



- Industrial standard housing Ø2.5"
- Up to 5000 ppr
- Servo flange or square flange
- 10 V ... 30 V with short-circuit proof push-pull output

Product description

The RVI25 series is Pepperl+Fuchs' industrial standard size 2,5" encoder. This encoder is well-suited for many applications with its rugged, industrial housing and variety of options. Standard mounting configurations include 1/4" and 3/8" shafts and servo or face mounts.

The pulse disk is designed in plastic up to 1500 pulses. Beyond that, glass is used.

Electrical options include push-pull and RS 422 outputs on either Mil-Spec connectors or cables. An optional shaft seal protects the encoder and gives it a protection rating of IP65.

RVI25*-*****1



Technical data

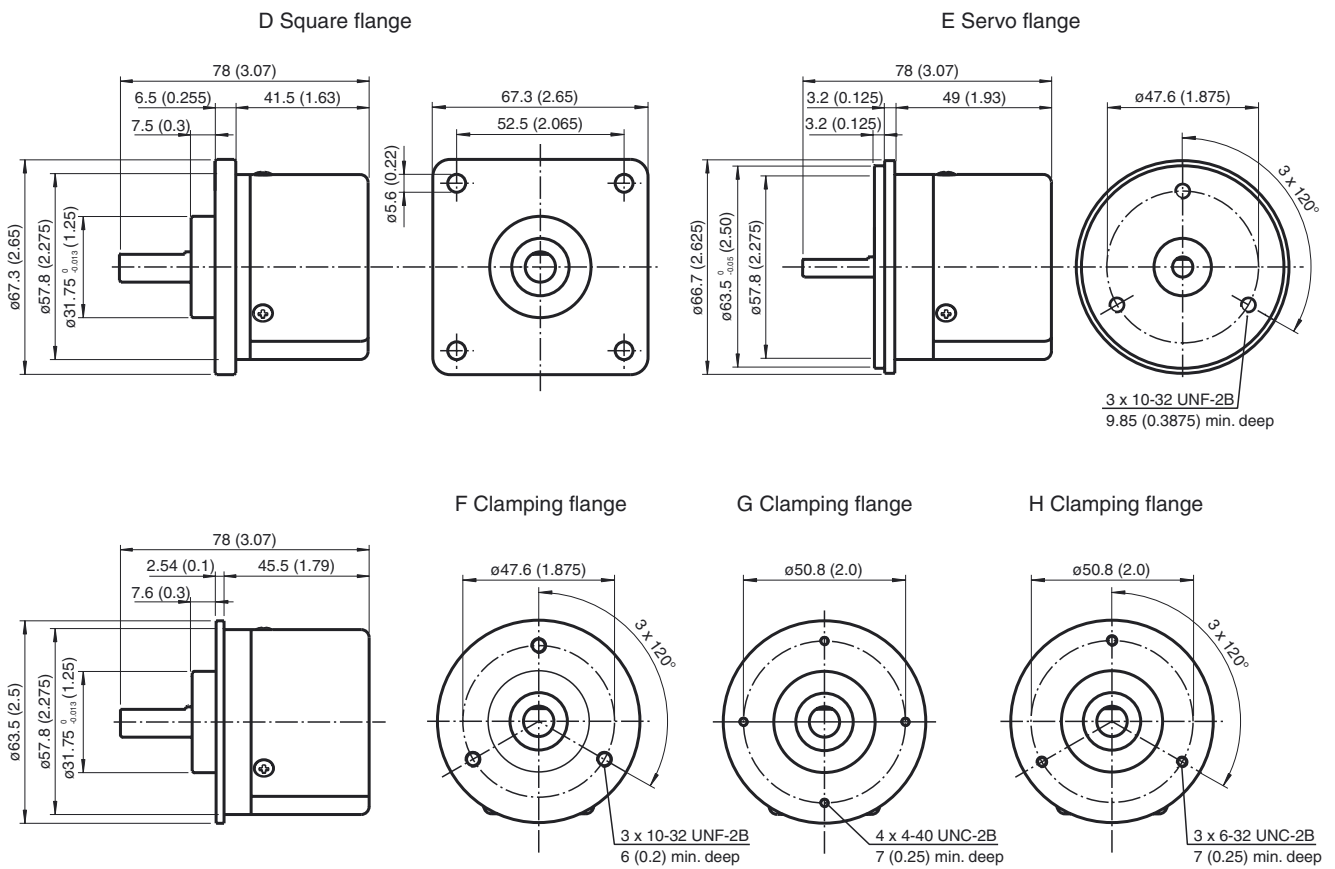
General specifications	
Detection type	photoelectric sampling
Pulse count	max. 5000
Functional safety related parameters	
MTTF _d	140 a
Mission Time (T _M)	20 a
L _{10h}	70 E+9 at 6000 rpm
Diagnostic Coverage (DC)	0 %
Electrical specifications	
Operating voltage U _B	10 ... 30 V DC
No-load supply current I ₀	max. 60 mA
Output	
Output type	push-pull, incremental
Voltage drop U _d	< 3 V
Load current	max. per channel 40 mA , short-circuit protected (not with U _B), reverse polarity protected
Output frequency	max. 100 kHz
Rise time	400 ns
De-energized delay t _{off}	400 ns
Connection	
Connector	type 9415, 7-pin type 9419, 10-pin
Cable	Ø7.8 mm, 6 x 2 x 0.14 mm ² , 2 m or 5 m
Standard conformity	
Protection degree	DIN EN 60529, IP54 (without shaft seal)/IP65 (with shaft seal)
Climatic testing	DIN EN 60068-2-3, no moisture condensation
Emitted interference	DIN EN 61000-6-4
Noise immunity	DIN EN 61000-6-2
Shock resistance	DIN EN 60068-2-27, 100 g, 3 ms
Vibration resistance	DIN EN 60068-2-6, 10 g, 10 ... 2000 Hz
Ambient conditions	
Operating temperature	
Glass disk	-20 ... 80 °C (-4 ... 176 °F)
Plastic disk	-20 ... 60 °C (-4 ... 140 °F)
Storage temperature	
Glass disk	-40 ... 100 °C (-40 ... 212 °F)
Plastic disk	-40 ... 70 °C (-40 ... 158 °F)
Mechanical specifications	
Material	
Housing	diecast zinc, not laquered or coated

Flange	3.1645 aluminum
Shaft	Stainless steel 1.4305 / AISI 303
Mass	approx. 397 g
Rotational speed	max. 12000 min ⁻¹
Moment of inertia	≤ 25 gcm ²
Starting torque	≤ 1.5 Ncm (with shaft seal) ≤ 1 Ncm (without shaft seal)
Shaft load	
Axial	40 N at max. 6000 min ⁻¹ 10 N at max. 12000 min ⁻¹
Radial	60 N at max. 6000 min ⁻¹ 20 N at max. 12000 min ⁻¹

Dimensions

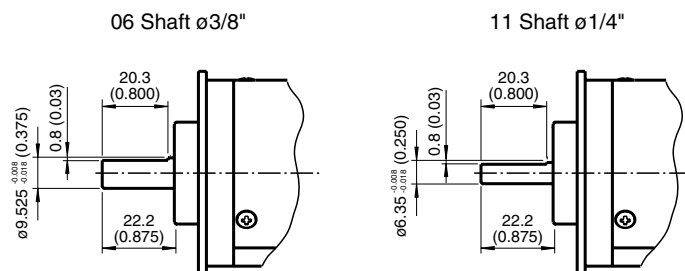
Flange

Dimensions in mm (inch)



Shafts

Dimensions in mm (inch)

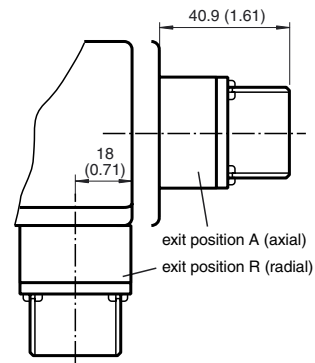
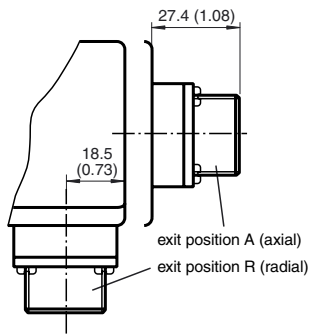
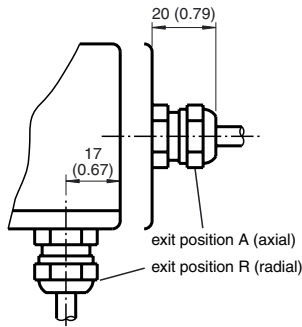


Connections
Dimensions in mm (inch)

K2 (2 m cable)
Cable gland PG7/PG9
K5 (5 m cable)
Cable gland PG7/PG9

AR
Connector 9415

AS
Connector 9419

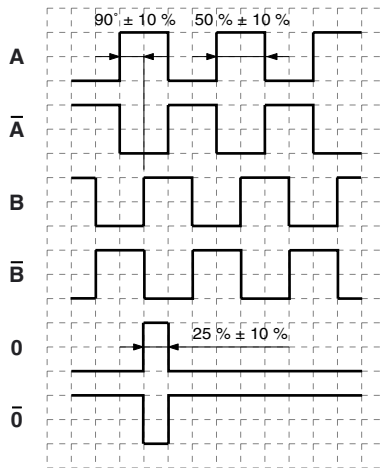


Electrical connection

Signal	Cable Ø7.8 mm, 12-core	Connector 9415, 7-pin	Connector 9419, 10-pin
GND	White	F	F
U _b	Brown	D	D
A	Green	A	A
B	Grey	B	B
\bar{A}	Yellow	-	H
\bar{B}	Pink	-	I
0	Blue	C	C
$\bar{0}$	Red	-	J
U _b Sens ^{*)}	Violet	-	-
NC	Grey/Pink	E	E
Case	Screen	G	G
GND Sens ^{*)}	Black	-	-

^{*)} only for devices with 5 V supply and RS 422 interface

Signal outputs



↺ ccw - with view onto the shaft

Accessories

For type	Accessories	Name/defining feature	Order code
All	Mounting aids	Eccentric clamping elements	9310-3
	Connectors	Cable socket	9415, 7-pin
		Cable socket	9419, 10-pin

For additional information on the accessories, please see the "Accessories" section.

Order code

R	V	I	2	5		-									N	-						
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											<p>Pulse count 100, 360, 500, 512, 1000, 1024, 1250, 2048, 2500, 3600, 4096, 5000</p> <p>Option N Normal</p> <p>Output switching 1 10 V ... 30 V, push-pull 6 5 V, RS 422 X 10 V ... 30 V, RS 422</p> <p>Signal output 3 A + B + 0 6 A + B + 0 and $\bar{A} + \bar{B} + \bar{0}$</p> <p>Exit position A Axial R Radial</p> <p>Connection type AR Plug connector type 9415, 7-pin AS Plug connector type 9419, 10-pin BF Plug connector type 9419, 10-pin, industrial K2 Cable Ø7.8 mm, 6 x 2 x 0.14 mm², 2 m K5 Cable Ø7.8 mm, 6 x 2 x 0.14 mm², 5 m</p> <p>Flange version D Square flange 2.65" x 2.65" E Servo flange Ø2.625" F Clamping flange Ø2.5" G Clamping flange Ø2.5" H Clamping flange Ø2.5"</p> <p>Shaft dimension 06 Shaft Ø3/8" x 0.875" 11 Shaft Ø1/4" x 0.875"</p> <p>Housing N Normal, protection degree IP54 P With shaft seal, protection degree IP65</p>											
<p>Shaft version V Solid shaft</p>																						

