

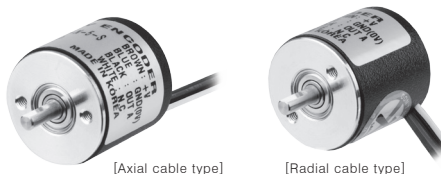
E18S Series

Diameter ø18mm Shaft type Incremental Rotary Encoder

■ Features

- Diameter ø18mm of miniature and weight 10g of ultra-light rotary encoder
- Easy installation at narrow space
- Small moment of inertia
- Power supply: 5VDC ±5%

NEW



[Axial cable type]

[Radial cable type]

■ Applications

- Suitable for office machine such as ATMs, bill counters, copy machines

⚠ Please read "Caution for your safety" in operation manual before using.



■ Ordering information

| | | | | | | | | | | | |
|----------------------------|--------------------------|----------|-----------------------|----------|--------------|----------|---|----------|--------------|----------|---|
| E18S | 2.5 | - | 200 | - | 1 | - | N | - | 5 | - | R |
| Series | Shaft diameter | | Pulse/1Revolution | | Output phase | | Output | | Power supply | | Cable |
| Diameter ø18mm, shaft type | 2 : ø2mm 2.5 : ø2.5mm | | 100, 200, 300, 400 | | 1 : A | | N: NPN open collector output V: Voltage output | | 5 : 5VDC ±5% | | R: Axial cable type S: Radial cable type |

■ Specifications

| | | | |
|--------------------------|---|---|--|
| Item | Diameter ø18mm shaft type of incremental rotary encoder | | |
| Resolution (P/R) | 100, 200, 300, 400 (not indicated resolutions are customizable) | | |
| Electrical specification | Output phase | A phase | |
| | Control output | NPN open collector output | Load current: Max. 30mA, Residual voltage: Max. 0.4VDC |
| | | Voltage output | Load current: Max. 10mA, Residual voltage: Max.0.4VDC |
| | Response time (rise/fall) | NPN open collector output | Max. 1µs |
| | | Voltage output | Max. 1µs |
| | Max. response frequency | 25kHz | |
| | Power supply | 5VDC ±5%(ripple P-P: max. 5%) | |
| | Current consumption | Max. 50mA (disconnection of the load) | |
| | Insulation resistance | Min. 100MΩ(at 500VDC megger between all terminals and case) | |
| | Dielectric strength | 500VAC 50/60Hz for 1 min.(between all terminals and case) | |
| Connection | Cable type(axial cable, radial cable) | | |
| Mechanical specification | Starting torque | Max. 10gf·cm(10×10 ⁻⁴ N·m) | |
| | Moment of inertia | Max. 0.5g·cm ² (5×10 ⁻⁸ kg·m ²) | |
| | Shaft loading | Radial : 200gf, Thrust : 200gf | |
| | Max. allowable revolution ^{*1} | 6000rpm | |
| Vibration | 1.5mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours | | |
| Shock | Max. 50G | | |
| Environment | Ambient temperature | -10 to 70°C, storage: -20 to 80°C | |
| | Ambient humidity | 35 to 85%RH, storage: 35 to 90%RH | |
| Protection | IP50(IEC standard) | | |
| Cable | ø0.98mm, 4-wire, Length: 150mm, flat ribbon cable (AWG26, Core diameter: 0.16mm, Number of cores: 7, Insulator out diameter: ø0.98mm) | | |
| Accessory | ø2mm coupling(supplied only for ø2mm shaft diameter model) | | |
| Approval | CE | | |
| Unit weight | Approx. 34.2g(approx. 12g) ^{*2} / Accessory: Approx. 1.2g | | |

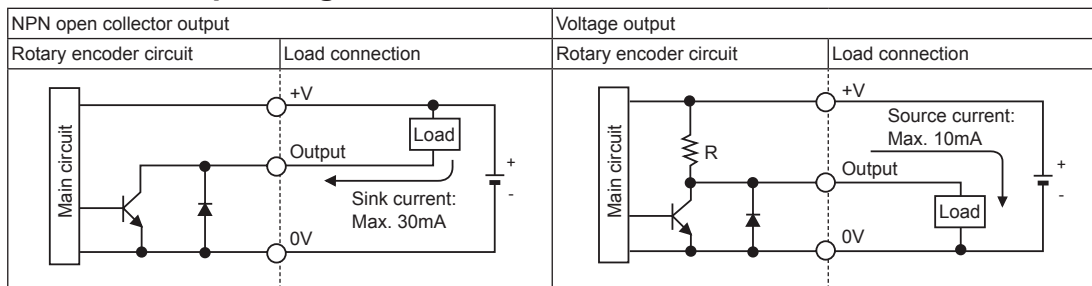
※1: Make sure that. Max response revolution should be lower than or equal to max. allowable revolution when selecting the resolution.
 [Max. response revolution(rpm)= $\frac{\text{Max. response frequency}}{\text{Resolution}} \times 60 \text{ sec}$]

※2: The weight with packaging and the weight in parentheses is only unit weight.

※Environment resistance is rated at no freezing or condensation.

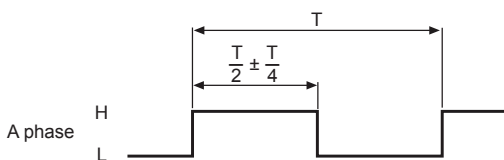
Incremental ø18mm Shaft type

Control output diagram

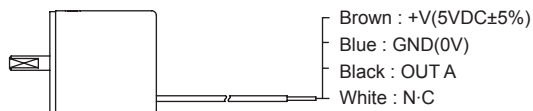


Output waveform

• NPN open collector output / Voltage output

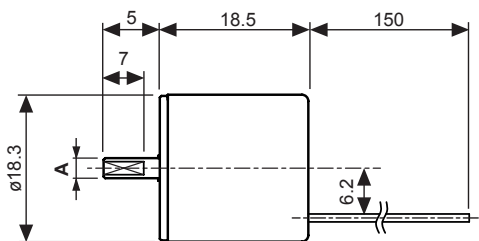
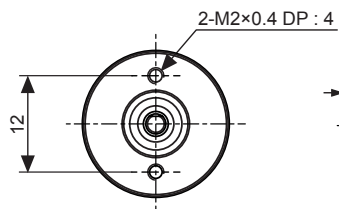


Connections



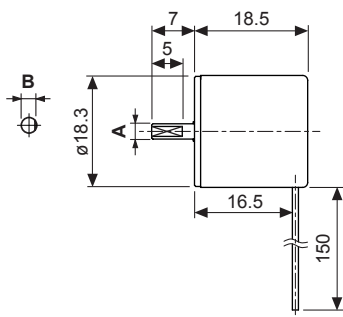
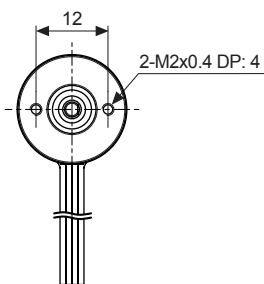
Dimensions

◎ Axial cable type



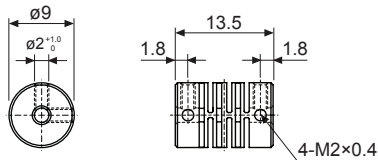
(unit : mm)

◎ Radial cable type



| Model | A | B |
|----------|---|-----|
| E18S-2 | Ø2.0 ^{-0.004} _{-0.02} | 1.7 |
| E18S-2.5 | Ø2.5 ^{-0.004} _{-0.02} | 2.2 |

• Coupling(E18S)



- Parallel misalignment: Min. 0.15mm
- Angular misalignment: Min. 2°
- End-play: Min. 0.2mm

※ For terminology of parallel, angular misalignment, and end-play, refer to the F-77 page.

(A) Photo electric sensor

(B) Fiber optic sensor

(C) Door/Area sensor

(D) Proximity sensor

(E) Pressure sensor

(F) Rotary encoder

(G) Connector/Socket

(H) Temp. controller

(I) SSR/Power controller

(J) Counter

(K) Timer

(L) Panel meter

(M) Tacho/Speed/ Pulse meter

(N) Display unit

(O) Sensor controller

(P) Switching mode power supply

(Q) Stepper motor& Driver&Controller

(R) Graphic/ Logic panel

(S) Field network device

(T) Software

(U) Other

进口光电编码器 18mm 微型编码器奥托尼克斯代理商韩国 autonics

| 类型 | | 外径(φ18)轴型增量型旋转编码器 | | |
|----------|------------------|---|--------------------------------|-------------------------------|
| 分辨率(P/R) | | 100.200.300.400(需要其他脉冲数请用户预订) | | |
| 电气参数 | 输出相 | A 相 | | |
| | 控制输出 | NPN 集电极开路输出 | 负载电流: 30mA 以下, 残留电压: 0.4VDC 以下 | |
| | | 电压输入 | 负载电流: 10mA 以下, 残留电压: 0.4VDC 以下 | |
| | 响应时间 上升/下降 | NPN 集电极开路输出 | Max. 1 μs | 测定条件: 配线长度: 1m I sink=20mA 以下 |
| | | 电压输入 | Max. 1 μs | |
| | 最大响应频率 | 25kHz | | |
| | 电源电压 | 5VDC ±5%(纹波 P-P: 5%以下) | | |
| | 消耗电流 | 50mA 以下 (无负载时) | | |
| | 绝缘阻抗 | 100MΩ 以上(500VDC 为基准)(所有端子和外壳之间) | | |
| | 耐电压 | 500VAC 50/60Hz 1 分钟 .(所有端子和外壳之间) | | |
| 连接方式 | 配线引出型(轴向电缆、径向电缆) | | | |
| 机械参数 | 启动力矩 | Max. 10gf·cm(10x10 ⁻⁴ N·m) | | |
| | 惯性力矩 | Max. 0.5g·cm ² (5x10 ⁻⁸ kg·m ²) | | |
| | 轴负重 | 径向:200 gf,推力:200 gf | | |
| | 最大允许转速※1 | 6000rpm | | |
| 耐振动 | | 振幅 1.5mm 频率 10~55Hz(周期 1 分钟) X Y Z 各方向 2 小时 | | |
| 耐冲击 | | Max. 50G | | |
| 环境 | 环境温度 | 使用温度-10~70℃ 存储温度:-20~80℃ | | |
| | 环境湿度 | 35~85%RH,存储 35~90%RH | | |
| 防护等级 | | IP50(IEC 标准) | | |
| 配线 | | ø0.98mm, 4P, 长度: 150mm, 屏蔽线缆 | | |
| | | (AWG26, 线芯直径: ø0.16mm, 线芯数: 7,绝缘皮外径: ø0.98mm) | | |
| 附件 | | ø2mm 连接器(仅适用于 ø2mm 轴径的型号) | | |
| 认证 | | CE | | |
| 重量 | | ø2mm 轴径的型号: 约 35.4g(约 12g) | | |
| | | ø2.5mm 轴径的型号: 约 34.2g(约 12g) | | |

※1: 当选择响应速度时, 确保最大响应速度应该低于或者等于最大允许转速。

[最大响应速度(rpm)= 最大响应频率/分辨率 x 60 秒)

※2:重量包含包装, 括号内的重量仅指设备本身。

※环境特性指未结冰、未结露的状态。

Autonics 旋转编码器型号:

E18S2-100-1-N-5-R; E18S2-200-1-N-5-R; E18S2-300-1-N-5-R; E18S2-400-1-N-5-R;
E18S2-360-1-N-5-R; E18S2-600-1-N-5-R; E18S2-1024-1-N-5-R;

E18S2-100-1-N-5-S; E18S2-200-1-N-5-S; E18S2-300-1-N-5-S; E18S2-400-1-N-5-S;
E18S2-360-1-N-5-S; E18S2-600-1-N-5-S; E18S2-1024-1-N-5-S;

E18S2-100-1-V-5-R; E18S2-200-1-V-5-R; E18S2-300-1-V-5-R; E18S2-400-1-V-5-R;
E18S2-360-1-V-5-R; E18S2-600-1-V-5-R; E18S2-1024-1-V-5-R;

E18S2-100-1-V-5-S; E18S2-200-1-V-5-S; E18S2-300-1-V-5-S; E18S2-400-1-V-5-S;
E18S2-360-1-V-5-S; E18S2-600-1-V-5-S; E18S2-1024-1-V-5-S;

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