



EXDJ78B Series

Explosion-proof absolute encoder

Equipment Type Class II (gas), Class III (dust)

Explosion-proof form: flame-proof type

NEPSI: Ex db IIC T5/T6 Gb, Ex tb IIIC T95°C/T80°C Db

ATEX: Ex II 2GD Ex db IIC T5/T6 Gb, Ex tb IIIC T95°C/T80°C Db

IECEx: Ex db IIC T5/T6 Gb, Ex tb IIIC T95 °C/T80°C Db

Applicable danger Zone 1 (gas) / 21 (dust)

Induction principle: Magnetic

Function Principle: multiple turn

Multi-turn technology: mechanical gear sets without batteries

Housing size $\Phi 78\text{mm}$

Blind hollow shaft $\Phi 12$ 、 $\Phi 14$ 、 $\Phi 16$ 、 $\Phi 25.4\text{mm}$

Number of steps 65536 /16Bit

Turns 16384 /14Bit

Interface: CANopen

CANopen+Incremental signal+Two limit switch output

Supply voltage 10-30VDC

Protection IP66

Mechanical characteristics

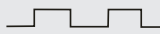
Shaft diameter (mm)	Blind hollow shaft $\Phi 12$ 、 $\Phi 14$ 、 $\Phi 16$ 、 $\Phi 25.4\text{mm}$
Protection	IP66
Speed	3000rpm
Maximum shaft load	Max. 60N Axial; max. 80N Radial
Shock resistance	100g, 6ms
Vibration resistance	10g, 10...2000Hz
Materials	316L stainless steel
Spindle materials	Aluminum alloy anodizing/316L stainless steel
The shell material	Aluminum alloy anodizing/316L stainless steel
Working temperature	-40°C...+80°C
Storage temperature	-40°C...+80°C
Weight	≈1600g (Aluminium alloy shell) ; ≈3900g (316L stainless steel)
Exit position	Radial direction; Axial direction

Electrical characteristics

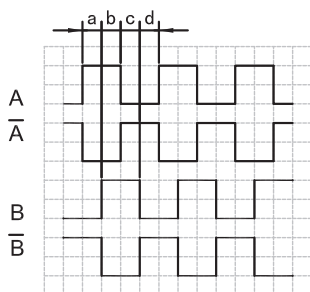
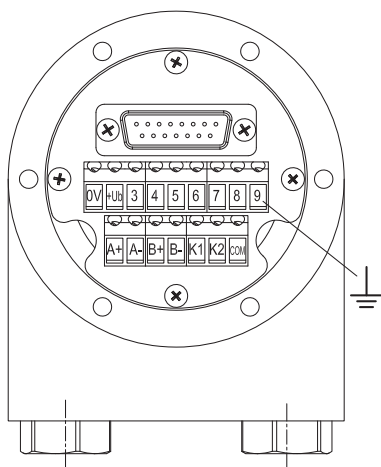
Interface	CANopen、CANopen+Incremental signal+Two limit switch output
No-load current	< 100mA
Operating voltage	10...30VDC
Transmission rate	≤1M Bit/S
Code	Binary
limit switch	Two limit switch output (Command Settings (optional))
Anti-interference	EN61000-6-2
Launch interference	EN61000-6-4
Circuit protection	Surge protection, Reverse polarity protection, ESD protection

Terminal assignment

CANopen+Incremental signal+Two limit switch output

Signal		GND	+Ub	CAN_0V	CAN_L	CAN_H	CAN_0V	CAN_L	CAN_H
Color		WH	BN	PUR	YE	GN	/	/	/
Terminal		0V	+Ub	3	4	5	6	7	8

Signal		A+	A-	B+	B-	Limit1	Limit2	GND2
Color		GY	PK	RD/BU	GY/PK	RD	BK	BU
Terminal		A+	A-	B+	B-	K1	K2	COM



 Shaft turning clockwise,
top-view of shaft.
a, b, c, d = $T/4 \pm T/10$

Ordering information

EXDJ X 78 B 16 B 12 12 XX S90T LF 10-30 R 2

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Shell material

Null: Aluminium alloy
Z: 316L stainless steel

② Shaft type

B: Blind hollow shaft

③ Shaft diameter

12: Φ 12mm
14: Φ 14mm
16: Φ 16mm
25.4: Φ 25.4mm

④ Resolution MT

00: Single-turn
12: 4096
14: 16384

⑤ Resolution ST

12: 4096
13: 8192
14: 16384
16: 65536

⑥ Incremental signal

Null: no increment signal

P1: 1024PPR, A+A- B+B- , Push-pull difference (HTL)
P3: 2048PPR, A+A- B+B- , Push-pull difference (HTL)

⑦ Limit switch output (Optional)

Null: no Limit switch output

LC: 2 limit values electrical Settings
LF: 2 limit value command Settings

⑧ Supply voltage

10-30: 10-30VDC

⑨ Exit position

R: Radial direction
C: Axial direction

⑩ Connection type

Figure: Cable length(m)

D¹ : Reserve two cable connectors

K: Cable connector 1 pc, Cable Gland Plug 1 pc

N: terminal box, Reserve two M16 x 1.5mm threaded holes for cable connectors

Note: Printed in bold=standard items

Notes: 1、Corner mark¹: The reserved cable connector is designed for cables with 3–8 mm outer diameter. When 8–11 mm OD cable is needed, N-type connector is optional, supplied with accessory 8816B.

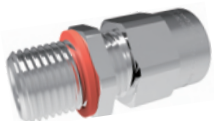
2、Lease contact us for further electrical parameter Settings and requirements.

Ordering example: EXDJ78B16B1213S90T10-30R2, Counting direction of the factory is set to clockwise increasing.

Explanation: EXDJ78B Series, Blind Hollow shaft 16mm, Binary code, Multiturn resolution 4096, Singleturn resolution 8192, no Incremental signal, CANopen, Transmission rate 125K, 10-30VDC, Radial direction 2m.

Recommended model: EXDJ78B16B1212S90T10-30R1

Accessories (Sold separately) Note: For other options, please refer to the Accessory Selection Table.



Flameproof cable gland

Model: 8816B

**Suitable for 8–11 mm OD cable; N-type connector optional, model 8816B.*



Mounting bracket

Model: 8146A

**Suitable for use with EXDJ78B12/14*



Mounting bracket

Model: 8146B

**Suitable for use with EXDJ78B16/25.4*



Signal cable

Model: 20.001

Bare wire ends, X m cable, Green, 4-core Ethernet cable, Ø6.5mm



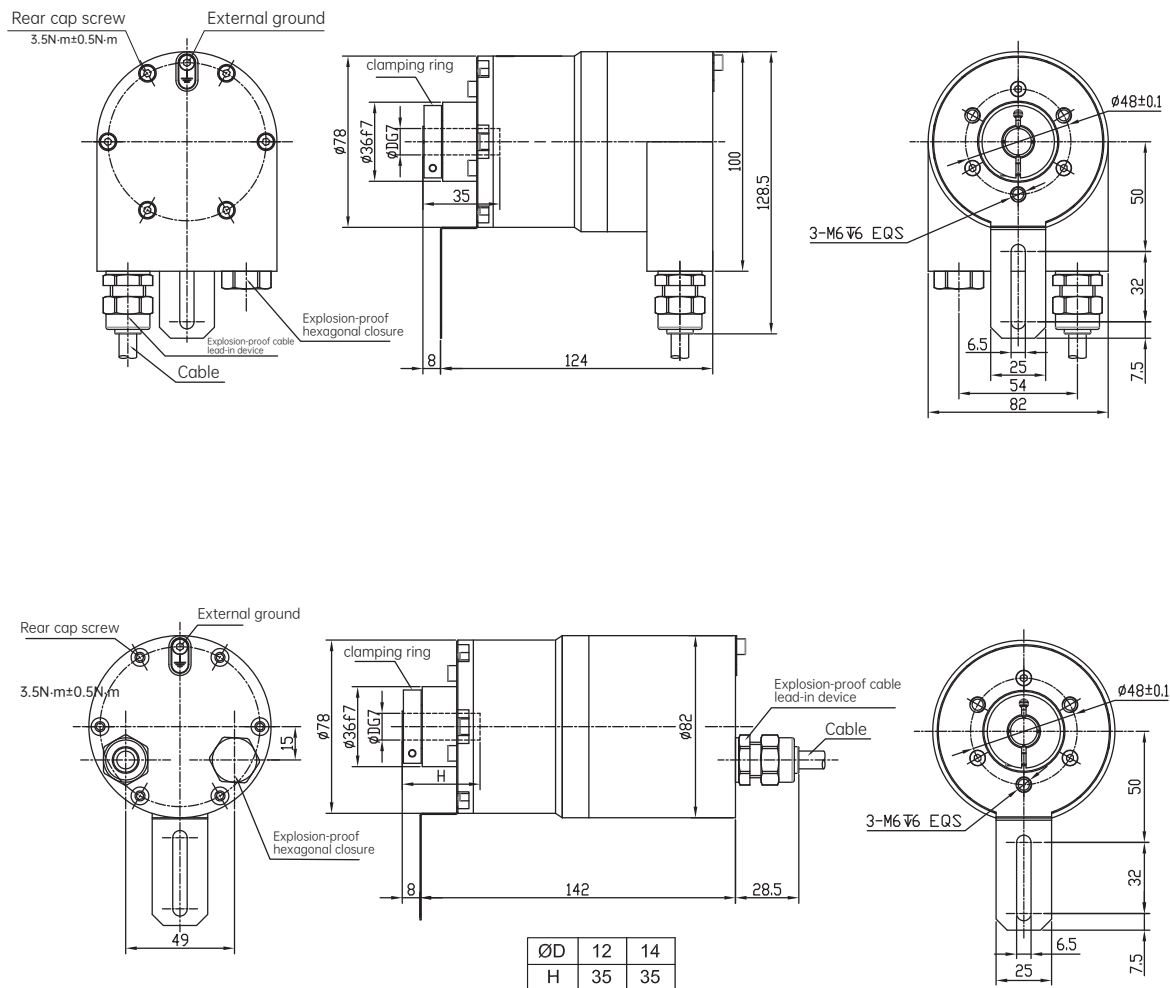
Power Cable

Model: 18.006

Bare wire ends, × m cable, RVVP, shielded cable with 5 individual cores 0.2 mm², Ø5.8mm

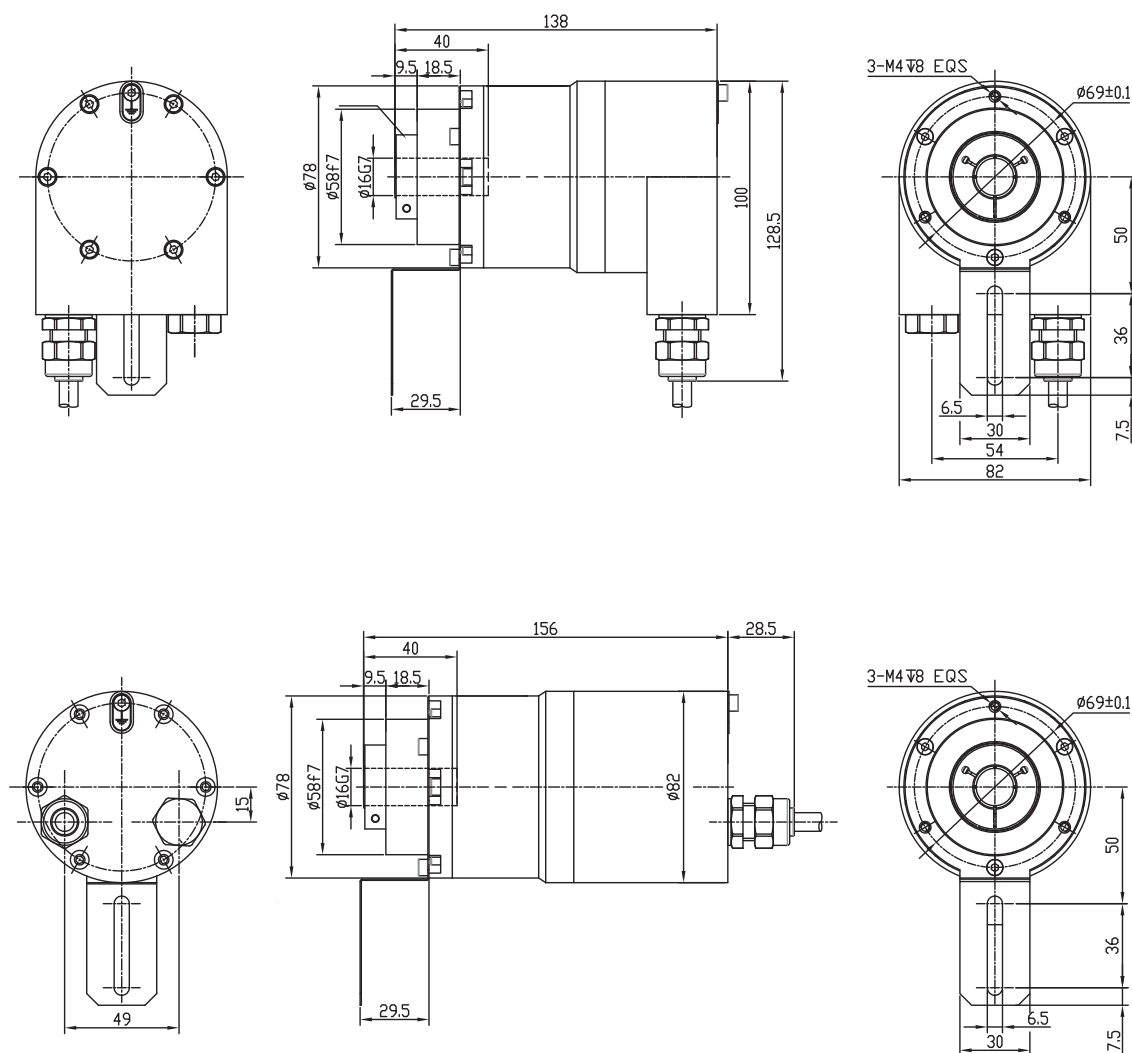
Dimensions

EXDJ(Z)78B12/14



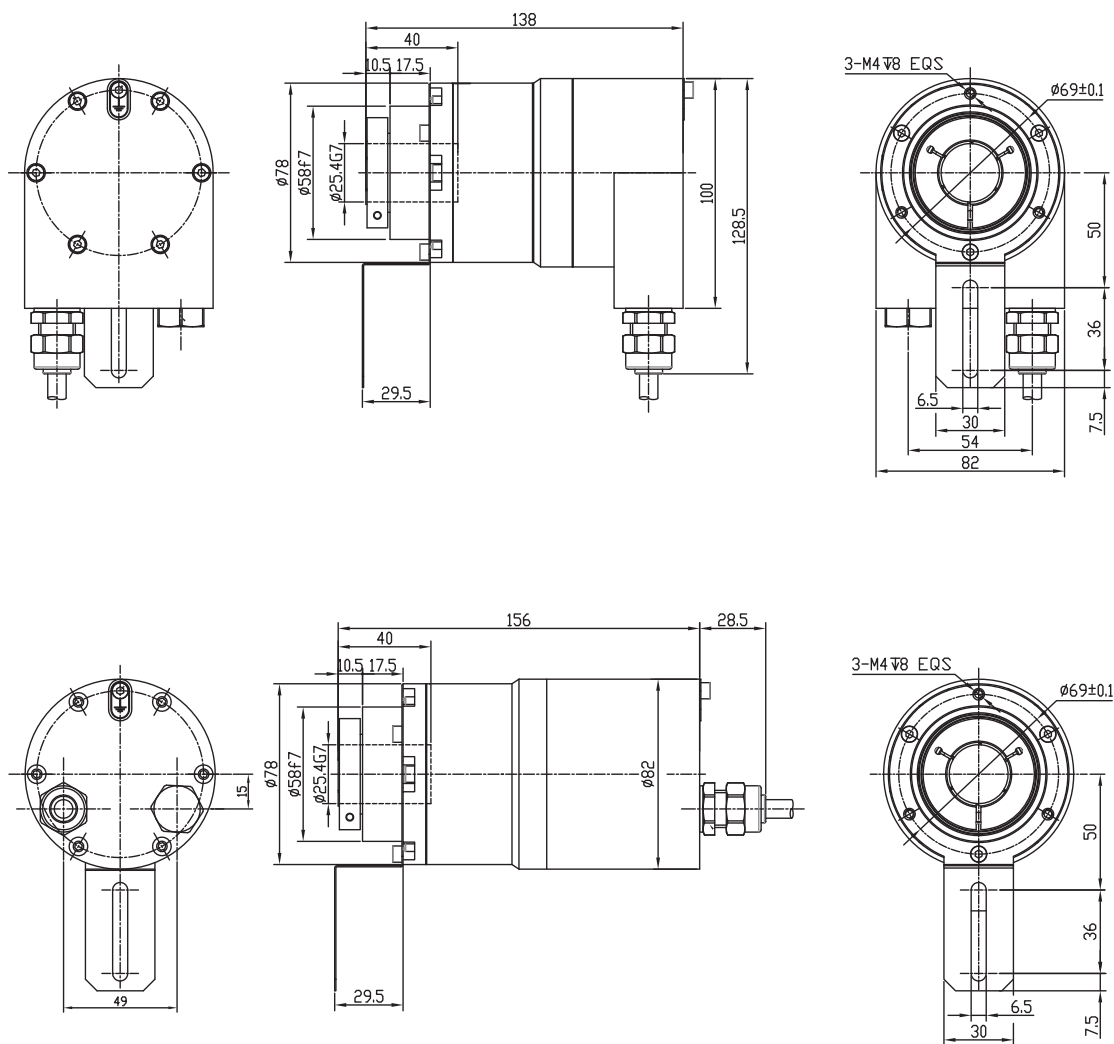
Dimensions

EXDJ(Z)78B16



Dimensions

EXDJ(Z)78B25.4



Dimensions

EXDJ78B (client)

