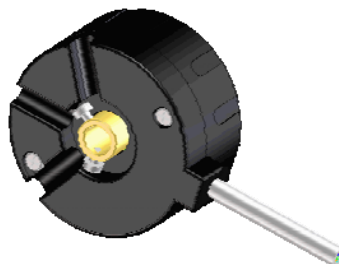


Code ST10	Project A04	Release A	Title TECHNICAL DATASHEET
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OPTICAL ENCODER EN413

GENERAL FEATURES

- Optical rotary encoder of small overall dimensions.
- Bi-directional signals with zero pulse.
- Up to 500 pulses per revolution.
- High rotational accuracy.
- Flange and cover made of zama.
- Cable output in radial position.



MECHANICAL AND ELECTRICAL FEATURES

CABLES AND ELECTRICAL CONNECTIONS

Cable 9 cores $\varnothing = 4.1$ mm, PVC external sheath

Wires section:

- for power supply: 0.08 mm²
- for signals: 0.08 mm²

Cable 5cores $\varnothing = 4.1$ mm, PVC external sheath

Wires section:

- for power supply: 0.35 mm²
- for signals: 0.14 mm²

NOTES.

Do not exceed the minimum cable bending radius of 30 mm.

LINE DRIVER		PUSH-PULL		WIRE COLOUR
WITH ZERO	WITHOUT ZERO	WITH ZERO	WITHOUT ZERO	
A	A	B	B	Green
\bar{A}	\bar{A}	NC	NC	Orange
B	B	A	A	White
\bar{B}	\bar{B}	NC	NC	Light blue
Z	Z	Z	NC	Brown
\bar{Z}	NC	NC	NC	Yellow
SCH	SCH	SCH	SCH	Shield
VS = 5V	VS = 5V	VS = 5V	VS = 5V	Red
VSO = 0V	VSO = 0V	VSO = 0V	VSO = 0V	Blue
9 CORES		5 CORES		CABLE

Code EN413

Pulses	50 ÷ 500 ppr
Max. rotation speed	6000 rpm
Shaft (diameter hole A)	$\varnothing 6$ mm (standard) $\varnothing 6.35$ mm (special)
Protection class	IP 40
Operating temperature	0 ÷ 70°C
Storage temperature	-20 ÷ 80°C
Relative humidity	20 ÷ 90% (not condensed)
Power supply	5 Vdc \pm 5% or 12 ÷ 24 Vdc \pm 5%
Current consumption	45 mA
Max. frequency	50 kHz
Output	LINE DRIVER PUSH-PULL
Standard cable length	1 m
Electrical connections	see the rel. table
Weight	≈ 110 g

ORDERING CODE

MODEL	TYPE	PPR	POWER SUPPLY	SHAFT \varnothing	CABLE	OUTPUT	CONN.
EN413	BZR	00100	1224	D06	M01	PP	C

B0R = bidirectional without zero
BZR = bidirectional with zero

00050 = 50 ppr
00100 = 100 ppr

00500 = 500 ppr

05V = 5V
1224 = 12÷24V

D06 = $\varnothing 6$ mm
635 = $\varnothing 6.35$ mm

Mxx = cable length in metres
M0.5 = 0.5m
M01 = 1m
M40 = 40m_{MAX}

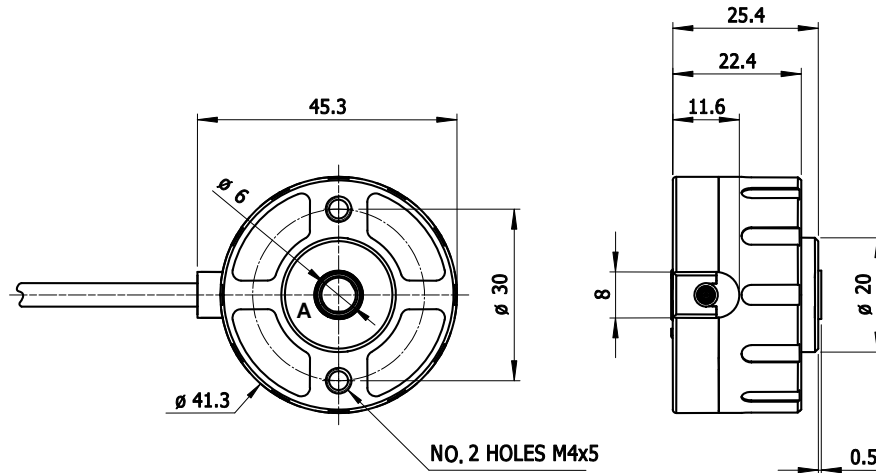
L5 = LINE DRIVER
PP = PUSH-PULL

C = cable

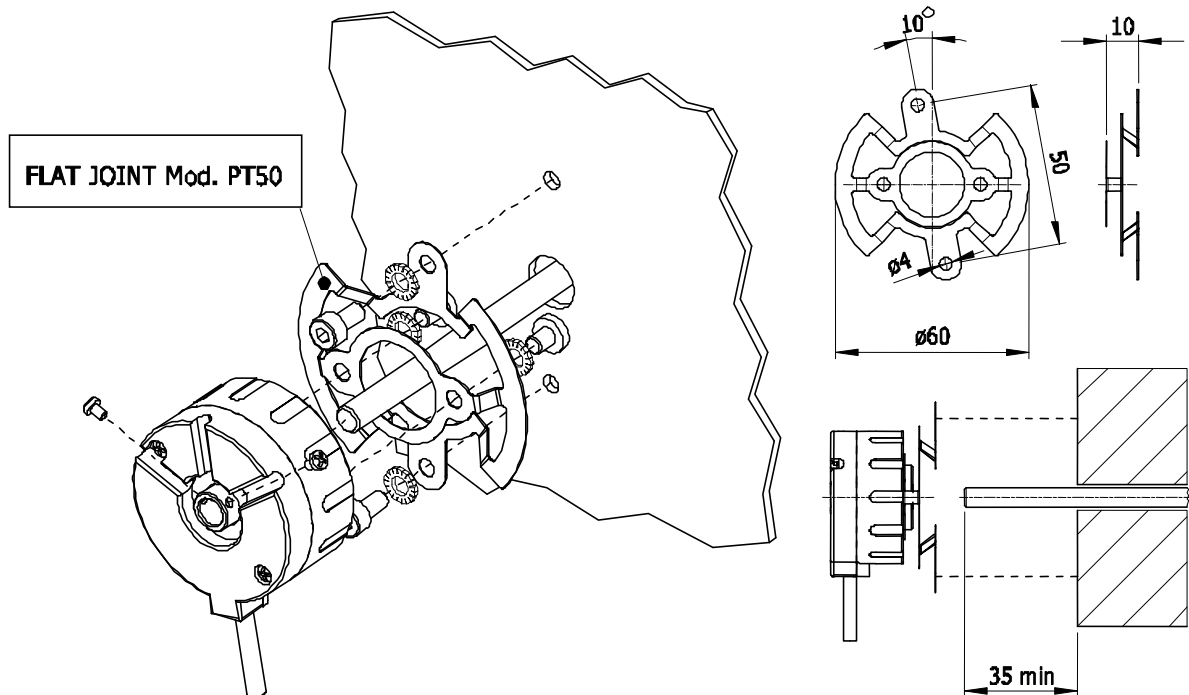
Example  **OPTICAL ENCODER EN413 BZR 00100 1224 D06M01 PPC**

Code	Project	Release	Title
ST10	A04	A	TECHNICAL DATASHEET

DIMENSIONS



RECOMMENDED FIXING



WHAT TO AVOID

- Any type of mechanical working (cut, drill, mill, etc.)
- Any modification either on the body or on the shaft of the encoder
- Any kind of bad usage
- External hits or stresses

