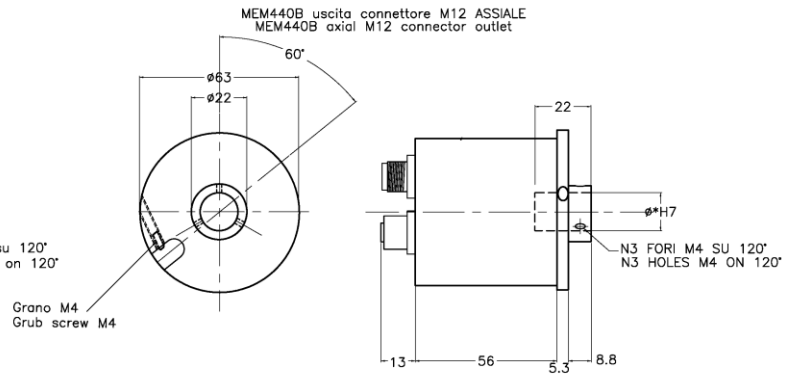
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Nei diametri 8mm-10mm
diametro 6mm lunghezza 10mm
- * AVAILABLE SHAFT DIAMETERS
8mm-10mm
shaft diameter 6mm length 10mm



- * FORO DISPONIBILE nei diametri
8mm-10mm-12mm-14mm-15mm
- * AVAILABLE HOLE DIAMETERS
8mm-10mm-12mm-14mm-15mm



- * FORO DISPONIBILE nei diametri
8mm-10mm-12mm-14mm-15mm
- * AVAILABLE HOLE DIAMETERS
8mm-10mm-12mm-14mm-15mm



elap MEM-BUS EtherCAT

QUICK REFERENCE GUIDE

EtherCAT
Conformance tested

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CERTIFICATE NO. E510647

ENCODER MEM-BUS	EtherCAT	IEC61158-1-6 & IEC61784-2
<ul style="list-style-type: none"> • Device profile CANOpen su EtherCAT (CoE), CiA DS-406 • Physical layer EtherCAT 100Base-TX, Fast Ethernet, ISO/IEC 8802-3 • Output code: Binary • Cycle time ≥ 1 ms • Transmission rate 100 Mbit/s • Transmission: CAT-5 cable, shielded (STP), ISO/IEC 11801 		

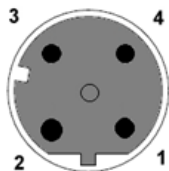
MECHANICAL & ENVIRONMENTAL SPECIFICATIONS		
MEM-Bus	620/520/540	440/450
• Materials: case	Aluminium	
• shaft	Stainless steel	
• Weight	500 g ca.	
• Shaft/Hollow shaft \varnothing	6, 8, 10 mm	8, 10, 12, 14, 15 mm
• Revolutions/minute	6000	
• Starting torque	≤ 0.8 Ncm	
• Inertia	≤ 25 g cm ²	
• Max load	80 N axial/100 N radial	
• Vibrations resistance (10÷2000 Hz)	100 m/sec ²	
• Shock (11 ms)	50 G	
• Protection degree	IP67 – IP65 shaft side	
• Operating temperature	$-30 \div 70^{\circ}\text{C}$	
• Ambient Temperature (UL certification)	Max. 60°C	
• Stocking temperature	$-30 \div 85^{\circ}\text{C}$	

ELECTRICAL & OPERATING SPECIFICATIONS	
• Operating principle	Magnetic
• Resolution/revolution	8192 steps/rev – 13 bit
• Revolutions no. (multiturn)	65536 - 16 bit
• Initializing time	< 1 s
• Data memory	> 20 years No motion – power off
• Fieldbus	EtherCAT
• Supply	$10 \div 30$ Vdc Protection against polarity reversal
• Power consumption	2 W
• Accuracy	$\pm \frac{1}{2}$ LSB
• Connection	2 M12 female connectors +1 M12 male connector
• Interference immunity	EN 61000-6-2
• Emitted interference	EN61000-6-4

CONNECTIONS PROGRAMMABLE VIA ETHERCAT

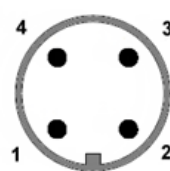
Connectors IN and OUT
M12 female type, D code

Pin	Signal
1	Tx +
2	Rx +
3	Tx -
4	Rx -



SUPPLY CONNECTOR
M12 male type, A code

Pin	Signal
1	Supply voltage (10-30 V DC)
2	N.C.
3	GND (0V)
4	N.C.



- Counting direction
- - Measuring steps per revolution
- - Total measuring length in steps
- - Preset value
- - Speed resolution

REFERENCES

MANUALS, SOFTWARE and DIMENSIONAL DRAWING DOWNLOAD AT:

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

