

Honeywell



Representative photograph, actual product appearance may vary.

Due to regional agency approval requirements, some products may not be available in your area. Please contact your regional Honeywell office regarding your product of choice.

600EN-128-CN1

600 Series Optical, 128 Pulse Per Rev, 2-bit gray code

Features

- Long life-10 million revolutions minimum (no contacts)
- Cost effective, eliminates need for A/D converters
- Stainless steel shafts and nickel-plated bushings
- Stability from -40 °C to 65 °C [-40 °F to 149 °F]
- Cable and printed circuit terminations available

Typical Applications

- Motion sensing and control
- Motor control
- Flow control
- Low-to-high input for test and measurement
- Medical and instrumentation
- Robotics
- Computer peripherals

Description

The 600 Series controls are manually operated, rotary, optical encoders that output two square waves in quadrature at a rate of 128 pulses 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.

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| Product Specifications | |
|-----------------------------|---|
| Encoder Type | Optical |
| Pulse Per Rev | 128 pulses/rev |
| Dome Switch | No |
| Output | 2-square wave, Channel A leads Channel B by 90 ° electrically in counterclockwise direction |
| Electrical Travel | Continuous |
| Source Voltage Range | 4.75 Vdc min., 5.0 Vdc nom., 5.25 V max. |
| Suppy Current | 30 mA |
| Voltage Out High | 2.4 Vdc min. |
| Voltage Out Low | 0.4 Vdc max. |
| Pull-up Resistor | 10 kOhms |
| Operating Speed | 300 RPM max. |
| Operating Torque | 0,011 Nm [1.5 oz in] max. |
| Terminals | 190,5 mm [7.5 in] long cable/connector |
| Terminals Strength | 0,9 kg [2.0 lbs] |
| Housing | Molded thermoplastic |
| Mechanical Travel | Continuous |
| Rotational Life | 10 million shaft rotations |
| Shaft Axial Force | 6,8 kg [15 lbs] push/pull |
| Shaft End Play | 0,127 mm [0.005 in] max. |
| Shaft Radial Play | 0,254 mm [0.01 in] at 25,4 mm [1 in] |
| Shaft Material | Stainless Steel |
| Shaft Diameter | 6,35 mm [0.25 in] |
| Shaft length | 19,05 mm [0.75 in] |
| Bushing Material | Nichel plated brass |
| Bushing Diameter | 9,53 mm [0.375 in] x 32 NEF-2A |

| | |
|------------------------------|--|
| Bushing length | 9,53 mm [0.375 in] |
| Operating Temperature | -40 °C to 65 °C [-40 °F to 149 °F] |
| Storage Temperature | -55 °C to 110 °C [-67 °F to 230 °F] |
| Humidity | 85% RH at 40 °C [104 °F] 240 Hr |
| Shock | 100 G at 6 per MIL-STD-202; Method 213, Condition C |
| Vibration | 10 Hz to 2000 Hz, 15 G; MIL-STD-202, Method 204, Condition C |
| Series Name | 600 Series |
| Availability | Global |
| UNSPSC Code | 30211929 |
| UNSPSC Commodity | 30211929 Encoders |



600EN-128-CN1

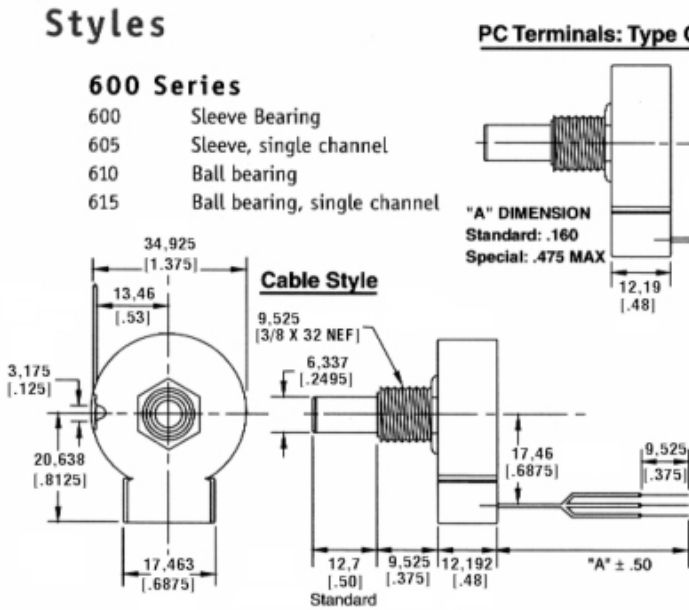
600 Series Optical, 128 Pulse Per Rev, 2-bit gray code

DIMENSIONS (For Reference Only) mm [in]

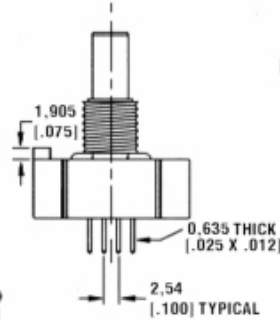
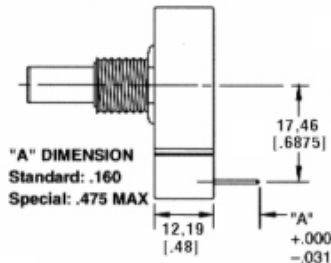
Styles

600 Series

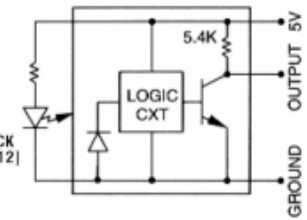
- 600 Sleeve Bearing
- 605 Sleeve, single channel
- 610 Ball bearing
- 615 Ball bearing, single channel



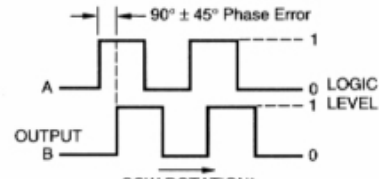
PC Terminals: Type C-24



Block Diagram One Output

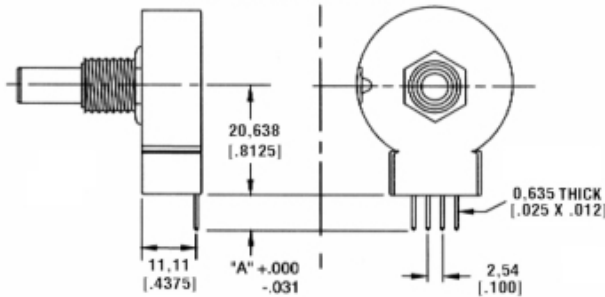


Output Waveform



*Channel A leads Channel B by 90° electrically in CCW direction

PC Terminals Type B-66



| TERM # | FUNCTION |
|--------|----------------------|
| 1 | 5VDC ± 5% @ 30ma MAX |
| 2 | "A" Out |
| 3 | Ground |
| 4 | "B" Out |

| "A" DIMENSIONS | |
|----------------|-------------------|
| Standard | 4.57 [.180] |
| Special | 10.16 [.400] MAX. |

Dimension Tolerances, Unless Otherwise Specified

FRACTIONS = ± 1/64 (0.40mm) DECIMALS = ± .005 GRDS = ± .010 (0.25mm)

NOTE:

- "A" Cable Length Standard 190.5 [7.5] Other lengths available, specified by customer
- "A" and "B" Outputs are TTL compatible on all models

| COLOR | FUNCTION |
|--------|----------------------|
| Red | 5VDC ± 5% @ 30ma MAX |
| Green | Ground |
| Yellow | "A" Out |
| Orange | "B" Out |

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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 product sheet (or catalog) 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.

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