



# elap MEM

## MULTI-TURN ABSOLUTE ENCODERS

- **High resolution**
- **Wide mechanical range**
- **Strong and reliable**

Absolute encoders always provide the actual position data at the system power on, despite possible shaft rotations; therefore there is no need to reset to the zero point after a power down. The encoders serie MEM operating principle is thoroughly electronic – no gear involved – and allows to achieve high acceleration and long lasting. The data reset function is available for any position.

### MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

	TIPO MEM520	TIPO MEM540	MEM620
	Ø.58 mm round flange servo coupling SIZE23	Ø.58 mm round flange Ø.36 mm centering mask	mm 63.5x63.5 square flange SIZE25
• Weight	320 g	320 g	440 g
• Materials: case	aluminium		
• Shaft	stainless steel		
• Shaft diameter	6, 8, 10 mm		
• RPM	6000		
• Starting torque	≤0,8Ncm		
• Inertia	≤25g cm <sup>2</sup>		
• Max load	20N axial/40N radial		
• Shock resistance (11 ms)	50 G		
• Vibrations resistance (10÷2000 Hz)	100 m/sec <sup>2</sup>		
• Protection degree	IP65		
• Operating temperature	-30 ÷ +70°C		
• Stacking temperature	-30 ÷ +85°C		

### TYPICAL APPLICATIONS:

- Detection of displacements on operating machines (packing machines, sheet, marble, wood-working, textile machinery etc.)
- Cranes operation
- Revolving turrets on machine tools

### OUTPUT SIGNALS

SSI Serial output

DATA  
DATA  
CLOCK  
CLOCK  
OV  
+Vdc  
COUNT RESET Input

The output code is increasing with shaft rotating clockwise (shaft side sight). Inverting the connection of the signals DATA+ and DATA- reverts the count direction (down-count).

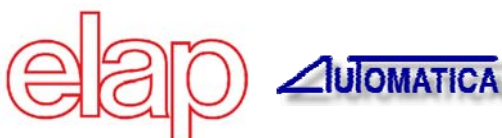
### PNP COUNT RESET INPUT

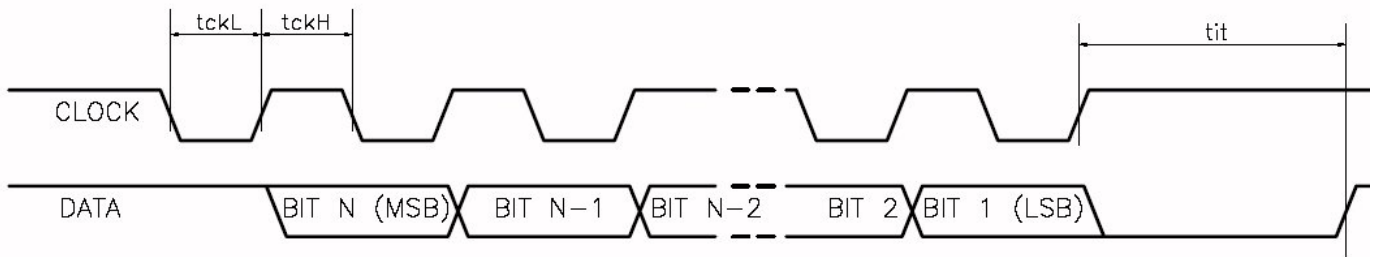
Applying a high logic level to this input (5 ÷ 24 Vdc) resets the position data.

### ELECTRICAL & OPERATING SPECIFICATIONS

• Operating principle	magnetic
• Pulse code	binary or Gray
• Resolution	5÷13 bits info/rev. x 15 bits rev. max.
• Resolution/rev.	32÷8192 positions/rev.
• Number of revolutions	4÷32768
• Data memory	>13 years *
• Output signals	SSI serial (RS422)
• Supply	5 ÷ 28 Vdc
• Power consumption (disconnected channels)	1.2 W
• SSI max clock frequency	1 MHz
• Accuracy	± ½ LSB
• Connection outlet	axial or radial cable 1 m long 12-pin axial or radial Connei connector

\*Rotating the shaft during power down decreases the data retention time





MSB: Most Significant Bit  
 LSB: Less Significant Bit

tckL: 0.5 microseconds min.

tckH: 0,5 microseconds max  
 20 microseconds max

tit: 20 microseconds min.  
 40 microseconds max  
 (When the tit time lag expires the encoder considers the interrogation ended)

**ORDERING INFORMATION**

