

# Potentiometers

## Line Guide



**Potentiometers** convert rotary motion or linear displacement into a change of resistance, supplying a smooth transition of voltage or current levels. The resulting voltage output may be used to control position transducers in a wide variety of potential transportation, industrial and medical applications.

**Rotary Potentiometers** are compact, rugged, thick-film devices that use either conductive plastic, or cermet or wirewound elements. Developed for potential military applications, our proprietary conductive plastic offers extensive temperature range and infinite resolution, and is designed to provide precision

position measurement. Cermet and wirewound elements are stable over a range of operating temperatures and provide high power dissipation and improved resistance temperature coefficient.

**Linear Potentiometers** feature rugged extruded aluminum housings to withstand harsh chemicals and immersion in oils or water. Construction features include extended life PTFE bearings, precious-metal multi-finger contact wipers, and MystR® conductive plastic thick-film elements.

### FEATURES

#### ROTARY POTENTIOMETERS

##### CONDUCTIVE PLASTIC POTENTIOMETERS

###### 308, 408 Series.

**Features:** Compact • Modular package • Conductive plastic element • 0.5 W power rating • Nickel-plated brass shaft and bushings • Enhanced performance • 408: sealed for board washing • PC and solder-hook terminals • CW audio and linear tapers available

**Benefits:** Reduced cost potentiometer that offers 0.5 W power rating in a compact body. Potential applications include manual controls, audio and lighting consoles, medical equipment, precision joysticks, and telecommunications.

###### 380, 385, 53C, 485, RV4 Series.

**Features:** Cost-effective • Wide range of resistance values (100 Ohm to 5 MOhm, inclusive) • Wide variety of tapers

**Benefits:** Supplies good performance at a reasonable price • Wide range of resistance values promotes flexibility in the applications • Wide variety of tapers creates flexibility in the output signal

profile, allowing use in a wide variety of applications. Potential applications include use on audio and visual equipment, foot pedal controls, machine controls, welding equipment, gear shifters, joysticks, and throttles.

###### 381 Series.

**Features:** Conductive plastic element • 1 W power rating • Solder lug terminals • Metal case and nickel-plated brass shaft and bushings • Locking-style bushing, rotary switch, or dual section options available • Linear taper

**Benefits:** Robust construction in a low-cost industrial package. Potential applications include manual and audio controls, and telecommunications.

###### 392, RV6 Series.

**Features:** Wave solderable • PCB washable • Cost-effective • Wide range of resistance values (100 Ohm to 5 MOhm, inclusive) • Small package size

**Benefits:** Devices may be automatically soldered on a PCB using the wave soldering process instead of being manually soldered, saving time and

yielding consistent results. The PCB containing the soldered devices may be washed after soldering, saving time and yielding consistent results. Good performance at a reasonable price. Wide range of resistance values promotes flexibility in the applications. May be used where space constraints may be present. Potential applications include audio and visual equipment, light switches, hand-held multimeters and mobile monitoring devices, test and measurement equipment, communications equipment, thermostats, hand-held medical equipment and mobile monitoring devices, medical laboratory and diagnostic equipment, and vehicle manual controls.

###### 574 Series.

**Features:** Conductive plastic element • 0.5 W power rating • Reduced mounting profile • Quiet electrical output • Vertical mounting with support bracket • PC style mounting • Smooth feel • Robust construction • All plastic construction • Metric bushing • Linear taper

# Potentiometers Line Guide

## Quality. Reliability. Enhanced life. Global reach.

Honeywell S&C rotary position sensors deliver the features you need and quality you demand. Even better, we offer worldwide support and manufacturing.

**Potentiometers:** The Honeywell S&C lineup is legendary in military and aerospace industries for reliability, durability, and enhanced life. Our potentiometer designs allow customization to your specs and cost requirements without sacrificing reliability and accuracy. Measuring rotary position or linear displacement, these units easily withstand exposure to harsh chemicals and high temperatures.



### Conductive Plastic Pots

#### 308, 408 Series



#### 380, RV4, 485, 53C, 385 Series

|                                 |   |   |
|---------------------------------|---|---|
| <b>Description</b>              | <ul style="list-style-type: none"> <li>308: compact modular housing</li> <li>408: sealed for board washing</li> </ul> | <ul style="list-style-type: none"> <li>380: 2 W conductive plastic pot</li> <li>RV4: Military version of 380</li> <li>485: Custom version of 380</li> <li>53C: Cost-effective version of 380</li> <li>385: Custom version of 53C</li> </ul> |
| <b>Expected rotational life</b> | 50 k cycles   | 100 k cycles, 25 k cycles   |
| <b>Element type</b>             | conductive plastic  | conductive plastic  |
| <b>Power rating</b>             | 0.5 W   | 2 W   |
| <b>Termination</b>              | PC, solder hook   | solder lug with/without center tap, PC pin, fast-on, custom   |
| <b>Resistance range</b>         | 308: 100 Ohm to 1 mOhm<br>408: 500 Ohm to 10 kOhm   | 100 Ohm to 5 MOhm, inclusive  |
| <b>Housing material</b>         | thermoplastic polyester   | stainless steel   |
| <b>Bushing</b>                  | 1/4-32 NEF-2A or 3/8-32 NEF-2A; nickel-plated brass; standard, locking  | 3/8-32 NEF-2A; nickel-plated brass; standard, high torque, custom   |
| <b>Shaft</b>                    | Ø3,18 mm [0.125 in], Ø6,35 mm [0.250 in]; nickel-plated brass   | Ø6,35 mm [0.250 in]; nickel-plated brass  |
| <b>Electrical taper</b>         | CW audio, linear  | linear, log, reverse log, custom  |



### Conductive Plastic Pots

#### 574 Series



#### 575 Series

|                                 |   |   |
|---------------------------------|---|---|
| <b>Description</b>              | low mounting profile                          | thermoplastic panel mount                     |
| <b>Expected rotational life</b> | 50 k cycles                                   | 50 k cycles                                   |
| <b>Element type</b>             | conductive plastic                            | conductive plastic                            |
| <b>Power rating</b>             | 0.5 W   | 0.5 W   |
| <b>Termination</b>              | PC with bracket                               | PC, solder hook                               |
| <b>Resistance range</b>         | 1 kOhm to 100 kOhm                            | 1 kOhm to 50 kOhm                             |
| <b>Housing material</b>         | glass-reinforced plastic                      | glass-reinforced plastic                      |
| <b>Bushing</b>                  | Ø9,53 mm [0.375 in]; glass-reinforced plastic | Ø9,53 mm [0.375 in]; glass-reinforced plastic |
| <b>Shaft</b>                    | Ø6,35 mm [0.250 in]; glass-reinforced plastic | Ø6,35 mm [0.250 in]; glass-reinforced plastic |
| <b>Electrical taper</b>         | linear  | linear  |



## Conductive Plastic Pots

381 Series



392, RV6 Series

|                                 |   |  |
|---------------------------------|---|--|
| <b>Description</b>              | 0.5 in diameter,<br>1 W conductive plastic  | • 392: 0.5 W conductive plastic pot<br>• RV6: Military version of 392  |
| <b>Expected rotational life</b> | 25 k cycles   | tested to 50 k cycles  |
| <b>Element type</b>             | conductive plastic  | conductive plastic   |
| <b>Power rating</b>             | 1 W   | 0.5 W  |
| <b>Termination</b>              | solder lug  | solder hook, PC pin, custom  |
| <b>Resistance range</b>         | 100 Ohm to 5 mOhm   | 100 Ohm to 5 MOhm, inclusive   |
| <b>Housing material</b>         | stainless steel   | thermoplastic  |
| <b>Bushing</b>                  | Ø6,35 mm [0.250 in], Ø9,53 mm [0.375 in];<br>nickel-plated brass; standard, locking | 1/4-32 NEF-2A, nickel-plated brass; metal panel seal: standard, split locking; metal no panel seal: standard, split locking; unthreaded; plastic standard, trimmer; custom |
| <b>Shaft</b>                    | Ø3,18 mm [0.125 in];<br>nickel-plated brass   | Ø3,18 mm [0.125 in];<br>nickel-plated brass or thermoplastic   |
| <b>Electrical taper</b>         | CW audio, linear  | linear, log, reverse log   |



## Conductive Plastic Pots

578 Series



585 Series



590 Series

|                                 |   |   |   |
|---------------------------------|---|---|---|
| <b>Description</b>              | long life, precision                        | metric sizes available                  | multiple sections available                 |
| <b>Expected rotational life</b> | 2.5 M cycles                                | 10 k cycles                             | 50 k cycles                                 |
| <b>Element type</b>             | conductive plastic                          | carbon                                  | conductive plastic                          |
| <b>Power rating</b>             | 0.5 W                                       | 0.05 W                                  | 0.5 W                                       |
| <b>Termination</b>              | PC  | PC                                      | PC, solder hook                             |
| <b>Resistance range</b>         | 1 kOhm to 10 kOhm                           | 1 kOhm to 10 kOhm                       | 100 Ohm to 1 mOhm                           |
| <b>Housing material</b>         | glass-reinforced plastic                    | thermoplastic polyester                 | thermoplastic polyester                     |
| <b>Bushing</b>                  | Ø9,53 mm [0.375 in];<br>nickel-plated brass | M7 x 0.75 mm;<br>nickel-plated brass    | 3/8-32 NEF-2A;<br>nickel-plated brass       |
| <b>Shaft</b>                    | Ø6,35 mm [0.25 in];<br>nickel-plated brass  | Ø6 mm [0.24 in];<br>nickel-plated brass | Ø3,18 mm [0.125 in];<br>nickel plated brass |
| <b>Electrical taper</b>         | linear                                      | CW audio, linear                        | linear                                      |

# Potentiometers Line Guide



## Conductive Plastic Pots

### 640 Series

|                                 |   |
|---------------------------------|---|
| <b>Description</b>              | thru-shaft potentiometer, low profile housing |
| <b>Expected rotational life</b> | >1 million cycles full cycles                 |
| <b>Element type</b>             | conductive plastic                            |
| <b>Power rating</b>             | 0.5 W max.                                    |
| <b>Termination</b>              | three or six 20 AWG leadwires                 |
| <b>Resistance range</b>         | 1 kOhm to 1 MOhm, inclusive                   |
| <b>Housing material</b>         | reinforced thermoplastic                      |
| <b>Bushing</b>                  | none (slotted rotor)                          |
| <b>Shaft</b>                    | none (customer provided)                      |
| <b>Electrical taper</b>         | linear, linear quadrature                     |

## Cermet and Wirewound Pots



309, 409 Series



43, RA20 Series

|                                 |   |  |
|---------------------------------|---|--|
| <b>Description</b>              | <ul style="list-style-type: none"> <li>• 309: compact modular house</li> <li>• 409: sealed for board washing</li> </ul> | RA20 meets MIL-R-19                                  |
| <b>Expected rotational life</b> | 25 k cycles   | 10 k cycles  |
| <b>Element type</b>             | cermet  | wirewound  |
| <b>Power rating</b>             | 1 W   | 2 W  |
| <b>Termination</b>              | PC, solder hook   | solder lug   |
| <b>Resistance range</b>         | 100 Ohm to 5 MOhm   | 43: 10 Ohm to 50 kOhm<br>RA20: 50 Ohm to 15 kOhm     |
| <b>Housing material</b>         | thermoplastic polyester   | stainless steel                                      |
| <b>Bushing</b>                  | 1/4-32 NEF-2A, 3/8-32 NEF-2A;<br>nickel-plated brass; standard  | 3/8-32 NEF-2A;<br>stainless steel, standard, locking |
| <b>Shaft</b>                    | Ø3,18 mm [0.125 in], Ø6,35 mm [0.250 in];<br>nickel-plated brass  | various diameters;<br>nickel plated brass            |
| <b>Electrical taper</b>         | linear  | linear   |

## Cermet and Wirewound Pots



58, RA30 Series



591 Series



73 Series

|                                 |  |   |  |
|---------------------------------|--|---|--|
| <b>Description</b>              | RA30 meets MIL-R-19                                  | multiple sections available                     | 10-turn construction   |
| <b>Expected rotational life</b> | 25 k cycles  | 25 k cycles                                     | 50 k cycles  |
| <b>Element type</b>             | wirewound  | cermet  | wirewound  |
| <b>Power rating</b>             | 4 W  | 1 W   | 2 W  |
| <b>Termination</b>              | solder lug   | PC, solder hook                                 | solder lug   |
| <b>Resistance range</b>         | 58: 50 Ohm to 50 kOhm<br>RA30: 25 Ohm to 25 kOhm     | 500 Ohm to 100 kOhm                             | 100 Ohm to 100 kOhm  |
| <b>Housing material</b>         | stainless steel                                      | thermoplastic polyester                         | glass-filled nylon   |
| <b>Bushing</b>                  | 3/8-32 NEF-2A;<br>stainless steel; standard, locking | 3/8-32 NEF-2A;<br>nickel-plated brass; standard | 3/8-32 UNEF-2A;<br>nickel-plated brass; standard             |
| <b>Shaft</b>                    | various diameters;<br>nickel-plated brass            | Ø3,18 mm [0.125 in];<br>nickel-plated brass     | Ø6,35 mm [0.25 in];<br>stainless steel or glass filled nylon |
| <b>Electrical taper</b>         | linear   | linear  | linear   |

# Potentiometers Line Guide

## Linear Potentiometers



**AQLT Series**



**AQMLT Series**

|                                    |  |  |
|------------------------------------|--|--|
| <b>Description</b>                 | shaftless, waterproof linear position transducer | shaftless, waterproof linear position transducer |
| <b>Operating temperature range</b> | -40 °C to 80 °C [-40 °F to 176 °F]               | -40 °C to 80 °C [-40 °F to 176 °F]               |
| <b>Supply voltage</b>              | 30 Vdc max.                                      | 30 Vdc max.                                      |
| <b>Linearity</b>                   | ±1 %   | ±1 %   |
| <b>Starting force</b>              | 56,7 g [2 oz] max.                               | 28,35 g [1 oz] max.                              |
| <b>Backlash</b>                    | NA   | n/a  |
| <b>Total resistance</b>            | 6 kOhm to 38 kOhm                                | 750 Ohm to 18 kOhm                               |
| <b>Measurement range</b>           | 127 mm to 965 mm [5 in to 38 in]                 | 12,7 mm to 304,8 mm [0.5 in to 12 in]            |
| <b>Shaft</b>                       | NA   | n/a  |
| <b>Total mechanical travel</b>     | 154,94 mm to 967,74 mm<br>[6.1 in to 38.1 in]    | 15,24 mm to 307,34 mm<br>[0.6 in to 12.1 in]     |
| <b>Electrical travel</b>           | 152,4 mm to 965,2 mm [6 in to 38 in]             | 12,7 mm to 304,8 mm [0.5 in to 12 in]            |
| <b>Housing length</b>              | electrical travel + 54,87 mm [2.16 in]           | electrical travel + 38,1 mm [1.5 in]             |
| <b>Vibration</b>                   | 20 g/0,75 mm (rms) 5 Hz to 2 kHz                 | 20 g/0,75 mm (rms) 5 Hz to 2 kHz                 |
| <b>Shock</b>                       | 50 g 11 ms half sine                             | 50 g 11 ms half sine                             |
| <b>Expected operating life</b>     | one billion dither operations                    | one billion dither operations                    |
| <b>Resistance tolerance</b>        | ±20 %  | ±20 %  |
| <b>Insulation resistance</b>       | 500 mOhm at 500 Vdc                              | 500 mOhm at 500 Vdc                              |
| <b>Dielectric strength</b>         | 250 V rms  | 250 V rms  |
| <b>Termination</b>                 | cable  | cable  |

## Linear Potentiometers



MLT Series



DR Series

|                                    |  |  |
|------------------------------------|--|--|
| <b>Description</b>                 | plunger-driven linear transducer           | Durastar rodless, space-saving side actuator           |
| <b>Operating temperature range</b> | -40 °C to 80 °C [-40 °F to 176 °F]         | -65 °C to 105 °C [-85 °F to 221 °F]                    |
| <b>Supply voltage</b>              | 30 Vdc max.                                | 75 Vdc max.  |
| <b>Linearity</b>                   | ±1 %                                       | 0.1 % from 1% to 100% of theoretical electrical travel |
| <b>Starting force</b>              | 28,35 g [1 oz] max.                        | 0,45 kg [1.0 lb]                                       |
| <b>Backlash</b>                    | 0,0127 mm [0.0005 in] max.                 | 0,025 mm [0.001 in] max.                               |
| <b>Total resistance</b>            | 750 Ohm to 9 kOhm                          | 2 kOhm to 10 kOhm                                      |
| <b>Measurement range</b>           | 13 mm to 152 mm [0.5 in to 6 in]           | 102 mm to 1270 mm [4 in to 50 in]                      |
| <b>Shaft</b>                       | Ø3,18 mm [0.125]                           | M5 x 0.8   |
| <b>Total mechanical travel</b>     | 13,97 mm to 153,67 mm [0.55 in to 6.05 in] | 106 mm to 1275 mm [4.2 in to 50.2 in]                  |
| <b>Electrical travel</b>           | 12,7 mm to 152,4 mm [0.5 in to 6 in]       | 101,6 mm to 1270 mm [4 in to 50 in]                    |
| <b>Housing length</b>              | electrical travel + 30,48 mm [1.2 in]      | 250 mm to 1418 mm [9.84 in to 55.83 in]                |
| <b>Vibration</b>                   | 20 g/0,75 mm (rms) 5 Hz to 2 kHz           | 20 g/0,75 mm (rms) 5 Hz to 2 kHz                       |
| <b>Shock</b>                       | 50 g 11 ms half sine                       | 50 g 11 ms half sine                                   |
| <b>Expected operating life</b>     | one billion dither operations              | one billion dither operations                          |
| <b>Resistance tolerance</b>        | ±20 %                                      | ±20 %  |
| <b>Insulation resistance</b>       | 500 mOhm at 500 Vdc                        | 1000 mOhm at 500 Vdc                                   |
| <b>Dielectric strength</b>         | 1000 V rms                                 | 1000 V rms   |
| <b>Termination</b>                 | cable                                      | Hirschmann GDM   |

## Potentiometers Line Guide



### Linear Potentiometers

| Linear Potentiometers              | LFII Series   | SLF Series                                 | LT Series  |
|------------------------------------|---|--|--|
| <b>Description</b>                 | vibration-resistant, plunger-driven linear transducer   | short stroke version of the LFII           | plunger-driven linear transducer                         |
| <b>Operating temperature range</b> | -65 °C to 105 °C [-85 °F to 221 °F]   | -65 °C to 105 °C [-85 °F to 221 °F]        | -40 °C to 80 °C [-40 °F to 176 °F]                       |
| <b>Supply voltage</b>              | 30 Vdc max.   | 40 Vdc max.                                | 30 Vdc max.  |
| <b>Linearity</b>                   | ±1 %  | ±1 % or ±0.1 %                             | ±1 %   |
| <b>Starting force</b>              | 0,45 kg [1 lb] (standard);<br>LFIIW: 2,27 kg [5 lb] (water resistant)   | 1 lb (standard)<br>5 lb (water resistant)  | 28,35 g max. [1 oz max.]<br>12 oz max. (water resistant) |
| <b>Backlash</b>                    | 0,025 mm [0.001 in] max.  | 0,025 mm [0.001 in] max.                   | 0,00508 mm [0.0002 in] max.                              |
| <b>Total resistance</b>            | 5 kOhm  | 1,5 kOhm to 9 kOhm                         | 1 kOhm to 10 kOhm  |
| <b>Measurement range</b>           | 152 mm to 1219 mm [6 in to 48 in]   | 25 mm to 152 mm [1 in to 6 in]             | 25 mm to 254 mm [1 in to 10 in]                          |
| <b>Shaft</b>                       | Ø6,35 mm [0.25 in]  | Ø6,35 mm [0.25 in]                         | Ø3,18 mm [0.125]   |
| <b>Total mechanical travel</b>     | 154,6 mm to 1221,4 mm<br>[6,09 in to 48,09 in]  | 30,5 mm to 166,2 mm<br>[1,2 in to 6,15 in] | 26,7 mm to 255,3 mm<br>[1,05 in to 10,05 in]             |
| <b>Electrical travel</b>           | 152,4 mm to 1219,2 mm [6 in to 48 in]   | 25,4 mm to 152,4 mm [1 in to 6 in]         | 25,4 mm to 254 mm [1 in to 10 in]                        |
| <b>Housing length</b>              | electrical travel + 81,02 mm [3,19 in]  | electrical travel + 77,5 mm [3,05 in]      | electrical travel + 38,10 mm [1,50 in]                   |
| <b>Vibration</b>                   | 20 g/0,75 mm (rms) 5 Hz to 2 kHz (for vibration levels up to 50 g rms and higher, additional housing clamps are required) | 20 g/0,75 mm (rms) 5 Hz to 2 kHz           | 20 g/0,75 mm (rms) 5 Hz to 2 kHz                         |
| <b>Shock</b>                       | 50 g 11 ms half sine  | 50 g 11 ms half sine                       | 50 g 11 ms half sine                                     |
| <b>Expected operating life</b>     | one billion dither operations   | one billion dither operations              | one billion dither operations                            |
| <b>Resistance tolerance</b>        | ±20 %   | ±20 %                                      | ±20 %  |
| <b>Insulation resistance</b>       | 1000 mOhm at 500 Vdc  | n/a  | 500 mOhm at 500 Vdc                                      |
| <b>Dielectric strength</b>         | 1000 V rms  | n/a  | 1000 V rms   |
| <b>Termination</b>                 | connector, binder series 681  | connector, binder series 681               | cable  |

**Benefits:** Reduced cost commercial potentiometer with the benefits of a conductive plastic element. Potential applications include welding/heating controls, joysticks, and manual controls.

### 575 Series.

**Features:** Conductive plastic element • 0.5 W power rating • Reduced mounting profile • Quiet electrical output • Solder hook terminals for panel mounting • Smooth feel • Robust construction • All plastic construction • Linear taper

**Benefits:** Reduced cost commercial potentiometer with the benefits of a conductive plastic element. Potential applications include welding/heating controls, joysticks, and manual controls.

### 578 Series.

**Features:** Conductive plastic element • 0.5 W power rating • Variable resistor technology • Low mounting profile • Quiet electrical output • Precision control • PC terminals • Nickel-plated shaft and bushing • Smooth feel • Robust construction • Linear taper • Central tap version available

**Benefits:** Precision-type potentiometer with low torque and very linear tapers delivers enhanced control. Potential applications include off-road vehicles, electric vehicles, marine controls, material handling, personal mobility, manual controls, telecommunications, and audio equipment.

### 585 Series.

**Features:** Compact size • Carbon element • 0.05 W power rating • Horizontal mount • PC terminals • Metal shaft and bushings • Linear taper

**Benefits:** Designed to be used as a low-wattage component that can be panel mounted or PC mounted. Robust construction in a low-cost commercial package, using carbon composition elements. Potential applications include manual and audio controls, heating equipment, and telecommunications.

### 590 Series.

**Features:** Compact size • Conductive plastic element • 0.5 W power rating • Linear taper • PC terminals • Brass shaft and bushing • Linear taper

**Benefits:** Reduced cost potentiometer with the benefits of a conductive plastic element. Potential applications include manual controls, lighting and audio consoles, precision joysticks, welding and heating, and telecommunications.

### 640 Series.

**Features:** Thru-shaft configuration actuated by customer-provided actuator shaft • Reinforced, low-profile housing • Dust sealed with splash- or moisture-sealed options • Long rotational life of greater than one million cycles

**Benefits:** Thru-shaft configuration allows use in space-constrained applications where there may not be enough room for a shaft/bushing integral to the sensor. May be used in rugged environments where space constraints may be present. Designed to provide protection against dust or moisture ingress. Long rotational life promotes extended life in the application. Potential applications include position and movement detection in construction/agricultural vehicles/equipment, vehicle manual controls, pedals, steering equipment, audio/visual equipment, industrial vehicle attachments machine control joysticks, robotic arms, valve actuators and material handling equipment.

## CERMET AND WIREWOUND POTENTIOMETERS

### 309/409 Series.

**Features:** Compact • Modular package • Cermet element • 1 W power rating • Enhanced performance • 409 is sealed for board washing • PC and solder-hook terminals

**Benefits:** Reduced cost potentiometer that offers the temperature stability of a cermet element and a 1 watt power rating in a compact body. Stable over operating temperature. Potential applications include audio consoles, lighting controls, precision joysticks, telecom control systems, manual controls, medical equipment, telecommunications, and marine controls.

### 43/RA20 Series.

**Features:** Wirewound element • 2 W power rating • RA20 meets MIL-R-19 standards • Rugged metal construction • Nickel-plated brass shaft • Lock-style bushing available • Linear taper

**Benefits:** Very stable over operating temperature. Potential applications include manual controls, welding, and heating.

### 58/RA30 Series.

**Features:** Wirewound element • 4 W power rating • RA30 meets MIL-R-19 standards • Rugged metal construction • Nickel-plated brass shaft • Lock-style bushing available • Linear taper

**Benefits:** Designed to be stable over operating temperature. Potential applications include manual controls, welding, and heating.

### 591 Series.

**Features:** Compact size • Cermet element • 1 W power rating • Temperature stability • Linear taper • PC terminals • Brass shaft and bushing • Linear taper

**Benefits:** Reduced cost potentiometer with the benefits of a cermet element. Designed to be stable over operating temperature. Potential applications include manual controls, welding and heating, telecommunications.

### 73 Series.

**Features:** Wirewound element • 2 W power rating • 10-turn construction • Nickel-plated brass shaft and bushings • Linear taper

**Benefits:** Precision-type potentiometer made with a wirewound element. Offers 10 turns for enhanced resolution and accurate output. Potential applications include manual controls.

## LINEAR POTENTIOMETERS

### AQLT Series.

**Features:** 1/2 in body diameter

- Multiple finger-wiper design • Extruded wiper block guides • MystR® plastic element • Anodized extruded aluminum housing • Sealed construction • Precious metal contact • Absolute continuous measurement • Infinite resolution
- Tolerates clamping loads • Tested up to one billion operations • Intrinsically safe for Class I, II and III Division I, Groups A, B, C, D, E, F, and G for hazardous (indoor/outdoor) NEMA 4 locations

**Benefits:** Fits in tight spaces and clamps easily to cylinders. Improves shock and vibration performance. Smooth quiet motion; extends operating life. Enhanced performance in hostile environments. Low noise level often. Accurate position at power up. Magnetic actuator replaces the shaft found in traditional linear transducers and often eliminates need for additional stroke length mounting space. Enhanced life and often reliable operation in potential applications including in-tank level sensing, robotic motion control, woodworking guides, seismology, packaging and processing equipment, animated characters, marine steering systems, off-road vehicles, semiconductor process equipment, and medical equipment.

### AQMLT Series.

**Features:** 3/8 in body diameter

- Multiple finger-wiper design • Extruded wiper block guides • MystR® plastic element • Anodized extruded aluminum housing • Sealed construction • Precious metal contact • Absolute continuous measurement • Infinite resolution
- Tolerates clamping loads • Tested up to one billion operations • Intrinsically safe for Class I, II and III Division I, Groups A, B, C, D, E, F, and G for hazardous (indoor/outdoor) NEMA 4 locations

**Benefits:** Fits in tight spaces and clamps easily to cylinders. Improves shock and vibration performance. Smooth quiet motion; extends operating life. Enhanced performance in hostile environments. Low noise level over entire life. Accurate position at power up. Magnetic actuator

replaces the shaft found in traditional linear transducers and often eliminates need for additional stroke length mounting space. Enhanced life and often reliable operation in potential applications including in-tank level sensing, robotic motion control, woodworking guides, seismology, packaging and processing equipment, animated characters, marine steering systems, off-road vehicles, semiconductor process equipment, and medical equipment.

### LFII Series.

**Features:** Vibration-damped element

- Extruded wiper carrier guides • Precious metal wipers • MystR® plastic elements
- Stainless-steel shaft • Enhanced dc level output • Enhanced performance bearings
- Infinite resolution • Absolute continuous measurement • Shaft seals • Water-resistant option available • Metric Series available • Tested up to one billion operations • Intrinsically safe for Class I, II and III Division I, Groups A, B, C, D, E, F, and G for hazardous (indoor/outdoor) NEMA 4 locations

**Benefits:** No wiper bounce in high vibration environments. Smooth, easy operation under high side loads and large misalignment. Provides enhanced performance, low noise, no oxidation. Works with simple controllers. Enhanced life even under side load conditions. Often accurate position at power-up. Protects internal components from harsh environments. Potential applications include injection molding machines, printing presses, meat packing equipment, drill presses, woodworking machines, cranes, front-end loaders, and scales.

### SLF Series.

**Features:** Precious metal wipers • 0.081 in thick housing with 6 mm [0.25 in] shaft

- MystR® plastic elements • High level dc output • Enhanced performance bearings
- Absolute continuous measurement
- Shaft seals • Infinite resolution • Water-resistant option available • Tested up to one billion operations • Intrinsically safe for Class I, II and III Division I, Groups A, B, C, D, E, F, and G for hazardous (indoor/outdoor) NEMA 4 locations

**Benefits:** Provides enhanced

performance, low noise. Rugged construction for manufacturing environment. Enhanced life even with side load conditions. Protects internal components from factory environment. Often accurate position at power-up. Works with simple controls. Provides a high resolution, often absolute position measurement without external signal conditioners. Potential applications include injection molding machines, printing presses, meat packing equipment, drill presses, woodworking machines, cranes, and front-end loaders.

## LT Series.

**Features:** 1/2 in diameter • Dual-wiper design • Extruded wiper-block guides • MystR® plastic element • Stainless-steel shaft • Anodized extruded aluminum housing • Precious metal contact • Absolute continuous measurement • Shaft seals for spray-or-hose-down environments • Infinite resolution • Enhanced reliability • Tested up to one billion operations • Intrinsically safe for Class I, II and III Division I, Groups A, B, C, D, E, F, and G for hazardous (indoor/outdoor) NEMA 4 locations

**Benefits:** Fits into tight spaces, clamps easily to cylinders. Improves shock and vibration performance. Smooth, quiet motion; enhances operating life. Tolerates clamping loads. Rugged construction to withstand hostile environments. Often accurate position at power up. Provides usable output at high vibration levels for long periods. Diameter is among the smallest available and can replace displacement transducers in many applications. Potential applications include animated characters, gauging, fluid flow meters, seismology, semiconductor processing, linear actuators, hospital beds, and other medical equipment.

## MLT Series.

**Features:** 3/8 in diameter • Dual-wiper design Extruded wiper-block guides • MystR® plastic element • Stainless-steel shaft • Internal spring-loaded ball joint • Anodized extruded aluminum housing • Precious metal contact • Absolute continuous measurement • Infinite resolution • Enhanced reliability • Tested up to one billion operations • Intrinsically safe for Class I, II and III Division I, Groups A, B, C, D, E, F, and G for hazardous (indoor/outdoor) NEMA 4 locations

**Benefits:** Fits into tight spaces, clamps easily to cylinders. Improves shock and vibration performance. Smooth, quiet motion; extends operating life. Tolerates clamping loads. Rugged construction to withstand hostile environments. Often accurate position at power up. Provides usable output at high vibration levels for long periods. Reduces error from shaft misalignment. Diameter is among the smallest available and can replace displacement transducers in many applications. Potential applications include animated characters, gauging, fluid flow meters, seismology, semiconductor processing, linear actuators, hospital beds, and other medical equipment.

## DR Series.

**Features:** Vibration-damped element • Extended side bearing • Extruded wiper-carrier guides • Rugged ribbed housing • Precious metal wipers • MystR® plastic elements • High dc level output • Enhanced performance bearings • Absolute continuous measurement • Infinite resolution • NEMA 4 sealing • Tested up to one billion operations • Intrinsically safe for Class I, II and III Division I, Groups A, B, C, D, E, F, and G for hazardous (indoor/outdoor) NEMA 4 locations

**Benefits:** No wiper bounce in high vibration environments. Improved life under high misalignment. Smooth, whisper-quiet operation under large misalignment. Rugged construction to withstand hostile environments. Provides enhanced performance, low noise, no oxidation. Works with simple controllers. Enhanced life even under side load conditions. Often accurate position at power-up. This long-lasting, rodless, side-sealed transducer may be used to replace rodded potentiometers in contaminated applications. Potential applications include injection molding machines, printing presses, meat packing equipment, drill presses, woodworking machines, cranes, front-end loaders, and scales.

**Warranty.** Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

For more information about Sensing and Control products, visit [sensing.honeywell.com](http://sensing.honeywell.com) or call +1-815-235-6847 or 1-800-537-6945; email inquiries to [info.sc@honeywell.com](mailto:info.sc@honeywell.com)

## **WARNING** **PERSONAL INJURY**

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

## **WARNING** **MISUSE OF DOCUMENTATION**

- The information presented in this catalogue is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**