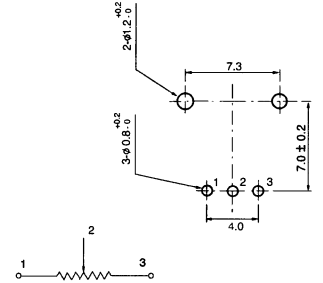
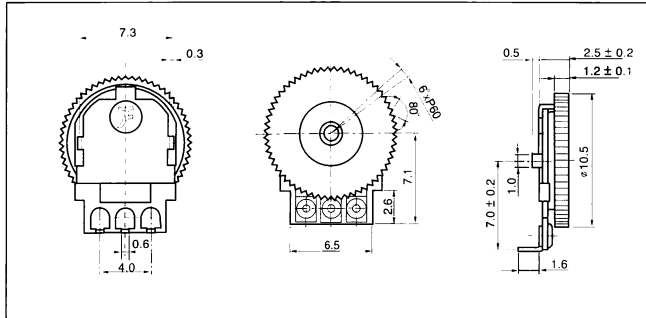


F-06 Series

Super Thin Rotary Potentiometer

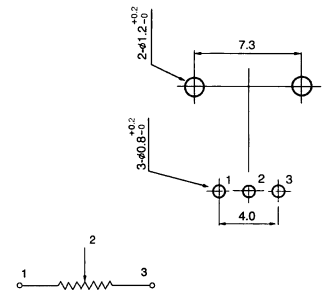
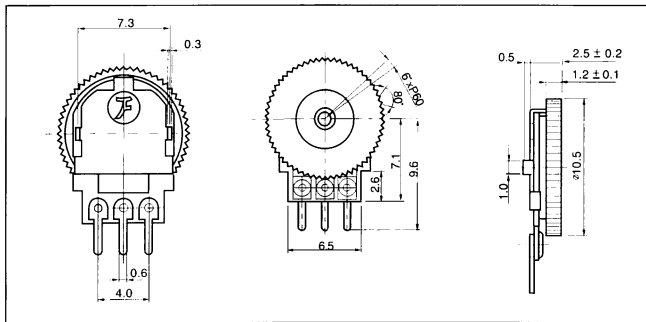
F-06N

Horizontal Type, Single Unit



F-06NP

Vertical Type, Single Unit



SPECIFICATIONS

Electrical Characteristics

- *Total Resistance.....500Ω~500KΩ
- *Total Resistance Tolerance.....±20%
- *Resistance Taper.....A,B,C,D, See P14
- *Max.Operation Voltage.....DC10V
- *Sliding Noise.....Less than 100mV
- *Insulation Resistance.....Over 5 MΩ at DC 25V
- *Withstand Voltage.....10 Sec at AC 25V
- *Residual Resistance.....Term.1-2:Less Than 20Ω
Term.2-3:Less Than 20Ω

Mechanical Characteristics

- *Total Rotational Angle.....270°±10°
- *Rotational Torque.....10 ~ 100 gf.cm
- *Rotational Stopper Strength.....0.7 Kgf.cm Min.
- *Push-Pull Strength.....Push:0.5kgf Min
Pull:0.2kgf Min

Durability

- *Rotational Life.....5,000 Cycles

MICRO Series

Standard Type Micro Potentiometer

SPECIFICATIONS

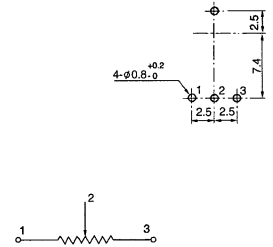
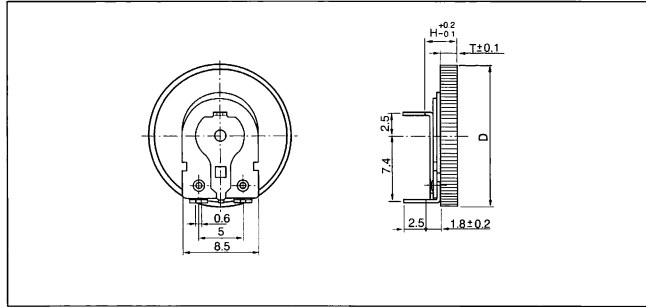
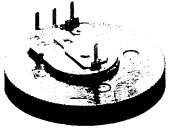
Electrical Characteristics	<ul style="list-style-type: none">• Total Resistance.....F-092N:5KΩ~100KΩ ,Others : 5KΩ~250KΩ• Total Resistance Tolerance.....F-092N:\pm20%,Others:\pm30%• Resistance Taper..... A,B,C,D, See P14• Max.Operation Voltage.....F-092N:AC/DC 10V,Others:AC/DC 50V• Rated Power F-092N.....Linear Taper B:0.05W, Other Tapers:0.025W F-08G.....Linear Taper B:0.03W, Other Tapers:0.02W F-011G-1.....Linear Taper B:0.05W, Other Tapers:0.03W• Sliding Noise..... Less than 100mV• Insulation Resistance.....F-092N:More than 100MΩ at DC 100V Others:More than 100MΩ at DC 500V• Withstand Voltage.....1 minute at AC 100 V• Residual Resistance F-092N..... Term. 1~2:Less than 20Ω Term.2~3:Less than 20Ω F-08G..... Term. 1~2:Less than 30Ω Term.2~3:Less than 30Ω F-011G-1...Term. 1~2:Less than 20Ω Term.2~3:Less than 30Ω Gang Error(Dual Unit).....-40dB~0dB \pm 3dB
Mechanical Characteristics	<ul style="list-style-type: none">• Total Rotational Angle..... F-08G:200$^{\circ}$$\pm10^{\circ}$ Others:230$^{\circ}$$\pm10^{\circ}$• Rotational Torque.....F-092N: 10 gf . cm ~ 200 gf . cm Others : 10 gf.cm ~ 100 gf . cm• Rotational Stopper Strength.....F-08G 0.8Kgf . cm Min Others : 1.0 Kgf . cm Min.• Push-Pull Strength.....F-092N:3.0Kgf Min. Others:1.0Kgf Min.
Durability	<ul style="list-style-type: none">• Rotational Life.....10,000 Cycles

F-09 Series

Super Thin Rotary Potentiometer

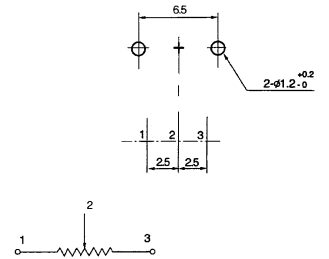
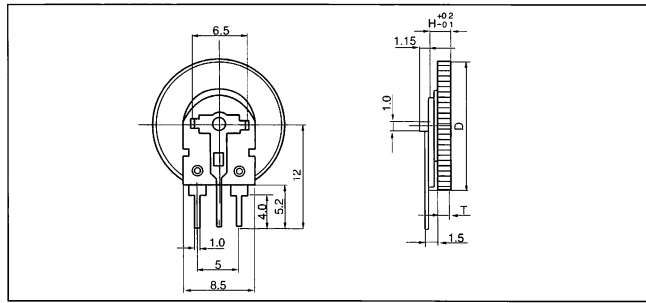
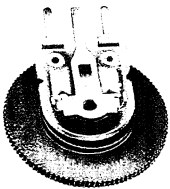
F-09N

Horizontal Type, Single Unit



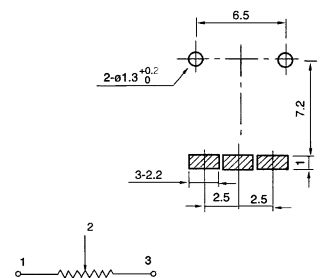
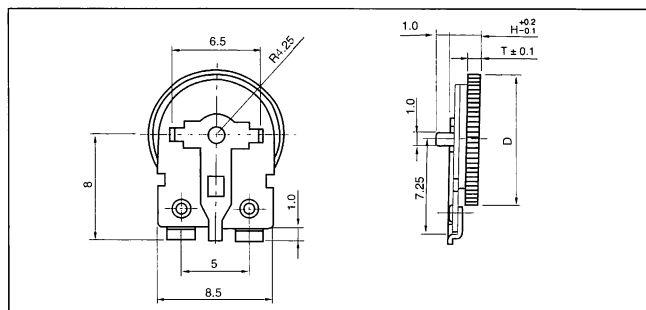
F-09NP

Vertical Type, Single Unit



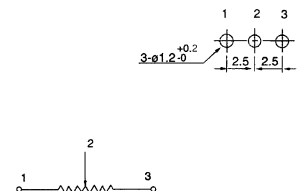
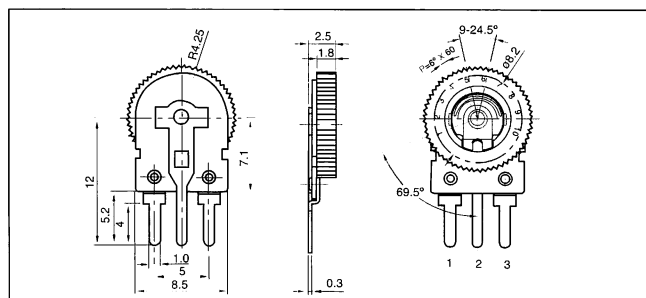
F-09NP-2

Horizontal Type, Single Unit



F-09NP-3

Vertical Type, Single Unit



F-09 Series

Super Thin Rotary Potentiometer

SPECIFICATIONS

Electrical Characteristics

- Total Resistance.....500Ω~500KΩ
- Total Resistance Tolerance.....±20%
- Resistance Taper.....A,B,C,D, See P14
- Rated Power.....0.05W
- Sliding Noise.....Less than 100 mV
- Insulation Resistance.....More than 100 MΩ at DC 100 V
- Withstand Voltage.....1 minute at AC 100 V
- Residual Resistance.....Term.1~2:Less than 20Ω
Term.2~3:Less than 20Ω

Mechanical Characteristics

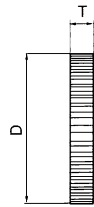
- Total Rotational Angle.....220° ± 5°
- Rotational Torque.....10gf.cm~150 gf.cm
- Rotational Stopper Strength.....0.8 Kgf.cm Min.
- Push-Pull Strength.....Push:0.5Kgf Min
Pull:0.2Kgf Min

Durability

- Rotational Life.....10,000 Cycles

KNOB ILLUSTRATION

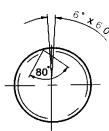
Standard Dimensions of Knob for F-09 Series
(Customer designs are welcomed)



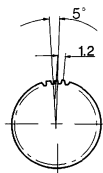
Type of Knob

(Unit: mm)

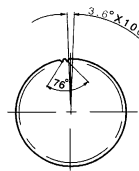
Outside Diameter (D)	∅10	∅12	∅13.6	∅15	∅16	∅20	∅20
Thickness (T)	0.9/1.8	1.9	1.9	0.9	1.9	3.0	1.8



∅ 10



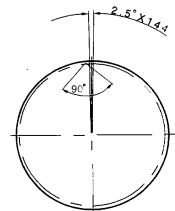
∅ 12



∅ 15



∅ 16



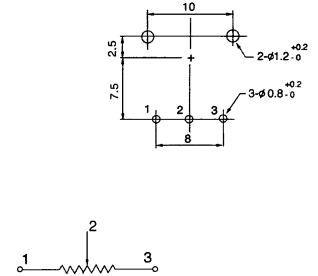
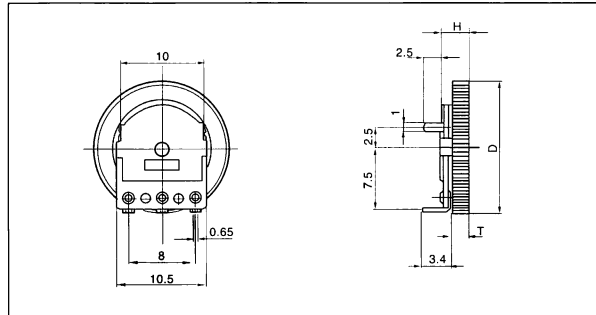
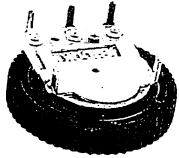
∅ 20

F-1001 Series

Super Thin Rotary Potentiometer

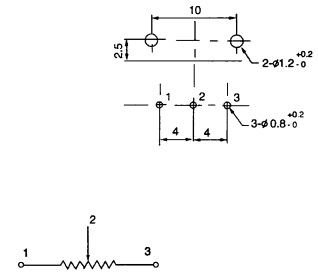
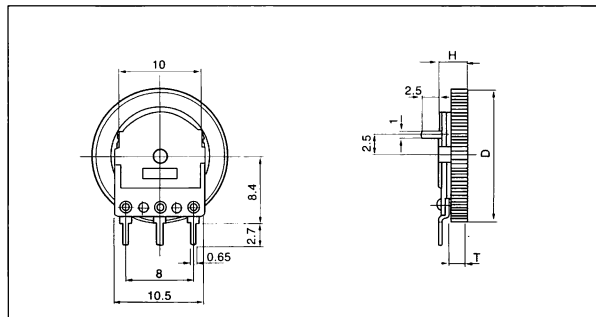
F-1001N

Horizontal Type, Single Unit



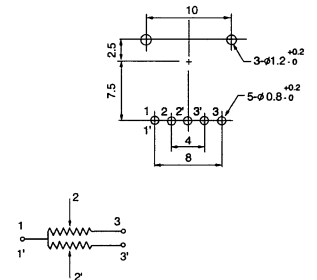
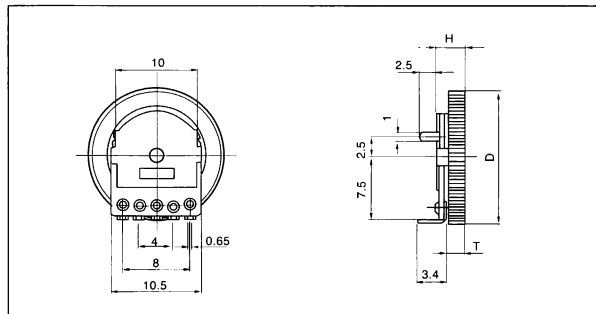
F-1001NP

Vertical Type, Single Unit



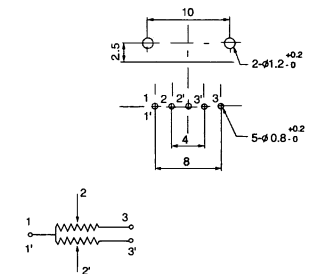
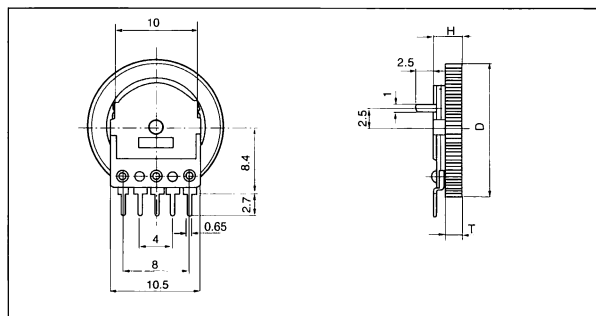
F-1001G

Horizontal Type, Dual Unit



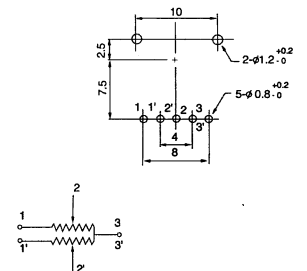
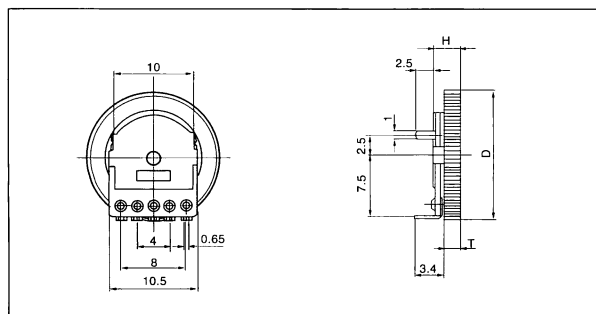
F-1001GP

Vertical Type, Dual Unit



F-1001G-3

Horizontal Type, Dual Unit

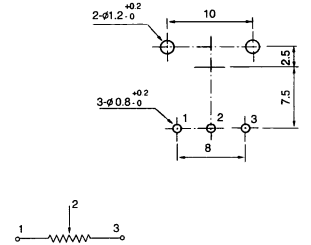
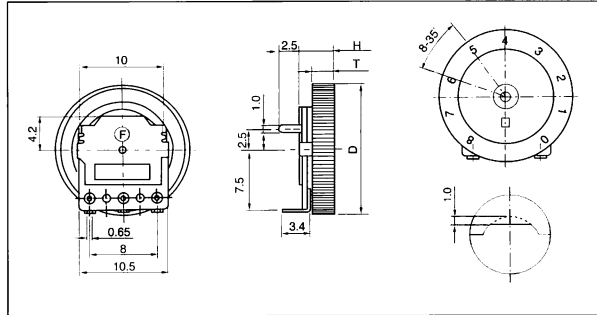
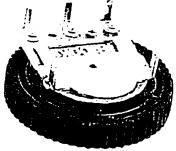


F-1001 Series

Super Thin Rotary Potentiometer

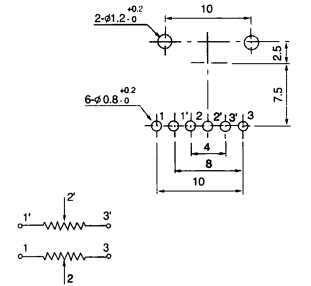
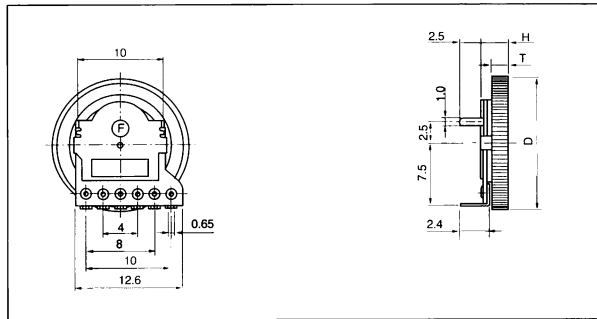
F-1001N-3 (R)

Horizontal Type, Single Unit



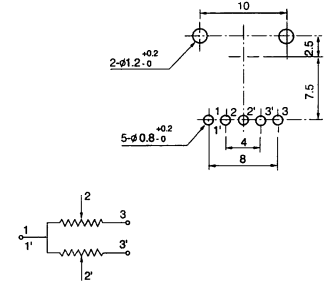
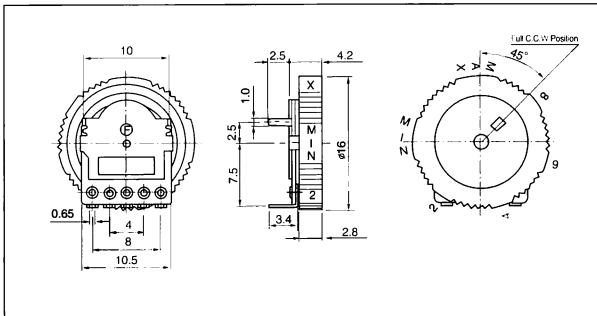
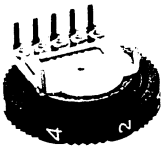
F-1001G-11

Horizontal Type, Single Unit



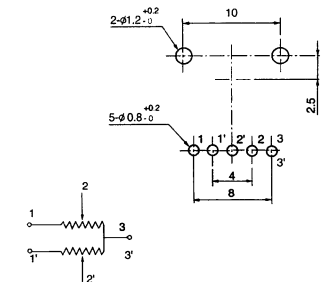
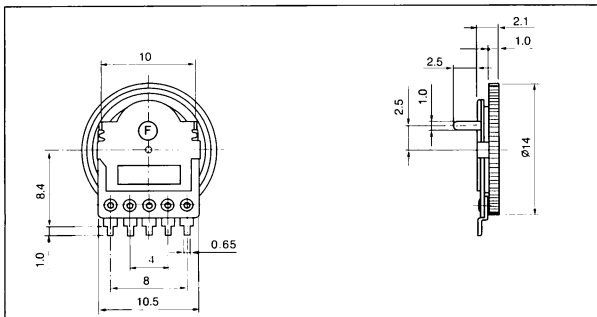
F-1001G-2.8x16-NO-2

Horizontal Type, Dual Unit



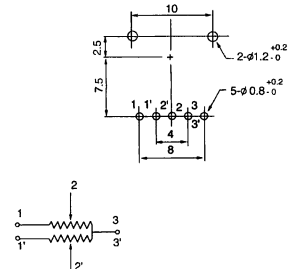
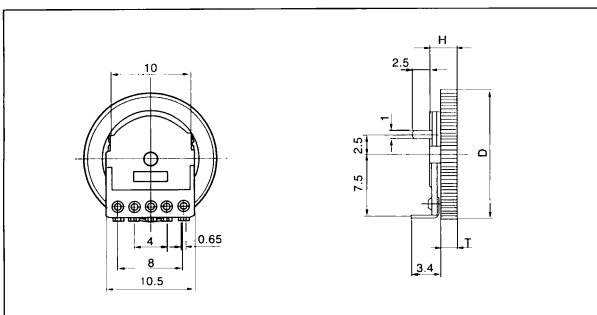
F-1001GP-5

Horizontal Type, Dual Unit



F-1001G-3/W10

Horizontal Type, Dual Unit



F-1001 Series

Super Thin Rotary Potentiometer

SPECIFICATIONS

Electrical Characteristics

- Total Resistance.....500Ω~1MΩ
- Total Resistance Tolerance.....±20%
- Resistance Taper.....A,B,C,D See P14
- Max. Operation Voltage.....AC 50V,DC 12V
- Rated Power.....0.05W
- Sliding Noise.....Less than 100 mV
- Insulation Resistance.....More than 100 MΩ at DC 100 V
- Withstand Voltage.....1 minute at AC 100 V
- Residual Resistance.....Term.1~2:Less than 20Ω
Term.2~3:Less than 20Ω
- Gang Error(Dual Unit).....-40 dB ~ 0 dB ± 3dB

Mechanical Characteristics

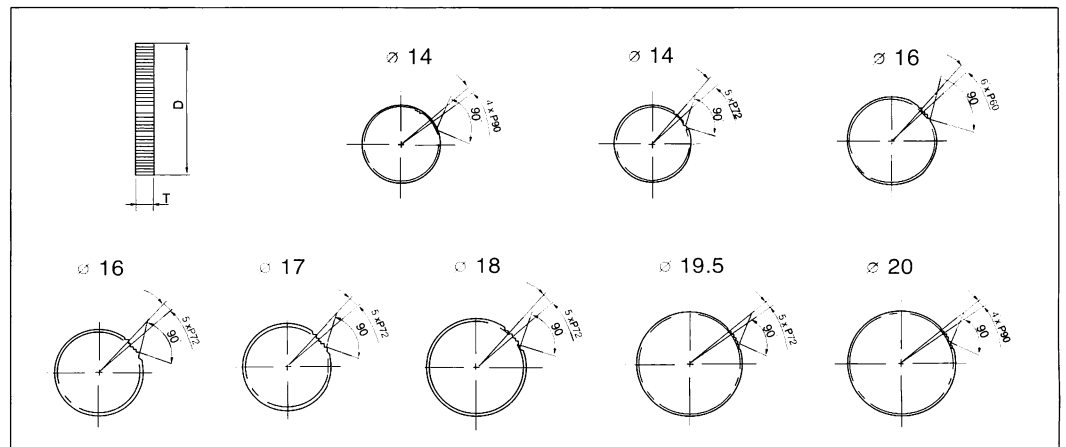
- Total Rotational Angle.....270° ± 5°
- Rotational Torque.....10gf.cm~150 gf.cm
- Rotational Stopper Strength.....0.8 Kgf.cm Min.
- Push-Pull Strength.....Push:0.5Kgf Min
Pull:0.2Kgf Min

Durability

- Rotational Life.....10,000 Cycles

KNOB ILLUSTRATION

Standard Dimensions of Knob for F-1001 Series.
(Customer designs are welcomed)



Type of Knob (Unit:mm)

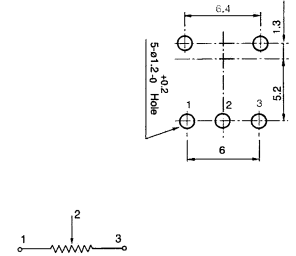
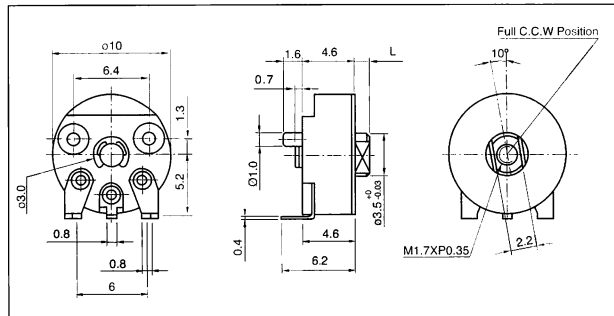
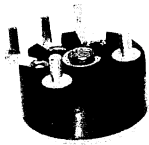
Outside Diameter(D)	ø14	ø14	ø14	ø16	ø16	ø16	ø16	ø17	ø18	ø18	ø18	ø19.5	ø20	ø20	ø20	ø22
Thickness(T)	1.0	2.0	2.8	1.0	2.0	2.65	2.8	2.8	1.0	2.0	2.8	2.8	2.0	2.2	2.8	2.8
Height(H)	2.4	3.4	4.2	2.4	3.4	4.0	4.2	4.2	2.4	3.4	4.2	4.2	3.4	4.2	4.2	4.2

F-10 Series (∅ 10.0mm)

Molded Case Rotary Potentiometer

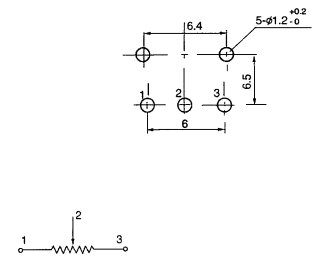
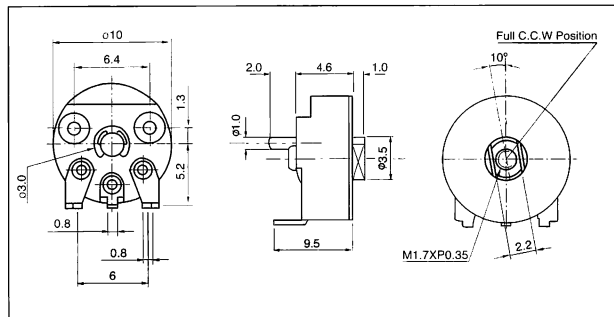
F-10NP-27

Horizontal Type, Single Unit



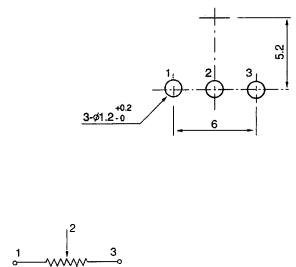
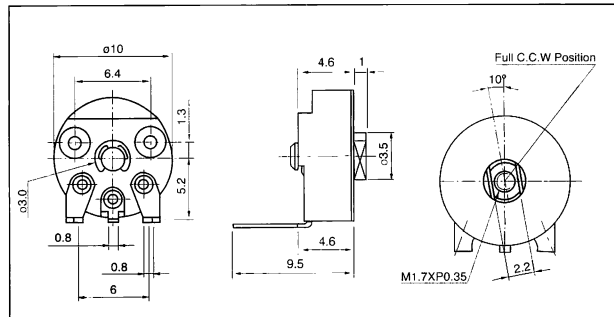
F-10NP-16

Horizontal Type, Single Unit



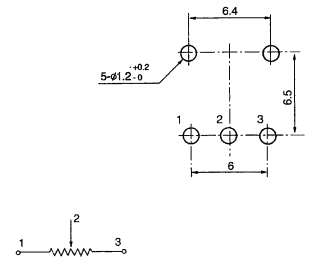
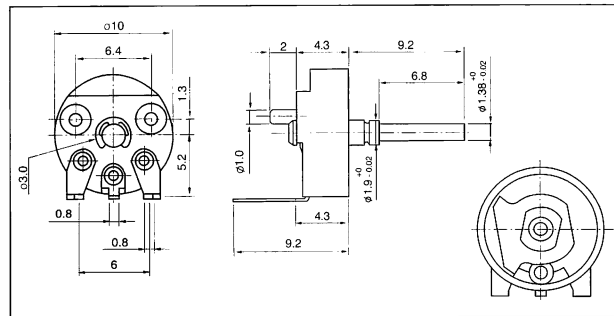
F-10NP-22

Horizontal Type, Single Unit



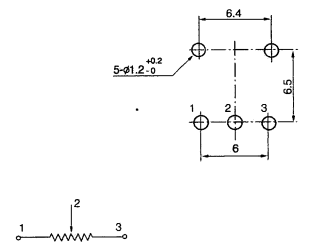
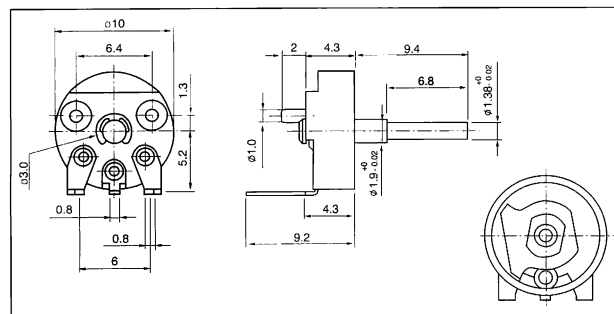
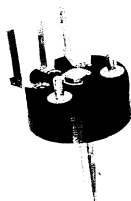
F-10NP-21

Horizontal Type, Single Unit



F-10NP-19

Horizontal Type, Single Unit



F-10 Series (∅ 10.0mm)

Molded Case Rotary Potentiometer

SPECIFICATIONS

Electrical Characteristics

- Total Resistance.....1KΩ~1MΩ
- Total Resistance Tolerance.....±20%
- Resistance Taper.....A,B,C,D, See P14
- Max. Operation Voltage.....Linear Taper B : AC 100V
Other Tapers : AC 70V
- Rated Power.....Linear Taper B : 0.07 W
Other Tapers : 0.03W
- Sliding Noise.....Less than 100 mV
- Insulation Resistance.....More than 100 MΩ at DC 100 V
- Withstand Voltage.....1 minute at AC 250 V
- Residual Resistance.....Term.1~2:Less than 20Ω
Term.2~3:Less than 20Ω

Mechanical Characteristics

- Total Rotational Angle.....200°± 5°
- Rotational Torque.....5gf.cm~150 gf.cm
- Rotational Stopper Strength.....2.0 Kgf.cm Min.
- Push-Pull Strength.....Push:1.0Kgf Min

Durability

- Rotational Life.....10,000 Cycles

SHAFT ILLUSTRATION

Standard Dimensions of Shaft for F-10 Series.
(Customer designs are welcomed)

No Tap Type

L	1.0 ~ 5.0
A	2.2 ⁺⁰ _{-0.1}
D	∅3.5

Tap Type

L	1.0 ~ 5.0
A	2.2 ⁺⁰ _{-0.1}
D	∅3.5

Slotted Type

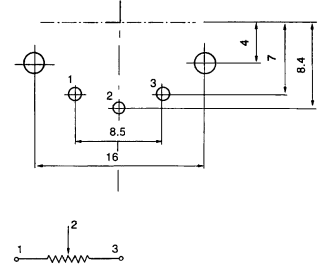
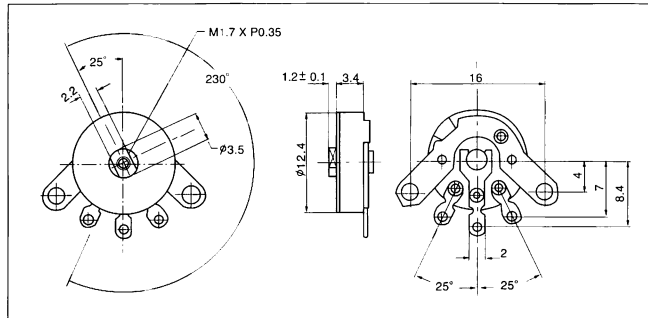
L	3.0 ~ 5.0
A	2.2 ⁺⁰ _{-0.1}
D	∅3.5

F-12 Series (∅ 12.0mm)

Molded Case Rotary Potentiometer

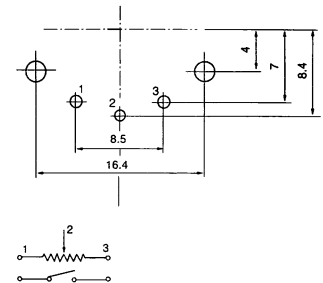
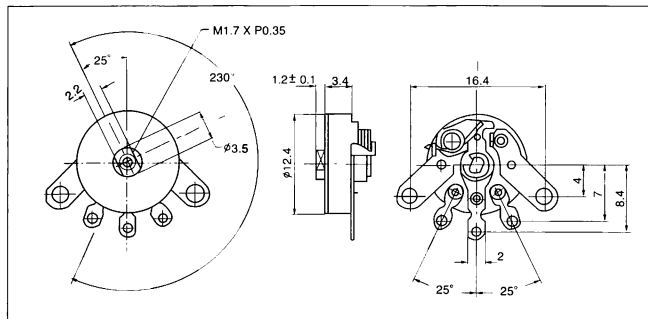
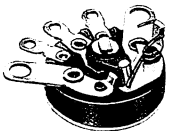
F-12N

Standard Type, Single Unit



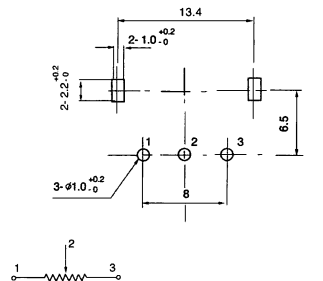
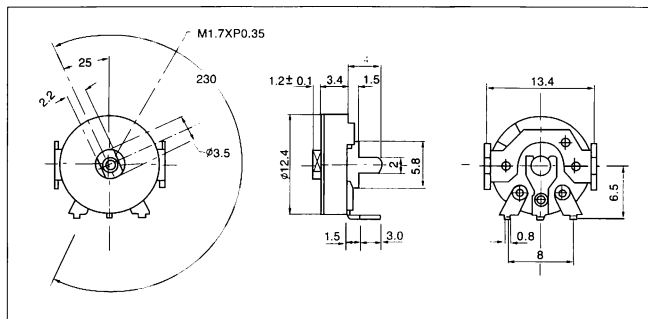
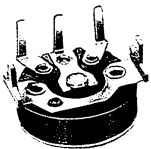
F-12S

Standard Type with Switch, Single Unit



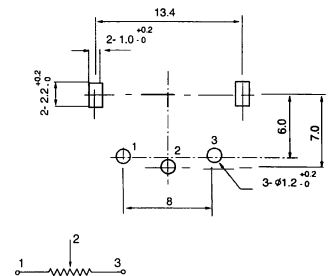
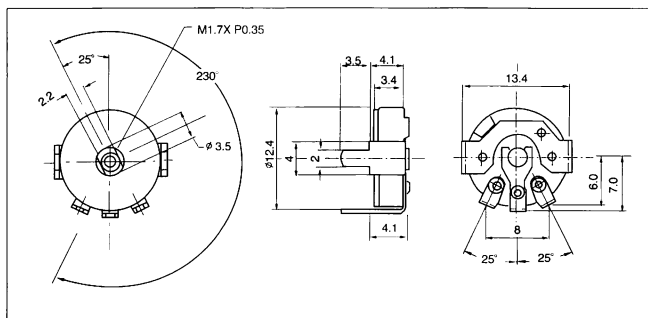
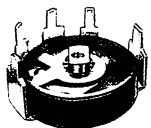
F-12NPT

Horizontal Type, Single Unit



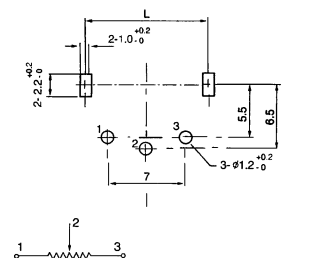
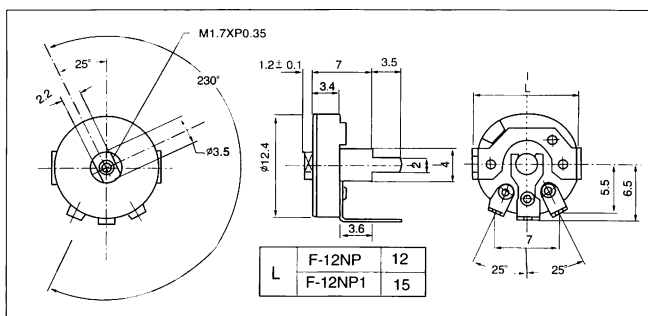
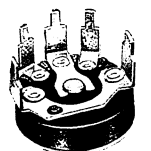
F-12NPD

Reverse Type, single Unit



F-12NP

Horizontal Type, single Unit



F-12 Series (∅ 12.0mm)

Molded Case Rotary Potentiometer

SPECIFICATIONS

Electrical Characteristics

- Total Resistance..... 100Ω~1MΩ
- Total Resistance Tolerance..... ±20%
- Resistance Taper..... A,B,C,D, See P14
- Max. Operation Voltage..... Linear Taper B: AC 150V
Other Tapers : AC 100V
- Rated Power..... Linear Taper B : 0.1W
Other Tapers : 0.05W
- Sliding Noise..... Less than 100 mV
- Insulation Resistance..... More than 50 MΩ at DC 500 V
- Withstand Voltage..... 1 minute at AC 500 V
- Residual Resistance..... Term.1~2: Less than 20Ω
Term.2~3: Less than 20Ω
- Switch Circuit..... S.P.S.T.
- Switch Contact Resistance..... Less than 50 mΩ
- Switch Rated Power..... 1.0 A at AC/DC 12V

Mechanical Characteristics

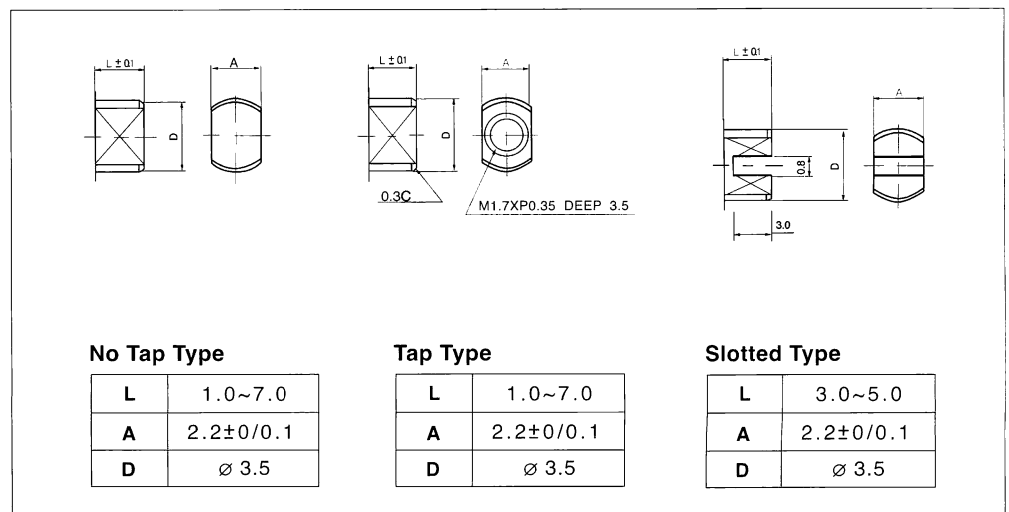
- Total Rotational Angle..... $230^{\circ} \pm 10^{\circ}$
- Rotational Torque..... 20gf.cm~150 gf.cm
- Rotational Stopper Strength..... 2.0 Kgf.cm Min
- Push-Pull Strength..... Push: 1.0Kgf Min
- Switch Rotational Angle..... $35^{\circ} \pm 10^{\circ}$
- Switch Action..... 100gf.cm ~ 350 gf.cm

Durability

- Rotational Life..... 10,000 Cycles

SHAFT ILLUSTRATION

Standard Dimensions of Shaft for F-12 Series.
(Customer designs are welcomed)

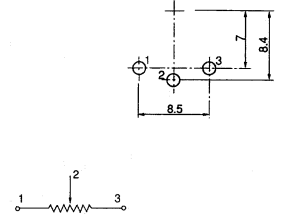
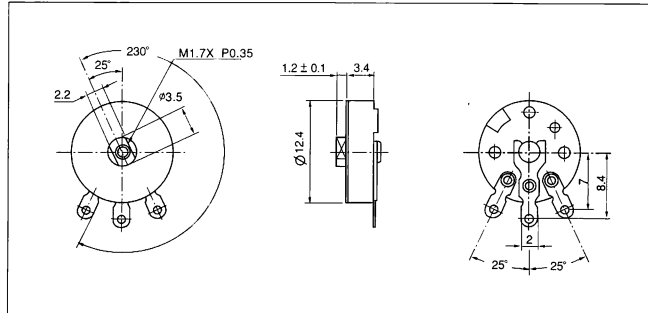


F-12 Series (Ø 12.0mm)

Molded Case Rotary Potentiometer

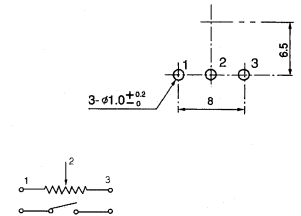
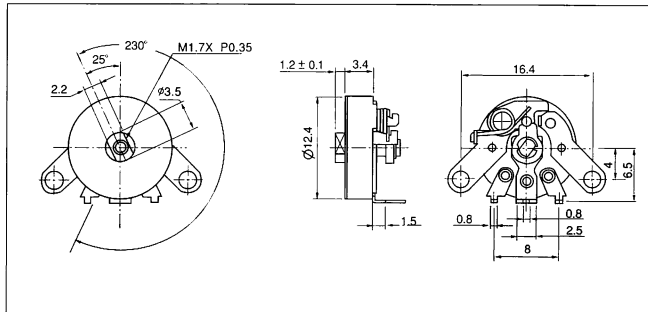
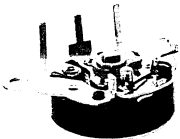
F-12N1

Horizontal Type ,Single Unit



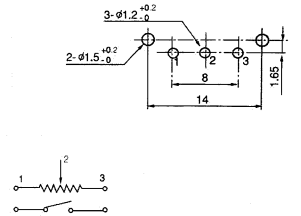
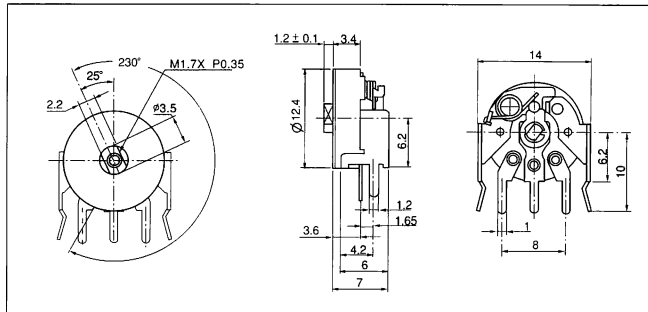
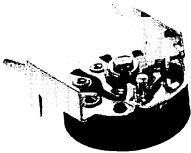
F-12S7

Horizontal Type with Switch,
Single Unit



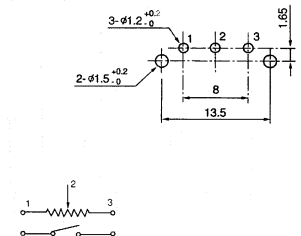
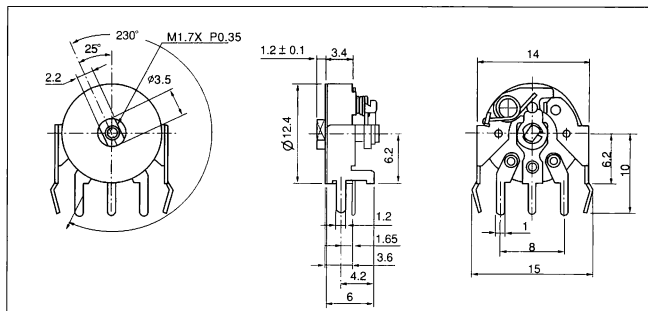
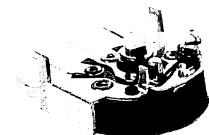
F-12SH3

Vertical Type with Switch,
Single Unit



F-12SH2

Vertical Type with Switch,
Single Unit

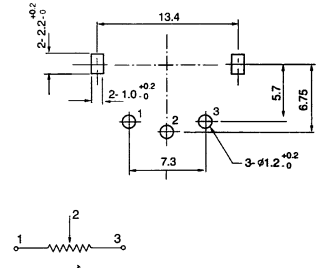
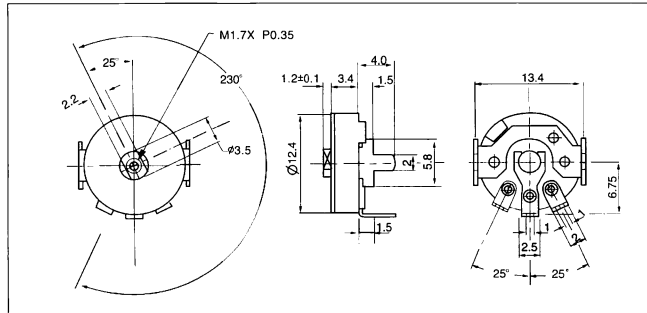
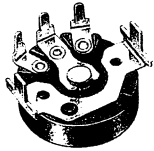


F-12 Series (∅ 12.0mm)

Molded Case Rotary Potentiometer

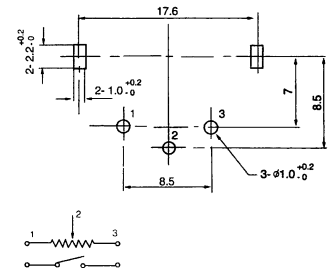
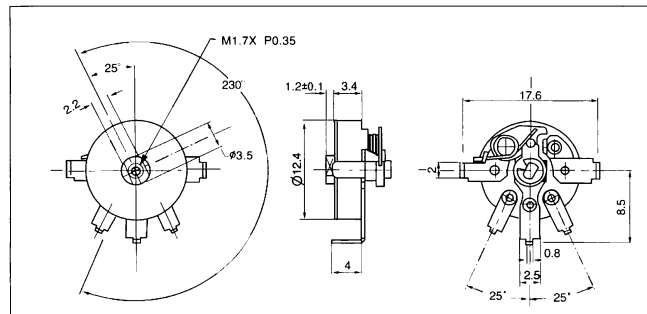
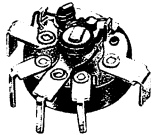
F-12NPT1

Horizontal Type ,Single Unit



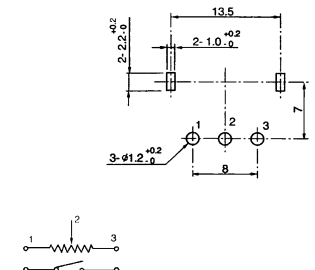
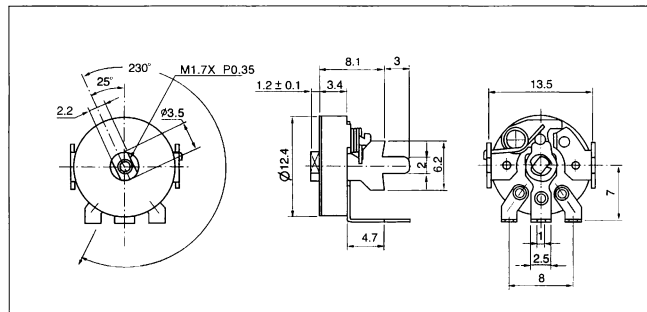
F-12SPD

Horizontal Type with Switch,
Single Unit



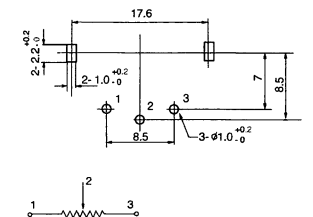
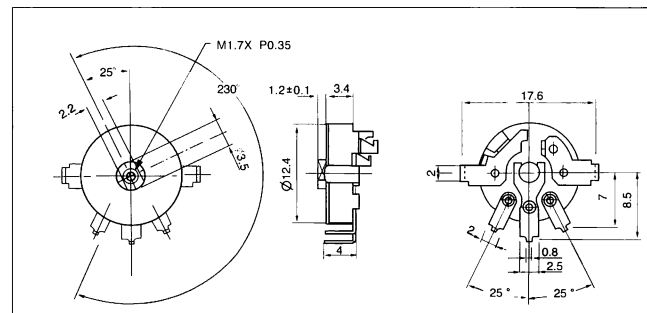
F-12SP2

Horizontal Type with Switch ,
Single Unit



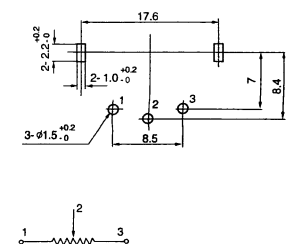
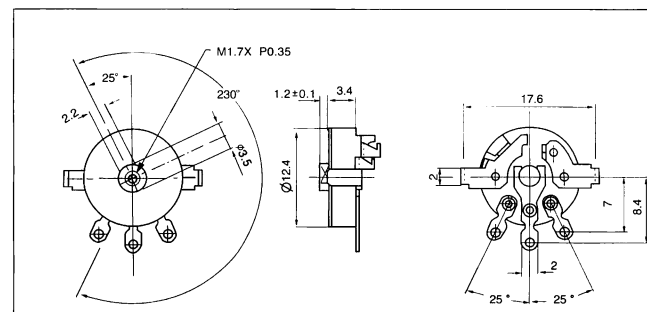
F-12SNPD

Reverse Type ,Single Unit



F-12SNPD1

Horizontal Type ,Single Unit

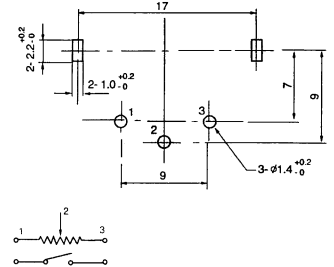
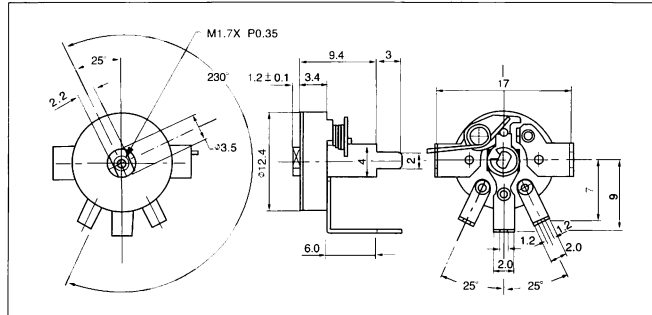
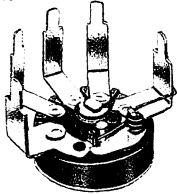


F-12 Series (Ø 12.0mm)

Molded Case Rotary Potentiometer

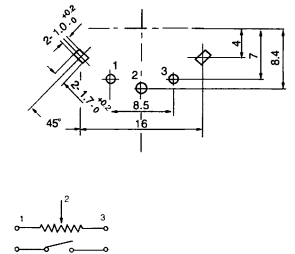
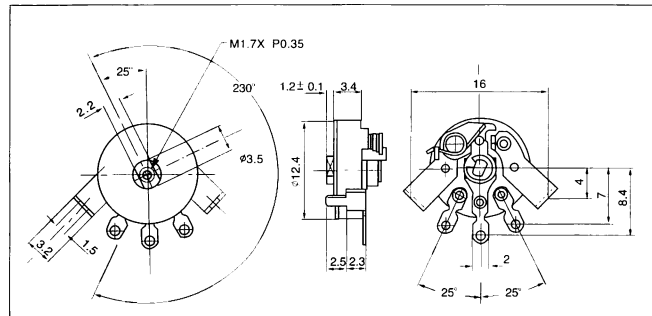
F-12SG

Horizontal Type with Switch,
Single Unit



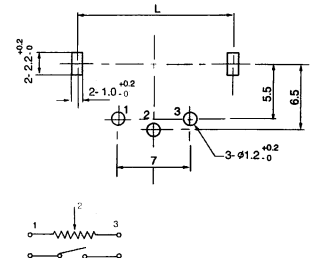
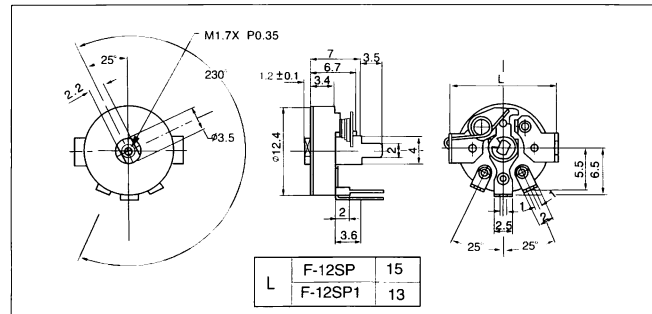
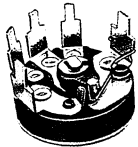
F-12SS

Horizontal Type with Switch,
Single Unit



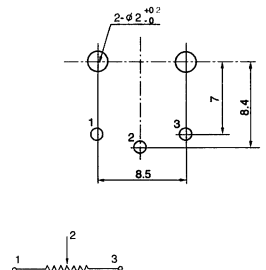
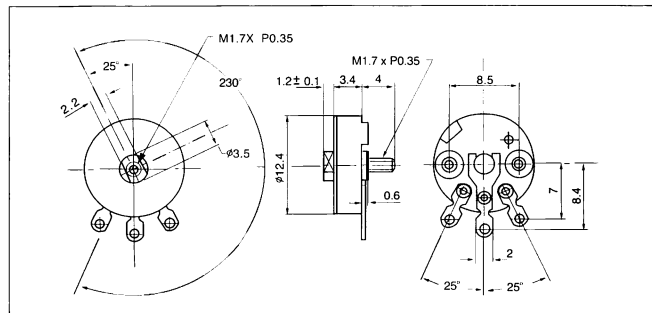
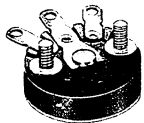
F-12SP

Horizontal Type with Switch,
Single Unit



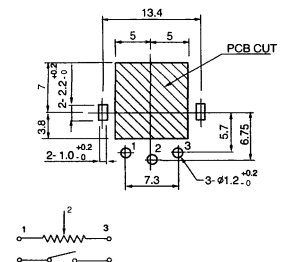
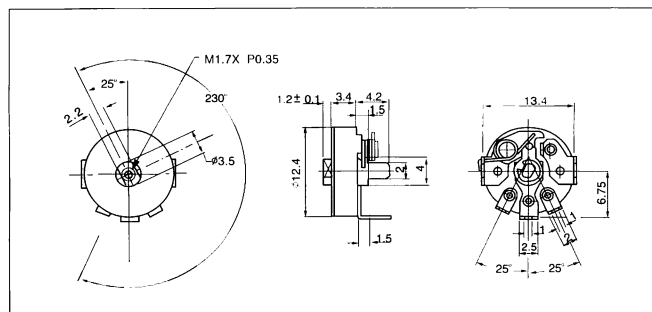
F-12NPG

Brass Pillar Type, Single Unit



F-12SPT

Horizontal Type with Switch,
Single Unit

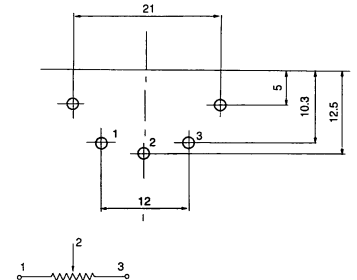
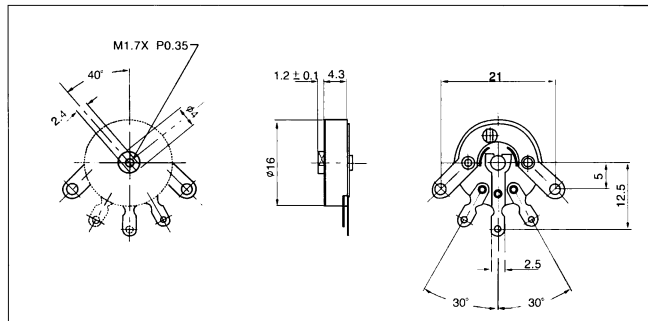
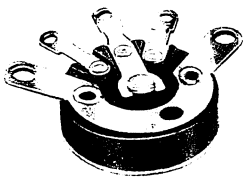


F-16 Series (∅ 16.0mm)

Molded Case Rotary Potentiometer

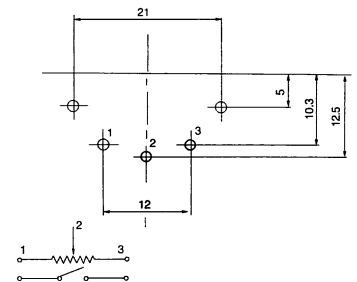
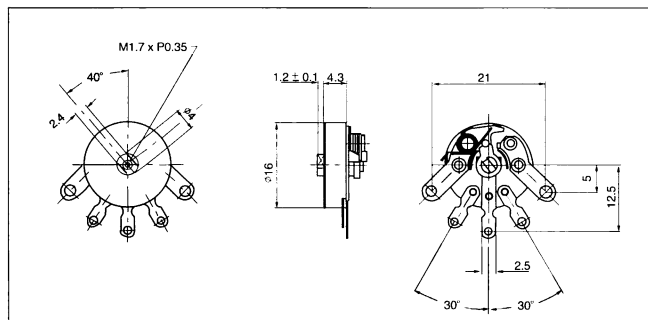
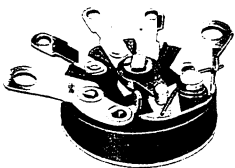
F-16N

Standard Type, Single Unit



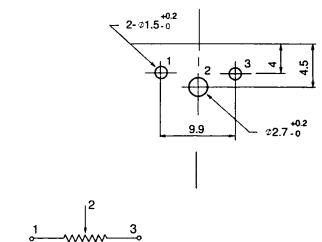
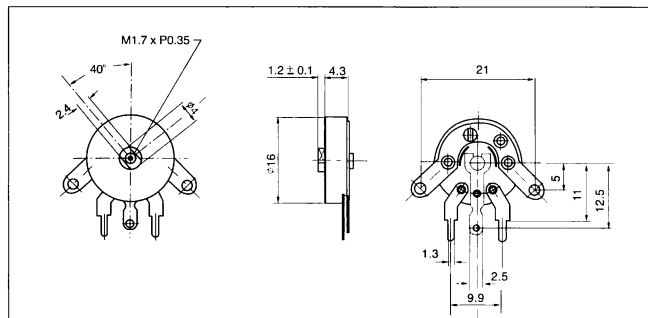
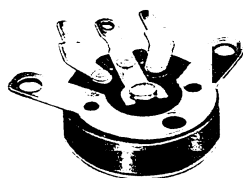
F-16S

Standard Type with Switch, Single Unit



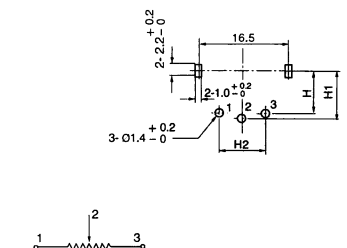
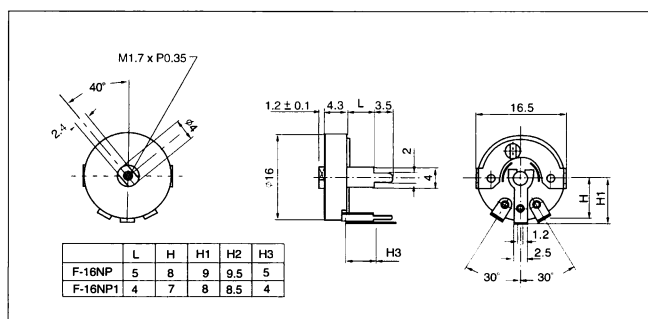
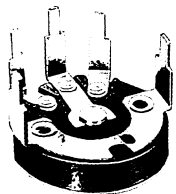
F-16N2

Mixture Type, Single Unit



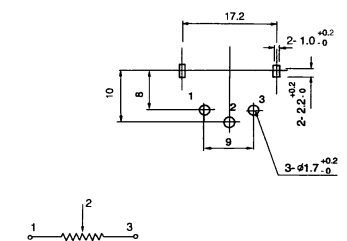
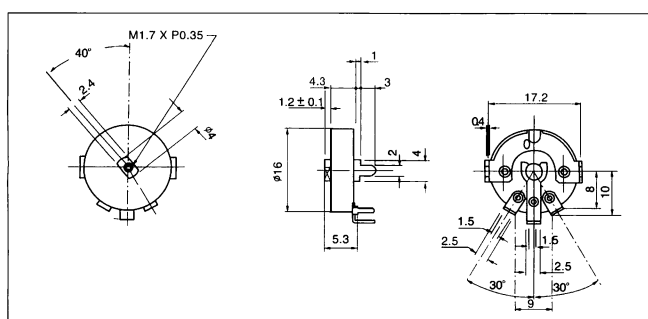
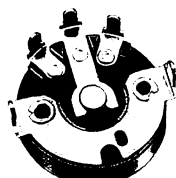
F-16NP

Horizontal Type, single Unit



F-16NP2

Horizontal Type, single Unit

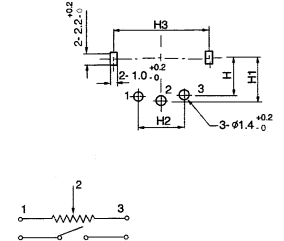
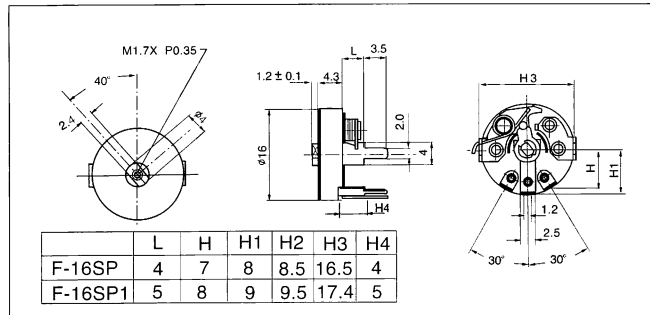
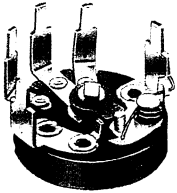


F-16 Series (∅ 16.0mm)

Molded Case Rotary Potentiometer

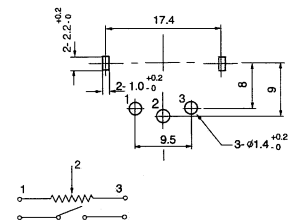
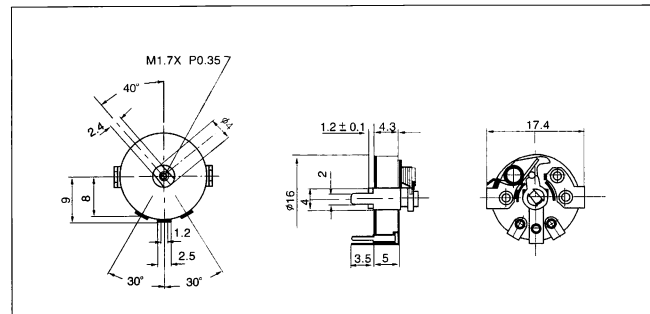
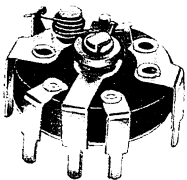
F-16SP

Horizontal Type with Switch,
Single Unit



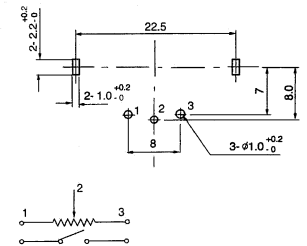
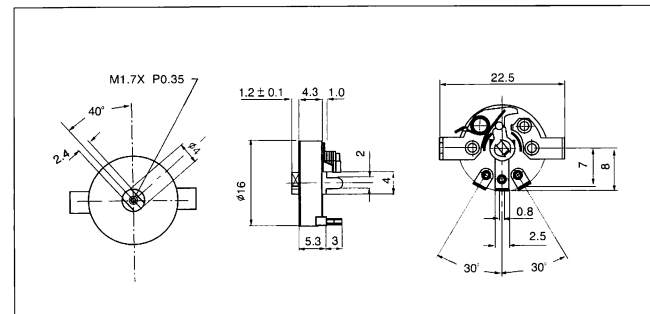
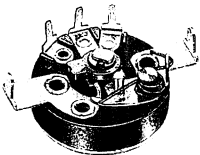
F-16SPD

Reverse Type with Switch,
Single Unit



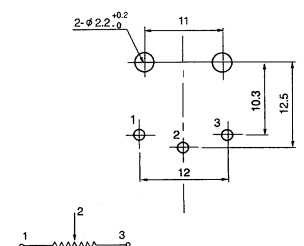
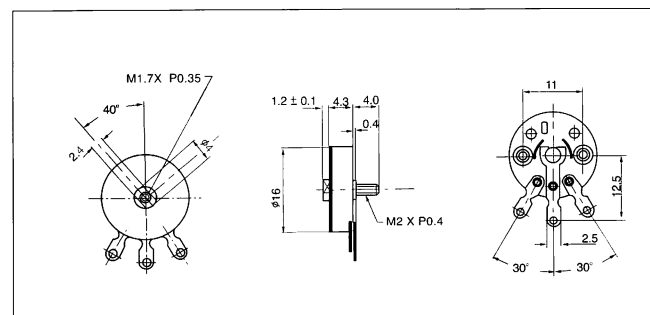
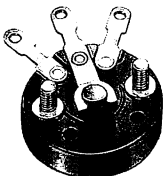
F-16SPT

Horizontal Type with Switch,
Single Unit



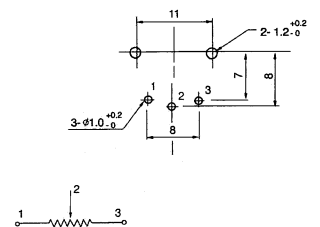
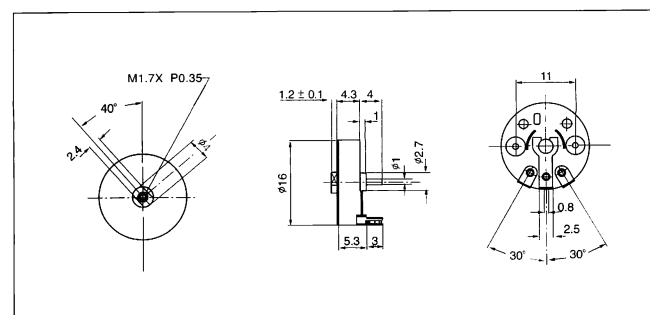
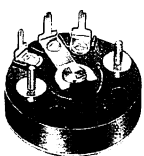
F-16NPG

Horizontal Type, Single Unit



F-16NPG1

Horizontal Type, Single Unit

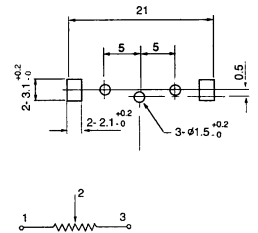
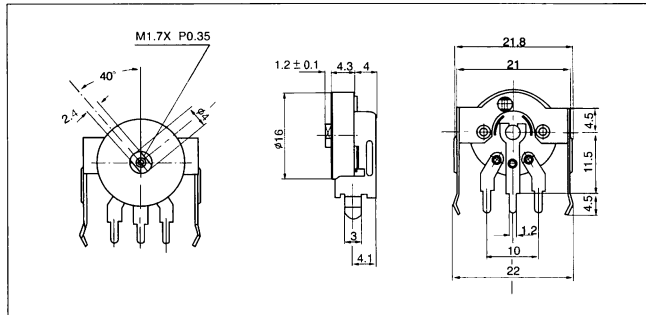
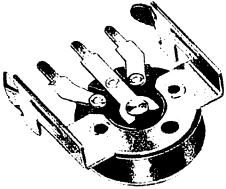


F-16 Series (∅ 16.0mm)

Molded Case Rotary Potentiometer

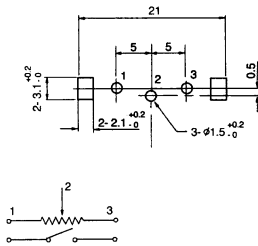
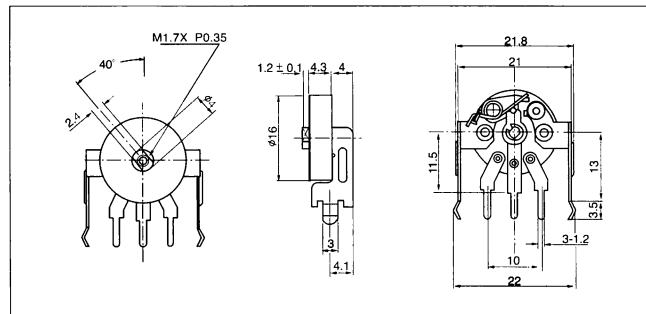
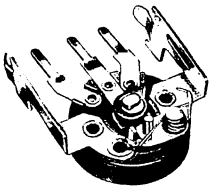
F-16NH

Vertical Type ,Single Unit



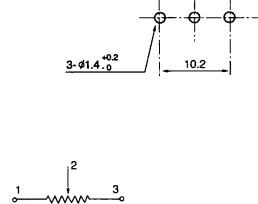
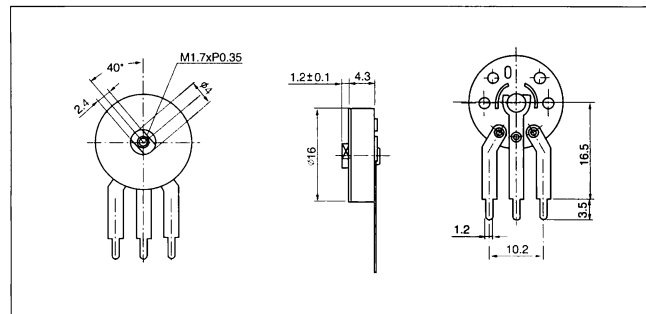
F-16SH

Vertical Type with Switch,
Single Unit



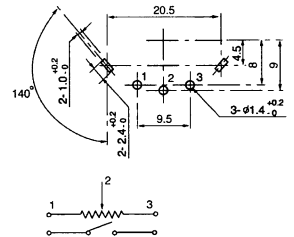
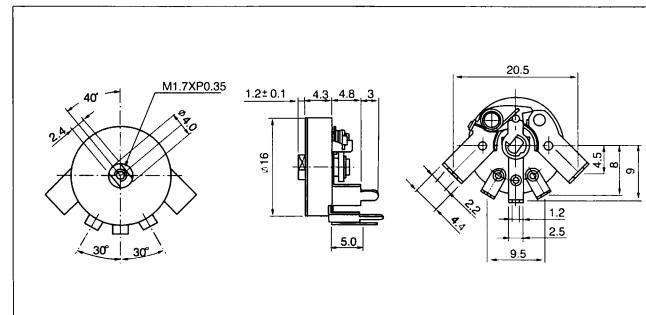
F-16N4

Vertical Type, Single Unit



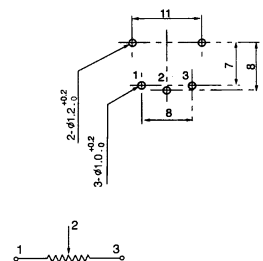
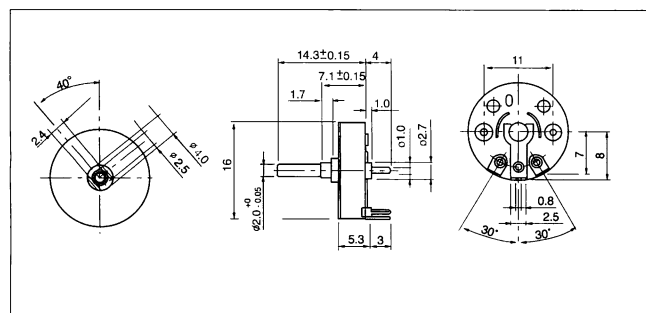
F-16SP3

Horizontal Type with Switch,
Single Unit



F-16NPG7

Horizontal Type ,Single Unit



F-16 Series (∅ 16.0mm)

Molded Case Rotary Potentiometer

SPECIFICATIONS

Electrical Characteristics

- Total Resistance.....100Ω~ 1 MΩ
- Total Resistance Tolerance.....±20%
- Resistance Taper.....A,B,C,D, See P14
- Max. Operation Voltage.....Linear Taper B: AC 200V
Other Tapers : AC 150V
- Rated Power.....Linear Taper B : 0.1W
Other Tapers : 0.05W
- Sliding Noise.....Less than 100 mV
- Insulation Resistance.....More than 50 MΩ at DC 500 V
- Withstand Voltage.....1 minute at AC 500 V
- Residual Resistance.....Term.1~2:Less than10Ω
Term.2~3:Less than 10Ω
- Switch Circuit.....S.P.S.T.
- Switch Contact Resistance.....Less than 50 mΩ
- Switch Rated Power.....1.0 A at AC/DC 12V

Mechanical Characteristics

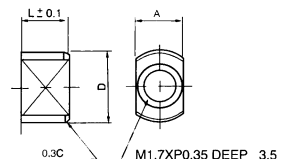
- Total Rotational Angle.....260° ± 10°
- Rotational Torque.....20gf.cm~150 gf.cm
- Rotational Stopper Strength.....2.0 Kgf.cm Min
- Push-Pull Strength.....Push:1.0Kgf Min
- Switch Rotational Angle.....40° ± 5°
- Switch Action.....150gf.cm ~ 450 gf.cm

Durability

- Rotational Life..... 10,000 Cycles

SHAFT ILLUSTRATION

Standard Dimensions of Shaft for F-16 Series.
(Customer designs are welcomed)



L	1.0~5.0
A	2.2±0/0.1
D	∅ 4.0

