RoHS
COMPLIANCE

Feature

1. Compact and highly accurate sliding contact type encoder
2. 0.5mm-travel push switch with compliance to 5.9mm height
3. Incremental type

F-11mm rotary encoder

Electrical characteristics

- Rated Power.....DC 5V 10mA(1mA Min)
- Fluttering.....T1,t3≤ 3ms
- Insulation Resistance.....More than100mΩ at 250v 1m A
- Withstand voltage.....1 minute at AC 300V 1mA
- Sliding Nosie(Bounce).....T2≤2ms
- Phase Difference.....△T ≥ 0.08T

Mechanical characteristics

- Rotation Torque of Detent.....50 ~ 180gf.cm(at 5~ 35° C)
- Total Rotational Angle.....Continuous
- Number and Position of Detent.....15 Detents (Angle: 24° ± 3°)
  20 Detents (Angle: 18°±3°)
- Push-Pull Strength of shaft..... 8.0kgf Min for 10s
- Bushing & nut tight strength..... 10.0Kgf.cm Min
- Rotational Life..... ... 15,000 Cycles Min.

Durability

- Rotational Life.....15,000 Cycles Min.

Switch characteristics

- Contact resistance .....100mΩ Max
- Maximum ratings. ..... DC 5V 10mA(1mA Min)
- Insulation resistance..... More than 100MΩ at DC 250V 1mA
- Withstand voltage..... 1 minute at AC 300V 1mA
- Travel..... 0.5+0.4/-0.3mm
- Operating Force.....550 ± 300gf

Durability

- Rotational Life.....15,000 Cycles Min.

11mm Encoder output wave diagram

(15 Pulse with 30 detent)

(20 Pulse with 20 detent)

F-11E Series

Rotary Encoder

F-11EN□M H□P M

Horizontal Type, Single Unit,
P.C.B. Terminal

F-11EN□M H□P B

Horizontal Type, Single Unit,
P.C.B. Terminal

F-11ES□M H□P M

Horizontal Type, Single Unit With
Switch P.C.B. Terminal

F-11ES□M H□P B

Horizontal Type, Single Unit With
Switch P.C.B. Terminal

F-11E Series

Rotary Encoder

F-11EN□M V□P M

Vertical Type, Single Unit,
P.C.B. Terminal

F-11EN□M V□P B

Vertical Type, Single Unit,
P.C.B. Terminal

F-11ES□M V□P M

Vertical Type, Single Unit,With
Switch P.C.B. Terminal

F-11ES□M V□P B

Vertical Type, Single Unit,With
Switch P.C.B. Terminal

Part number system of encoder

F- 11 E N □ H □ M +C L□ F*□

- F- : Favor union
- 11 : Outline dimension (11=11mm)
- E : Encoder
- N : N:No Switch S:With Switch
- □ : Length of bushing 5=5.0mm; 7=7.0mm
- H : Operating direction H:Horizontal, V:Vertical
- □ : Number of pulse 15=15pulse,20=20pulse
- M : M:With whorl bushing(M7.0) B:No whorl bushing(Φ7.0)
- +C : With detent
- L□ : Length of shaft
- F*□ : Type of shaft