

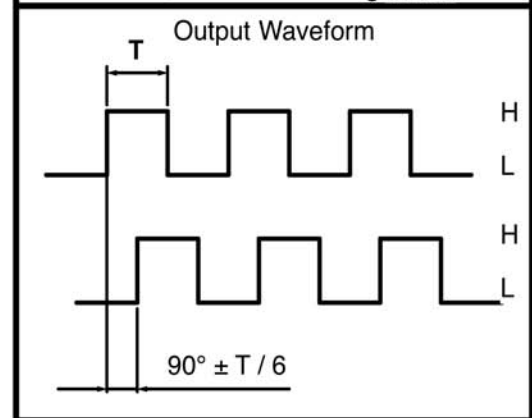
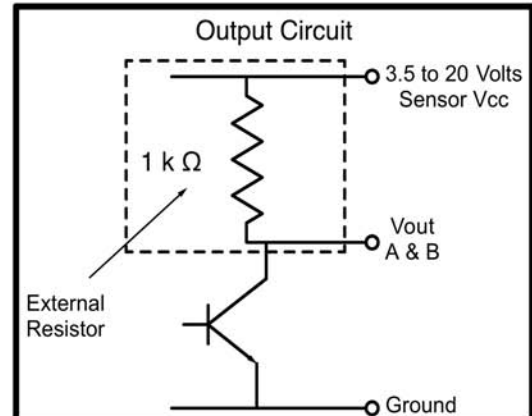
Magnetic Encoders - Integrated

Low Cost - Single & Quadrature Channels



Global Motion Products

| | |
|---|--------------------------------------|
| Supply Voltage - Max | 20.0 Volt |
| Supply Voltage - Min | 3.5 Volt |
| Supply Voltage - Symbol | Vcc |
| Output Saturation Voltage - Max | 700 mVolts |
| Output Saturation Voltage - Ref | 300 mVolts |
| Output Saturation Voltage - Symbol | Vce(sat) |
| Output Saturation Voltage - Test Conditions | Vcc =14 Volts; Ic = 20mA |
| Output Leakage Current - Max | 10.0 μAmp |
| Output Leakage Current - Ref | < 0.1 μAmp |
| Output Leakage Current - Symbol | Icex |
| Output Leakage Current - Test Conditions | Vce =14 Volts; Vcc = 14 V |
| Supply Current - Max | 10 mAmp |
| Supply Current - Ref | 5 mAmp |
| Supply Current - Symbol | Ice |
| Supply Current - Test Conditions | Vcc =20 Volts, Output Open |
| Output Rise Time - Max | 1.5 μSec |
| Output Rise Time - Ref | 0.3 μSec |
| Output Rise Time - Symbol | tr |
| Output Rise Time - Test Condition | Vce =14 Volts; RI = 820 Ω; CI = 20pF |
| Output Fall Time - Max | 1.5 μSec |
| Output Fall Time - Ref | 0.3 μSec |
| Output Fall Time - Symbol | tf |
| Output Fall Time - Test Conditions | Vce =14 Volts; RI = 820 Ω; CI = 20pF |
| Max Temperature - Operating | 60°C |
| Min Temperature - Operating | -10°C |
| Relative Humidity - Operating | 20% to 85% RH |

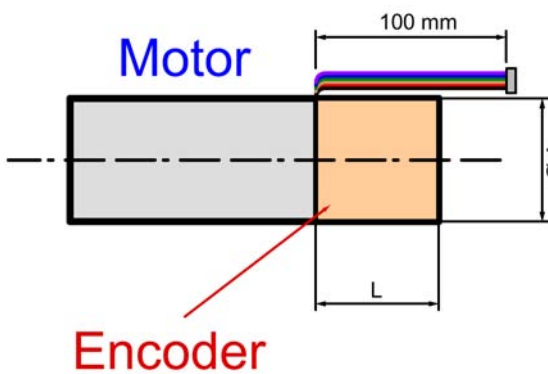


Two Channel Encoder

| Connector Pin | Color | Function |
|---------------|--------|--------------------|
| 1 | Black | - Motor |
| 2 | Red | + Motor |
| 3 | Brown | Hall Sensor Vcc |
| 4 | Green | Hall Sensor Ground |
| 5 | Blue | Hall Sensor A Vout |
| 6 | Purple | Hall Sensor B Vout |

One Channel Encoder

| Connector Pin | Color | Function |
|---------------|--------|--------------------|
| 1 | Black | - Motor |
| 2 | Red | + Motor |
| 3 | Brown | Hall Sensor Vcc |
| 4 | Green | Hall Sensor Ground |
| 5 | Blue | Hall Sensor A Vout |
| 6 | Purple | No Function |



- CONNECTOR A
JST ZHR-6; P=1.5-6P
26 AWG, UL 1061 Wires
- CONNECTOR B
JST PHR-6; P=2.0-6P
24 AWG, UL 1007 Wires
- CONNECTORS C - Two
JST PHR-4; P=2.0-6P
24 AWG, UL 1007 Wires
Molex 09-50-3021; P= 3.96-2P
18 AWG 18, UL 1007 Wires

Note:

For encoder resolution and channel options, how to order, diameter and encoder length details refer to the following pages. Resolution options vary by motor diameter, as do connector(s) and wire gauge(s).

Below 30 mm motor diameter the magnetic encoder does not have the option for a dust cap at this time. The encoder is exposed and the dimensions represent the largest dimension of the encoder. On 30 mm and larger diameter motors an OPTIONAL Dust Cap is available. Part Numbers here represent no Dust Cap.

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| Pulses per Revolution per Track | Track Number | Dust Cap Option | Cover ØA mm | Cover or Encoder L - mm | Connector Type(s) | Compatible Gearmotor Series | Order Part Number |
|---------------------------------|--------------|-----------------|-------------|-------------------------|-------------------|---------------------------------------|-------------------|
| 3 | X | No | 12.0 | 6.5 | A | A12----GM-- | EM120003X00 |
| 1 | X | No | 15.4 | 6.5 | A | A16----AS-- | EM160001X00 |
| 3 | X | No | 15.4 | 6.5 | A | A16----AS-- | EM160003X00 |
| 1 | X | No | 20.3 | 8.5 | B | S20----AM--; A22----GM--; A22----HM-- | EM210001X00 |
| 3 | X | No | 20.3 | 8.5 | B | S20----AM--; A22----GM--; A22----HM-- | EM210003X00 |
| 1 | X | Yes | 30.0 | 12.6 | B | A30----GM-- | EM300001X00 |
| 3 | X | Yes | 30.0 | 12.6 | B | A30----GM-- | EM300003X00 |
| 7 | X | Yes | 30.0 | 12.6 | B | A30----GM-- | EM300007X00 |
| 7 | X | Yes | 32.0 | 14.3 | B | A32----GM-- | EM320007X00 |
| 7 | X | Yes | 36.0 | 13.5 | B | A36----GM-- | EM360007X00 |
| 1 | X | Yes | 42.5 | 15.5 | C | A45----A--- | EM430001X00 |
| 5 | X | Yes | 42.5 | 15.5 | C | A45----A--- | EM430005X00 |
| 1 | X | Yes | 52.0 | 18.0 | C | A52----GM-- | EM520001X00 |
| 1 | X | Yes | 52.0 | 18.0 | C | A52----GM-- | EM520001X00 |
| 5 | X | Yes | 54.0 | 18.0 | C | A54----GM-- | EM540005X00 |
| 5 | X | Yes | 54.0 | 18.0 | C | A54----GM-- | EM540005X00 |
| 1 | X & Y | No | 12.0 | 6.5 | A | A12----GM-- | EM120001Y00 |
| 3 | X & Y | No | 12.0 | 6.5 | A | A12----GM-- | EM120003Y00 |
| 1 | X & Y | No | 15.4 | 6.5 | A | A16----AS-- | EM160001Y00 |
| 3 | X & Y | No | 15.4 | 6.5 | A | A16----AS-- | EM160003Y00 |
| 1 | X & Y | No | 20.3 | 8.5 | B | S20----AM--; A22----GM--; A22----HM-- | EM210001Y00 |
| 3 | X & Y | No | 20.3 | 8.5 | B | S20----AM--; A22----GM--; A22----HM-- | EM210003Y00 |
| 1 | X & Y | Yes | 30.0 | 12.6 | B | A30----GM-- | EM300001Y00 |
| 3 | X & Y | Yes | 30.0 | 12.6 | B | A30----GM-- | EM300003Y00 |
| 7 | X & Y | Yes | 30.0 | 12.6 | B | A30----GM-- | EM300007Y00 |
| 7 | X & Y | Yes | 32.0 | 14.3 | B | A32----GM-- | EM320007Y00 |
| 7 | X & Y | Yes | 36.0 | 13.5 | B | A36----GM-- | EM360007Y00 |
| 1 | X & Y | Yes | 42.5 | 15.5 | C | A45----A--- | EM430001Y00 |
| 5 | X & Y | Yes | 42.5 | 15.5 | C | A45----A--- | EM430005Y00 |
| 1 | X & Y | Yes | 52.0 | 18.0 | C | A52----GM-- | EM520001Y00 |
| 1 | X & Y | Yes | 52.0 | 18.0 | C | A52----GM-- | EM520005Y00 |
| 5 | X & Y | Yes | 54.0 | 18.0 | C | A54----GM-- | EM540001Y00 |
| 5 | X & Y | Yes | 54.0 | 18.0 | C | A54----GM-- | EM540005Y00 |

Global Motion Products

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Specifications Subject to change without notice