

Clarostat Rotary Position Transducers

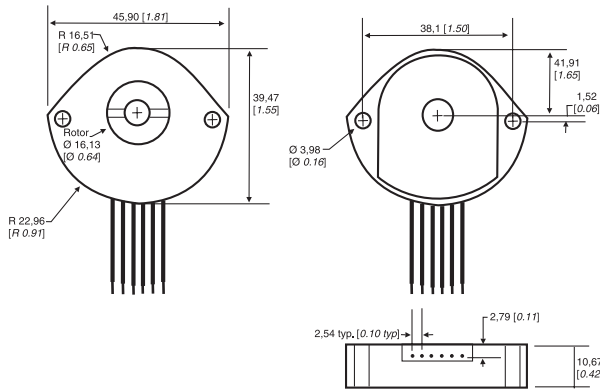
TH100 Series



The TH-100 Series puts Honeywell's proven variable-resistor technology to work in angle-management applications such as control-lever sensing and equipment position feedback. High performance and low cost make it attractive for a wide range of applications. Special electrical and mechanical configurations, including dual tracks, D-shape rotor holes, etc. are available on special order.

The device provides for angle measurements, has 152,4 mm (6.0 in) wire leads, a 6,35 mm (0.25 in) slotted thru hole and is sealed.

| | |
|---|---|
| Power rating: | 0.5 W max. |
| Element type: | Conductive plastic |
| Terminal type: | three 20 AWG |
| Shaft: | 6,35 mm (0.25 in) thru hole with .105 w x .090 d slot |
| Body: | 38,1 mm (1.5 in) x 45,72 mm (1.8 in) |
| Electrical taper: | Linear |
| Storage & operating temperature: | -40 °C to 120 °C (-40 °F to 248 °F) |
| Working voltage (max): | 350 Vdc |
| Linearity: | ± 5% standard; to ± 1% special |
| Total resistance: | 10 K |
| Total resistance tolerance: | ± 15% |
| Rotational cycles: | > 1 million |



OPTIONS

180° Rotation

| TAPER | CABLE CONNECTOR | REFERENCE |
|--------|-----------------|-----------------|
| Linear | No | 640CS103A06NAAY |

90° Rotation

| TAPER | CABLE CONNECTOR | REFERENCE |
|--------|-----------------|-----------------|
| Linear | No | 640ES103A06NAAY |

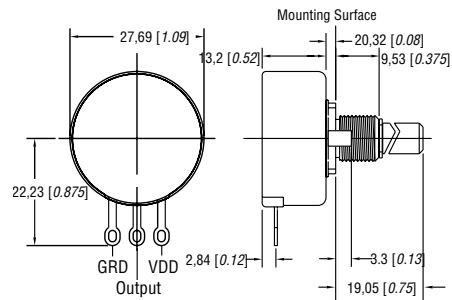
HRS100 Series, Hall-effect



The HRS100 provides angular position information for a variety of sensing and control applications in the automotive, marine, truck, off-road, industrial implementation, aerospace, and rail industries. The use of magnetically coupled information in place of a mechanical wiper assembly provides a long life, cost-effective solution for harsh environments that include temperature, vibration, dither, moisture and dirt.

This position sensor incorporates Hall-effect to provide a sensing device that will last for more than 50 million operations. The device is packaged in a metal housing with a 9,5 mm (0.375 in) diameter bushing and a 6,35 mm (0.25 in) diameter slotted shaft and solder lug terminals.

| | |
|------------------------------------|---|
| Terminal type: | Straight solder lug |
| Bushing: | 9,52 mm (.375 in) FMS, includes C-ring |
| Shaft: | Slotted 6,32 mm ± 0,03 (0.249 in ± 0.001) |
| Body: | 27,79 mm (1.094 in) Ø |
| Electrical taper: | Linear |
| Operating temperature: | -40 °C to 85 °C (-40 °F to 185 °F) |
| Supply voltage (max): | 5 Vdc |
| Linearity: | ± 2% |
| Rotational cycles: | 10 million |
| Mechanical operating angle: | 90° |



OPTIONS

90° Rotation

| SHAFT | LUG | REFERENCE |
|---------|-----------------|---------------|
| Slotted | Straight Solder | HRS100SSAB090 |

Clarostat Rotary Potentiometers and Position Transducers

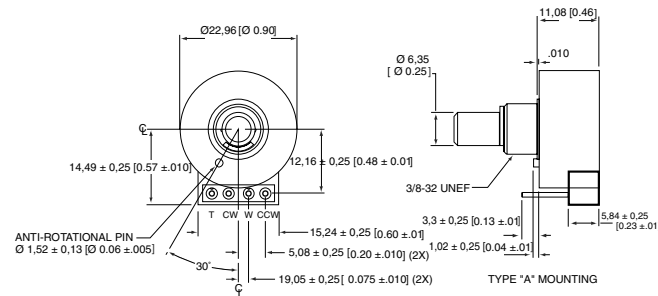
578 Series, Precision potentiometer



The 578 Series conductive plastic precision potentiometer puts Honeywell's proven variable resistor technology to work in a high performance, cost-effective device. With its compact size, rugged construction and advanced versatility, the 578 provides superior control for applications such as joy-stick controllers and position-sensing devices.

The model 578 features a 9,5 mm x 9,5 mm (0.375 in x 0.375 in) bushing, 6,35 mm x 19,05 mm (0.25 in x 0.75 in) slotted shaft, linear taper, and type A pc pins (please consult with the factory for custom OEM configurations).

| | |
|------------------------------------|--|
| Power rating: | 0.5 W @ 70 °C (158 °F) |
| Element type: | Conductive plastic |
| Terminal type: | PC pin type A |
| Bushing: | 9,52 mm (0.375 in) D x 9,52 mm (0.375 in) L |
| Shaft: | 6,35 mm x 19,05 mm (0.25 in x 0.75 in) Slotted |
| Body: | 22,86 mm (0.900 in) Ø |
| Electrical taper: | Linear |
| Operating temperature: | -40 °C to 100 °C (-40 °F to 212 °F) |
| Working voltage: | 400 Vdc |
| Linearity: | 1% |
| Total resistance tolerance: | ± 10% |
| Revolutions: | 5 million |
| Mechanical rotation: | 320° ± 5° |



OPTIONS

1 kOhm Resistance

| SHAFT | RESISTANCE TAPER | REFERENCE |
|-------------------------|------------------|----------------|
| Slotted stainless steel | Linear | 578X1G48S102SA |

5 kOhm Resistance

| SHAFT | RESISTANCE TAPER | REFERENCE |
|-------------------------|------------------|----------------|
| Slotted stainless steel | Linear | 578X1G48S502SA |

10 kOhm Resistance

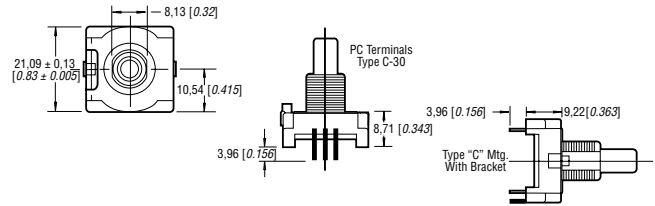
| SHAFT | RESISTANCE TAPER | REFERENCE |
|-------------------------|------------------|----------------|
| Slotted stainless steel | Linear | 578X1G48S103SA |

574 Series, Commercial potentiometer



The 574 Series conductive plastic potentiometer offers low mounting profile, smooth feel, and robust construction with a thermoplastic housing, bushing, and shaft. Terminals are PC style with a bracket for vertical mounting. No hardware is included.

| | |
|------------------------------------|---|
| Power rating: | 0.25 W @ 70 °C (158 °F) |
| Element type: | Conductive plastic |
| Terminal type: | PC terminals type C with C mounting bracket |
| Bushing: | M9 x 6,35 mm (0.25 in) L |
| Shaft: | 6,35 (0.25 in) Ø x 19,05 (0.75 in) L |
| Body: | 21,08 mm (0.830 in) square |
| Electrical taper: | Linear |
| Operating temperature: | -40 °C to 120 °C (-40 °F to 248 °F) |
| Working voltage: | 350 Vac |
| Linearity: | ± 5% |
| Total resistance tolerance: | ± 20% |
| Rotational cycles: | 50,000 |
| Mechanical rotation: | 300° ± 5° |



OPTIONS

Flatted Shaft

| RESISTANCE | TAPER | REFERENCE |
|------------|--------|-----------------|
| 1 kOhm | Linear | 574SX1M48F102SD |
| 10 kOhm | Linear | 574SX1M48F103SD |
| 100 kOhm | Linear | 574SX1M48F104SD |
| 50 kOhm | Linear | 574SX1M48F503SD |

Slotted Shaft

| RESISTANCE | TAPER | REFERENCE |
|------------|--------|-----------------|
| 1 kOhm | Linear | 574SX1M48S102SD |
| 10 kOhm | Linear | 574SX1M48S103SD |
| 100 kOhm | Linear | 574SX1M48S104SD |
| 50 kOhm | Linear | 574SX1M48S503SD |

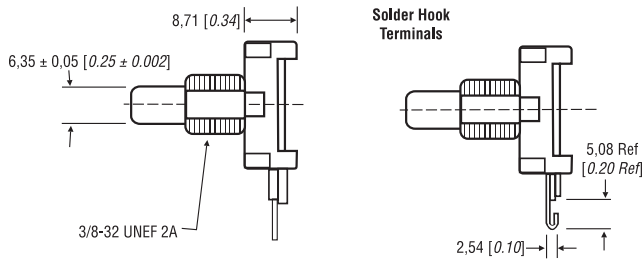
Clarostat Rotary Potentiometers and Position Transducers (continued)

575 Series, Commercial potentiometer



The 575 Series conductive plastic potentiometer offers a smooth feel and robust construction, with a thermoplastic housing, bushing, and shaft. Terminals are solder-hook style for panel mounting. No hardware is included.

| | |
|------------------------------------|--|
| Power rating: | 0.5 W @ 70 °C (158 °F) |
| Element type: | Conductive plastic |
| Terminal type: | Solder hook-200 grid |
| Bushing: | 9,52 mm (.375 in) D x 6,35 mm (0.25 in) L |
| Shaft: | 6,35 mm (0.25 in) Ø x 19,05 mm (0.75 in) L |
| Body: | 21,08 mm (0.830 in) square |
| Electrical taper: | Linear |
| Operating temperature: | -40 °C to 120 °C (-40 °F to 248 °F) |
| Working voltage: | 350 Vac |
| Linearity: | ± 5% |
| Total resistance tolerance: | ± 20% |
| Rotational cycles: | 50,000 |
| Mechanical rotation: | 300° ± 5° |



OPTIONS

Flatted Shaft

| RESISTANCE | TAPER | REFERENCE |
|------------|--------|-----------------|
| 1 kOhm | Linear | 575SX1A48F102SS |
| 10 kOhm | Linear | 575SX1A48F103SS |
| 50 kOhm | Linear | 575SX1A48F503SS |

Slotted Shaft

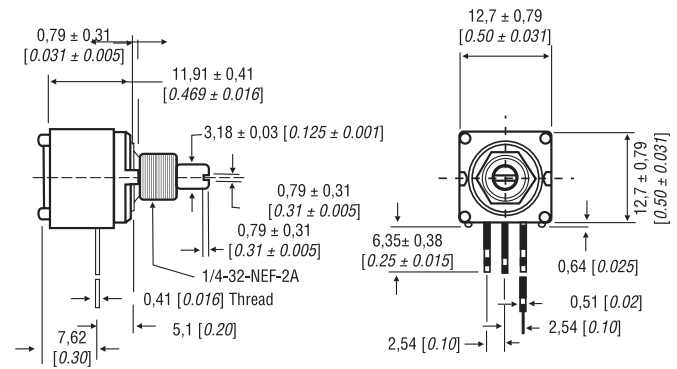
| RESISTANCE | TAPER | REFERENCE |
|------------|--------|-----------------|
| 1 kOhm | Linear | 575SX1A48S102SS |
| 10 kOhm | Linear | 574SX1A48S103SS |
| 50 kOhm | Linear | 574SX1A48S503SS |

590 Series, Commercial potentiometer



The 590 Series conductive plastic modular potentiometer features low electrical noise, smooth feel, robust construction, and brass bushing and shaft. Terminals are PC style. Hardware included. Multiple sections (up to three) are available on special order.

| | |
|------------------------------------|---|
| Power rating: | 0.5 W @ 70 °C (158 °F) |
| Element type: | Conductive plastic |
| Terminal type: | PC, 6,35 mm (0.25 in) long |
| Bushing: | 6,35 mm (0.25 in) Ø x 6,35 mm (0.25 in) L |
| Shaft: | Slotted, 3,17 mm (0.125 in) Ø x 22,23 mm (0.875 in) L |
| Body: | 12,7 mm (0.50 in) Ø |
| Electrical taper: | Linear |
| Operating temperature: | -40 °C to 120 °C (-40 °F to 248 °F) |
| Linearity: | ± 5% |
| Total resistance tolerance: | ± 10% (up to 500 kOhms) ± 20 % (1 MOhm and over) |
| Rotational cycles: | 50,000 |
| Mechanical rotation: | 295° ± 5° |



OPTIONS

Slotted Shaft

| RESISTANCE | TAPER | REFERENCE |
|------------|--------|-----------------|
| 100 Ohm | Linear | 590SX1N56S101SP |
| 500 Ohm | Linear | 590SX1N56S501SP |
| 1 kOhm | Linear | 590SX1N56S102SP |
| 5 kOhm | Linear | 590SX1N56S502SP |
| 10 kOhm | Linear | 590SX1N56S103SP |
| 100 kOhm | Linear | 590SX1N56S104SP |
| 500 kOhm | Linear | 590SX1N56S504SP |
| 1 MOhm | Linear | 590SX1N56S105SP |

380 Series, Industrial potentiometer

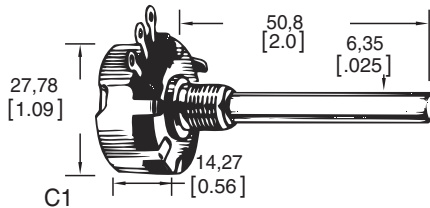


The 380 Series “Quiet One” is a 2-watt conductive plastic potentiometer offering superior dynamic noise and a long rotational life. It meets MIL-R-94 specifications where applicable.

| | |
|------------------------------------|---|
| Approvals: | MIL-R-94 |
| Power rating: | 2.0 W max. |
| Element type: | Conductive plastic |
| Terminal type: | Solder lug |
| Shaft: | Slotted |
| Body: | 27,79 mm (1.094 in) Ø |
| Electrical taper: | Linear |
| Operating temperature: | -55 °C to 120 °C (-67 °F to 248 °F) |
| Working voltage: | 500 Vdc |
| Linearity: | ± 5% |
| Total resistance tolerance: | ± 10% (up to 500 kOhms) ± 20 % (1 MOhm and over) |
| Rotational cycles: | 100,000 |
| Mechanical rotation: | 312° ± 3° |

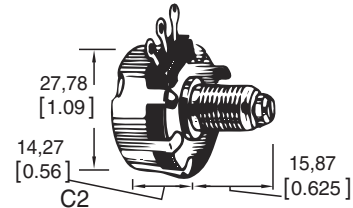
OPTIONS

**C1: 2.0 in (50,8 mm) Round Shaft;
0.375 in (9,5 mm) L bushing**



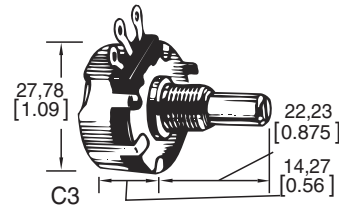
| RESISTANCE | REFERENCE |
|------------|-----------|
| 100 Ohm | 380C1100 |
| 250 Ohm | 380C1250 |
| 500 Ohm | 380C1500 |
| 1 kOhm | 380C11000 |
| 1.5 kOhm | 380C11500 |
| 2 kOhm | 380C12000 |
| 2.5 kOhm | 380C12500 |
| 5 kOhm | 380C15000 |
| 10 kOhm | 380C110K |
| 15 kOhm | 380C115K |
| 20 kOhm | 380C120K |
| 25 kOhm | 380C125K |
| 50 kOhm | 380C150K |
| 100 kOhm | 380C1100K |
| 200 kOhm | 380C1200K |
| 250 kOhm | 380C1250K |
| 500 kOhm | 380C1500K |
| 1 MOhm | 380C11MEG |

**C2: 0.625 in (15,88 mm) screwdriver slotted shaft;
0.5 in (12,7 mm) L locking bushing**



| RESISTANCE | REFERENCE |
|------------|-----------|
| 250 Ohm | 380C2250 |
| 1 kOhm | 380C21000 |
| 5 kOhm | 380C25000 |
| 10 kOhm | 380C210K |
| 25 kOhm | 380C225K |
| 50 kOhm | 380C250K |
| 100 kOhm | 380C2100K |
| 250 kOhm | 380C2250K |
| 1 MOhm | 380C21MEG |

**C3: 0.875 in (22,23 mm) shaft;
0.375 in (9,5 mm) L bushing**



| RESISTANCE | REFERENCE |
|------------|-----------|
| 100 Ohm | 380C3100 |
| 250 Ohm | 380C3250 |
| 500 Ohm | 380C3500 |
| 1 kOhm | 380C31000 |
| 2 kOhm | 380C32000 |
| 2.5 kOhm | 380C32500 |
| 5 kOhm | 380C35000 |
| 10 kOhm | 380C3310K |
| 25 kOhm | 380C325K |
| 50 kOhm | 380C350K |
| 100 kOhm | 380C3100K |
| 150 kOhm | 380C3150K |
| 200 kOhm | 380C3200K |
| 250 kOhm | 380C3250K |
| 500 kOhm | 380C3500K |
| 1 MOhm | 380C31MEG |
| 5 MOhm | 380C35MEG |

Clarostat Rotary Potentiometers and Position Transducers (continued)

485 Series, Industrial potentiometer

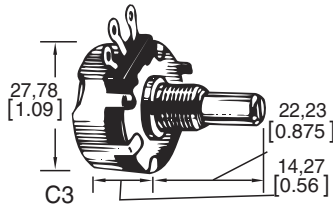


The 485 Series is the extended-life version of the 380 Series. It is a 2-watt conductive plastic potentiometer offering superior dynamic noise and extra long rotational life. It meets MIL-R-94 specifications where applicable.

| | |
|------------------------------------|---|
| Approvals: | MIL-R-94 |
| Power rating: | 2.0 W max. |
| Element type: | Conductive plastic |
| Terminal type: | Solder lug |
| Shaft: | Slotted |
| Body: | 27,79 mm (1.094 in) Ø |
| Electrical taper: | Linear |
| Operating temperature: | -55 °C to 120 °C (-67 °F to 248 °F) |
| Working voltage: | 500 Vdc |
| Linearity: | ± 5% |
| Total resistance tolerance: | ± 10% (up to 500 kOhms) ± 20 % (1 MOhm and over) |
| Rotational cycles: | 1,000,000 |
| Mechanical rotation: | 312° ± 3° |

OPTIONS

0.875 in (22,23 mm) shaft;
0.375 in (9,5 mm) L bushing



| RESISTANCE | REFERENCE |
|------------|-----------|
| 1 kOhm | C0416392 |
| 5 kOhm | C0416393 |
| 10 kOhm | C0416394 |

Special version with 45° element

Construction incorporates an internal shaft seal for moisture resistance.

| RESISTANCE | REFERENCE |
|------------|-----------|
| 5 kOhm | C0416395 |

RV4 MIL Series potentiometer

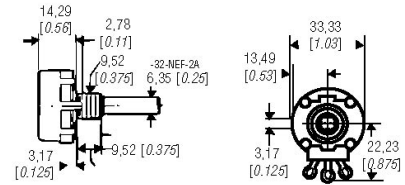


The RV4 is a dual-marked potentiometer with all the fine features of the 380 Series in a more economical package. It is built in strict accordance with MIL-R-94.

| | |
|-------------------------------|-------------------------------------|
| Approvals: | MIL-R-94 |
| Power rating: | 2.0 W max. |
| Element type: | Conductive plastic |
| Terminal type: | Solder lug |
| Shaft: | Slotted |
| Body: | 27,79 mm (1.094 in) Ø |
| Electrical taper: | Linear |
| Operating temperature: | -55 °C to 120 °C (-67 °F to 248 °F) |
| Working voltage: | 500 Vdc |
| Linearity: | ± 5% |
| Rotational cycles: | 25,000 |
| Mechanical rotation: | 312° ± 3° |

OPTIONS

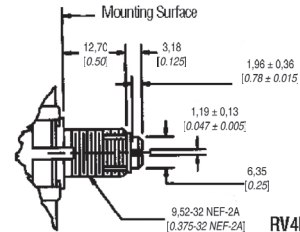
Standard Bushing,
0.875 in (22,23 mm)
shaft length



RV4N

| RESISTANCE | TOLERANCE | REFERENCE |
|------------|-----------|-------------|
| 100 Ohm | ± 10 % | RV4NAYS101A |
| 250 Ohm | ± 10 % | RV4NAYS251A |
| 500 Ohm | ± 10 % | RV4NAYS501A |
| 1 kOhm | ± 10 % | RV4NAYS102A |
| 2.5 kOhm | ± 10 % | RV4NAYS252A |
| 5 kOhm | ± 10 % | RV4NAYS502A |
| 10 kOhm | ± 10 % | RV4NAYS103A |
| 25 kOhm | ± 10 % | RV4NAYS253A |
| 50 kOhm | ± 10 % | RV4NAYS503A |
| 100 kOhm | ± 10 % | RV4NAYS104A |
| 250 kOhm | ± 10 % | RV4NAYS254A |
| 500 kOhm | ± 10 % | RV4NAYS504A |
| 750 Kohm | ± 10 % | RV4NAYS754A |
| 1 MOhm | ± 10 % | RV4NAYS105A |
| 5 MOhm | ± 20 % | RV4NAYS505B |

Locking Bushing



RV4L

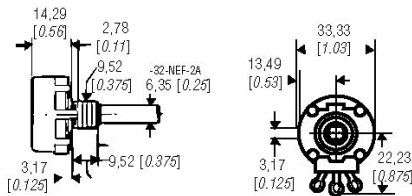
| RESISTANCE | TOLERANCE | REFERENCE |
|------------|-----------|-------------|
| 100 Ohm | ± 10 % | RV4LAYS101A |
| 250 Ohm | ± 10 % | RV4LAYS251A |
| 500 Ohm | ± 10 % | RV4LAYS501A |
| 1 kOhm | ± 10 % | RV4LAYS102A |
| 2.5 kOhm | ± 10 % | RV4LAYS252A |
| 5 kOhm | ± 10 % | RV4LAYS502A |
| 10 kOhm | ± 10 % | RV4LAYS103A |
| 25 kOhm | ± 10 % | RV4LAYS253A |
| 50 kOhm | ± 10 % | RV4LAYS503A |
| 100 kOhm | ± 10 % | RV4LAYS104A |
| 250 kOhm | ± 10 % | RV4LAYS254A |
| 500 kOhm | ± 10 % | RV4LAYS504A |
| 750 kOhm | ± 10 % | RV4LAYS754A |
| 1 MOhm | ± 10 % | RV4LAYS105A |
| 5 MOhm | ± 20 % | RV4LAYS505B |

53 Series potentiometer



The 53 Series has all the fine features of the Series 380 in a more economical package. It is available with a 50,8 mm [2.0 in] long shaft.

| | |
|-------------------------------|-------------------------------------|
| Power rating: | 2.0 W max. |
| Element type: | Conductive plastic |
| Terminal type: | Solder lug |
| Shaft: | Slotted, 50,8 mm (2.0 in) L |
| Body: | 27,79 mm (1.094 in) Ø |
| Electrical taper: | Linear |
| Operating temperature: | -55 °C to 120 °C (-67 °F to 248 °F) |
| Working voltage: | 500 Vdc |
| Linearity: | ± 5% |
| Rotational cycles: | 25,000 |
| Mechanical rotation: | 312° ± 3° |



OPTIONS

Standard Bushing, 2.0 in (50,8 mm) shaft length

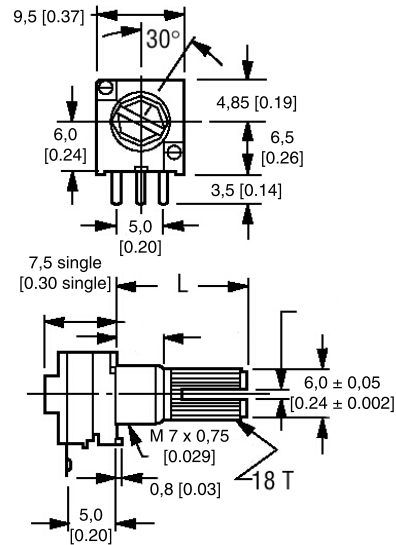
| RESISTANCE | TOLERANCE | REFERENCE |
|------------|-----------|------------|
| 100 Ohm | ± 10 % | 53C1100 |
| 250 Ohm | ± 10 % | 53C1250 |
| 500 Ohm | ± 10 % | 53C1500 |
| 1 kOhm | ± 10 % | 53C11K |
| 2.5 kOhm | ± 10 % | 53C12500 |
| 5 kOhm | ± 10 % | 53C15K |
| 10 kOhm | ± 10 % | 53C110K |
| 25 kOhm | ± 10 % | 53C125K |
| 50 kOhm | ± 10 % | 53C150K |
| 100 kOhm | ± 10 % | 53C1100K |
| 150 kOhm | ± 10 % | 53C1150K |
| 250 kOhm | ± 10 % | 53C1250K |
| 500 kOhm | ± 10 % | 53C1500K |
| 750 kOhm | ± 10 % | 53C1750K |
| 1 MOhm | ± 20 % | 53C11MEG |
| 2.5 MOhm | ± 20 % | 53C12.5MEG |
| 5 MOhm | ± 20 % | 53C15MEG |

585 Series, Commercial potentiometer



Our Series 585 offers a robust construction in a low-cost commercial package, using carbon composition elements and a metal shaft and bushing.

| | |
|-------------------------------|--|
| Power rating: | 0.05 W max. @ 40 °C |
| Element type: | Carbon composition |
| Terminal type: | 3 in-line |
| Bushing: | M 7 x 0.75 thread, 7 mm L |
| Shaft: | 6,0 mm (0.24 in) Ø by 25,0 mm (0.98 in) L |
| Flatted shaft: | 12,0 mm (0.47 in) long by 4,5 mm (0.18 in) D standard; round end available |
| Body: | 9,5 mm (0.37 in) square |
| Operating temperature: | -55 °C to 120 °C (-67 °F to 248 °F) |
| Resistance tolerance: | ± 20% |
| Rotational cycles: | 10,000 |
| Mechanical rotation: | 300° |



OPTIONS

Linear taper

| RESISTANCE | SECTION | REFERENCE |
|------------|---------|-----------------|
| 1 kOhm | Single | 585SX4Q25F102SP |
| 5 kOhm | Single | 585SX4Q25F502SP |
| 10 kOhm | Single | 585SX4Q25F103SP |
| 1 kOhm | Double | 585DX4Q25F102SP |
| 5 kOhm | Double | 585DX4Q25F502SP |
| 10 kOhm | Double | 585DX4Q25F103SP |

Audio taper

| RESISTANCE | SECTION | REFERENCE |
|------------|---------|-----------------|
| 1 kOhm | Single | 585SX4Q25F102ZP |
| 5 kOhm | Single | 585SX4Q25F502ZP |
| 10 kOhm | Single | 585SX4Q25F103ZP |

Clarostat Rotary Potentiometers and Position Transducers (continued)

RV6/392M MIL Series potentiometer



RV6/392M Series are economical potentiometers designed to meet wave soldering applications for mounting PC boards. They meet flow solderability and washability test requirements, and MIL-R-94 standard apply.

| | |
|------------------------------------|---|
| Approvals: | MIL-R-94 |
| Power rating: | 0.5 W max. |
| Element type: | Conductive plastic |
| Terminal type: | Solder hook |
| Shaft: | Slotted |
| Body: | 12,7 mm (0.5 in) Ø |
| Electrical taper: | Linear |
| Operating temperature: | -40 °C to 120 °C (-40 °F to 248 °F) |
| Working voltage: | 350 Vdc |
| Linearity: | ± 5% |
| Total resistance tolerance: | ± 10% (up to 500 kOhms) ± 20 % (1 MOhm and over) |
| Rotational cycles: | 50,000 |
| Mechanical rotation: | 295° ± 5° |

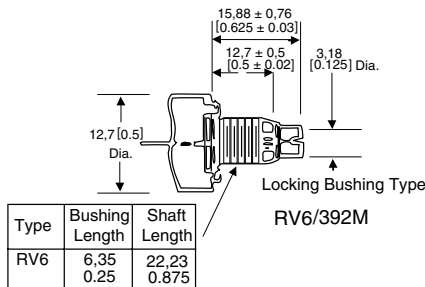
OPTIONS

**Standard Bushing, 6,35 mm (0.25 in) L;
0.875 in (22,23 mm) shaft length**

| RESISTANCE | REFERENCE |
|------------|--------------|
| 100 Ohm | RV6NAYSD101A |
| 250 Ohm | RV6NAYSD251A |
| 500 Ohm | RV6NAYSD501A |
| 1 kOhm | RV6NAYSD102A |
| 2.5 kOhm | RV6NAYSD252A |
| 5 kOhm | RV6NAYSD502A |
| 10 kOhm | RV6NAYSD103A |
| 25 kOhm | RV6NAYSD253A |
| 50 kOhm | RV6NAYSD503A |
| 100 kOhm | RV6NAYSD104A |
| 250 kOhm | RV6NAYSD254A |
| 500 kOhm | RV6NAYSD504A |
| 1 MOhm | RV6NAYSD105A |

**Locking Bushing, 12,7 mm (0.50 in) L;
0.625 in (15,88 mm) shaft length**

| RESISTANCE | REFERENCE |
|------------|-------------|
| 100 Ohm | RV6LAYS101A |
| 250 Ohm | RV6LAYS251A |
| 500 Ohm | RV6LAYS501A |
| 1 kOhm | RV6LAYS102A |
| 2.5 kOhm | RV6LAYS252A |
| 5 kOhm | RV6LAYS502A |
| 10 kOhm | RV6LAYS103A |
| 25 kOhm | RV6LAYS253A |
| 50 kOhm | RV6LAYS503A |
| 100 kOhm | RV6LAYS104A |
| 250 kOhm | RV6LAYS254A |
| 500 kOhm | RV6LAYS504A |
| 1 MOhm | RV6LAYS105A |



Encoders

510 Series, Mechanical

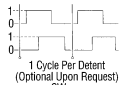
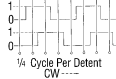


The 510 Series controls are manually operated, rotary, mechanical encoders that provide a two-bit gray code for relative reference applications and a four-bit gray code for absolute electrical reference applications. The "L" channel leads the "R" channel by 90° electrically in the CW position. It features continuous electrical travel and has a rotational life of more than 100,000 shaft revolutions with a positive detent feel.

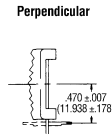
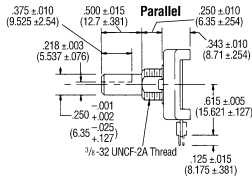
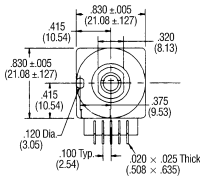
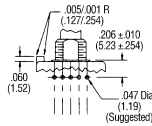
This series is small-sized, 21,08 mm² by 8,71 mm deep (0.83 in² x 0.343 in) long and commonly used in limited-space, panel-mounted applications where the need for costly, front-panel displays can be completely eliminated. Digital gray-code outputs eliminate the need for A/D converters.

- Bushing:** 9,52 mm (0.375 in) Ø x 6,35 mm (0.25 in) L
- Shaft:** Flatted, 6,35 mm (0.25 in) Ø x 19,05 mm (0.75 in) L
- Body:** 21,08 mm (0.830 in) square
- Operating temperature:** -40 °C to 105 °C (-40 °F to 221 °F)
- Rotational cycles:** 100,000

Output Table



Control Dimensions, Single Control



OPTIONS

Vertical Mount, PC Terminals/bent back

GREY CODE OPTIONS

- 2 bit/4 cycles
- 2 bit/6 cycles
- 2 bit/9 cycles
- 4 bit/16 cycles

REFERENCE

- 510E1A48F204PC
- 510E1A48F206PC
- 510E1A48F209PC
- 510E1A48F416PC

Horizontal Mount, PC Terminals/straight

GREY CODE OPTIONS

- 2 bit/4 cycles
- 2 bit/6 cycles
- 2 bit/9 cycles
- 4 bit/16 cycles

REFERENCE

- 510E1A48F204PB
- 510E1A48F206PB
- 510E1A48F209PB
- 510E1A48F416PB

Brackets

MOUNTING DIRECTION

- Vertical
- Horizontal

REFERENCE

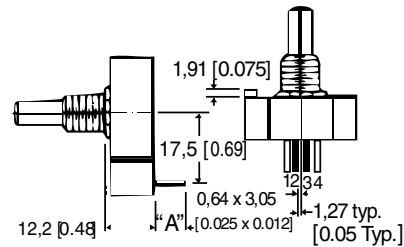
- 510VBKT
- 510HBKT

600 Series, Optical



The 600 Series controls are manually operated, rotary, optical encoders that output two square waves in quadrature at a rate of 128 pulse per channel per revolution as a standard with other resolutions down to 60 pulses available. The outputs are TTL compatible. PC terminals or cable leads are available.

- Pulses per revolution:** 128
- Supply voltage:** 5.0 V
- Body:** 34,93 mm (1.375 in) Ø
- Shaft:** 6,35 mm [0.25 in] dia by 22,23 mm [0.875] long
- Bushing:** 9,52 mm [0.375 in] dia by 9,52 mm [0.375 in] long
- Operating temperature:** -40 °C to 65 °C (-40 °F to 149 °F)
- Revolutions:** 10 million



OPTIONS

Series 600

TERMINATION

- 177,8 mm (7.0 in) long cable
- PC terminals exiting side
- PC terminals exiting rear
- 177,8 mm (7.0 in) long cable with connector

REFERENCE

- 600EN-128-CBL
- 600EN-128-B66
- 600EN-128-C24
- 600EN-128-CN1

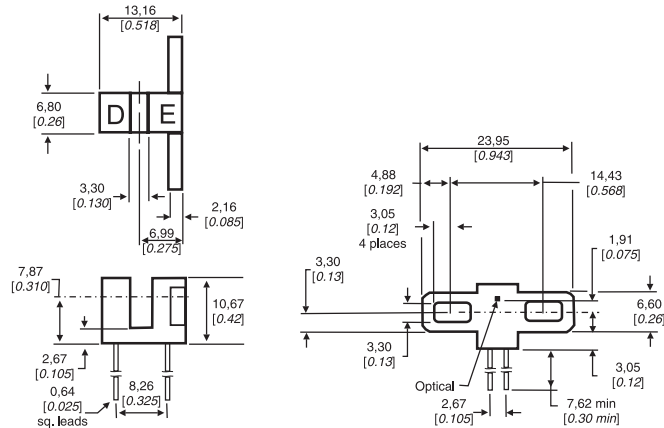
Slotted Optical Switches

S-180 Series



The S-180 Series consists of a gallium arsenide IRED and silicon phototransistor mounted in a rigid one-piece polycarbonate housing. All electrical options are available with either PCB mount or 457,0 mm (18.0 in) minimum length wire termination (26 AWG type UL 1429)

| | |
|--|------------------------------------|
| Operating temperature: | -40 °C to 85 °C (-40 °F to 185 °F) |
| IRED continuous forward current: | 50 mA |
| IRED peak forward current: | 3 A |
| IRED reverse voltage: | 3 V |
| IRED power dissipation: | 100 mW |
| Sensor collector-emitter voltage: | 30 V |
| Sensor emitter-collector voltage: | 5 V |
| Sensor power dissipation: | 100 mW |



OPTIONS

PCB Mount

| $V_{CE(sat)}$ | I_L | REFERENCE |
|---|---|-----------|
| 0.4 V max @ $I_F = 20$ mA, $I_C = 0.4$ mA | 0.5 mA min @ $I_F = 20$ mA and $V_{CE} = 5$ V | S-180-A55 |
| 0.4 V max @ $I_F = 10$ mA, $I_C = 0.8$ mA | 1.0 mA min @ $I_F = 10$ mA and $V_{CE} = 5$ V | S-180-B55 |
| 0.4 V max @ $I_F = 20$ mA, $I_C = 2.0$ mA | 2.0 mA min @ $I_F = 20$ mA and $V_{CE} = 5$ V | S-180-C55 |

Wire Leads

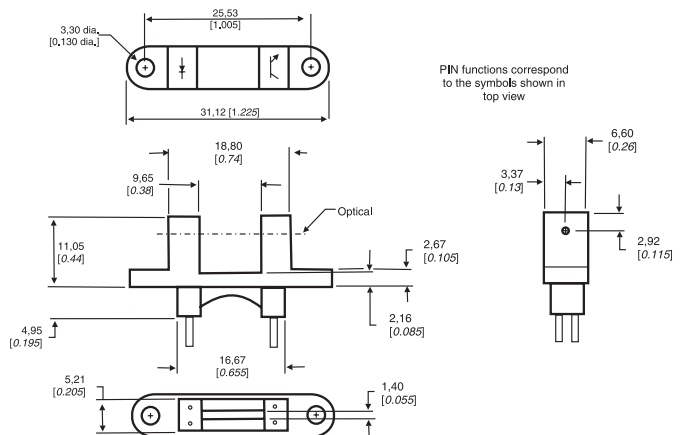
| $V_{CE(sat)}$ | I_L | REFERENCE |
|---|---|------------|
| 0.4 V max @ $I_F = 20$ mA, $I_C = 0.4$ mA | 0.5 mA min @ $I_F = 20$ mA and $V_{CE} = 5$ V | S-180-A55W |
| 0.4 V max @ $I_F = 10$ mA, $I_C = 0.8$ mA | 1.0 mA min @ $I_F = 10$ mA and $V_{CE} = 5$ V | S-180-B55W |
| 0.4 V max @ $I_F = 20$ mA, $I_C = 2.0$ mA | 2.0 mA min @ $I_F = 20$ mA and $V_{CE} = 5$ V | S-180-C55W |

S-800W Series, Wide gap



The S-800W Series of wide gap slotted switches consists of a gallium arsenide IRED and silicon phototransistor in an injection-molded housing. The output current range options allow the design engineer the flexibility to choose from three current minimums to best solve application requirements.

| | |
|--|------------------------------------|
| Operating temperature: | -40 °C to 80 °C (-40 °F to 176 °F) |
| IRED continuous forward current: | 50 mA |
| IRED peak forward current: | 3 A |
| IRED reverse voltage: | 3 V |
| IRED power dissipation: | 100 mW |
| Sensor collector-emitter voltage: | 30 V |
| Sensor emitter-collector voltage: | 5 V |
| Sensor power dissipation: | 100 mW |



OPTIONS

| I_L | $V_{CE(sat)}$ | REFERENCE |
|---|--|-----------|
| 500 uA min @ $V_{CE} = 10$ V & $I_F = 20$ mA | 0.4 V max @ $I_C = 250$ uA & $I_F = 20$ mA | S-800W |
| 1.0 mA min @ $V_{CE} = 5$ V & $I_F = 10$ mA | 0.4 V max @ $I_C = 500$ uA & $I_F = 20$ mA | S-801W |
| 1.8 mA min @ $V_{CE} = 0.6$ V & $I_F = 20$ mA | 0.4 V max @ $I_C = 1.8$ mA & $I_F = 20$ mA | S-802W |