Rotary Encoder E6B2-C

New General-purpose Incremental Rotary Encoder

- A wide operating voltage range of 5 to 24 VDC (open collector model).
- Resolution of 2,000 pulses/revolution in 40-mm housing.
- Phase Z can be adjusted with ease using the origin indicating function.
- A large load of 30 N in the radial direction and 20 N in the thrust direction is permitted.
- The load short-circuit and reversed connection protecting circuit assures highly reliable operation.
- A line driver output model is available. (Cable extends up to 100 m.)

Ordering Information

<table>
<thead>
<tr>
<th>Supply voltage</th>
<th>Output configuration</th>
<th>Resolution (P/R)</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 24 VDC</td>
<td>NPN open collector output</td>
<td>10/20/30/40/50/60/100/200/300/360/400/500/600/720/800/1,000/1,024/1,200/1,500/1,800/2,000</td>
<td>E6B2-CWZ6C</td>
</tr>
<tr>
<td>12 to 24 VDC</td>
<td>PNP open collector output</td>
<td>100/200/360/500/600/1,000/2,000</td>
<td>E6B2-CWZ5B</td>
</tr>
<tr>
<td>5 to 12 VDC</td>
<td>Voltage output</td>
<td>10/20/30/40/50/60/100/200/300/360/400/500/600/1,000/1,200/1,500/1,800/2,000</td>
<td>E6B2-CWZ3E</td>
</tr>
<tr>
<td>5 VDC</td>
<td>Line driver output</td>
<td>10/20/30/40/50/60/100/200/300/360/400/500/600/1,000/1,024/1,200/1,500/1,800/2,000</td>
<td>E6B2-CWZ1X</td>
</tr>
</tbody>
</table>

Note: When ordering, specify the resolution together with the model number.

■ Accessories (Order Separately)

<table>
<thead>
<tr>
<th>Name</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coupling</td>
<td>E69-C06B (attachment)</td>
</tr>
<tr>
<td></td>
<td>E69-C68B</td>
</tr>
<tr>
<td></td>
<td>E69-C610B</td>
</tr>
<tr>
<td></td>
<td>E69-C06M</td>
</tr>
<tr>
<td>Flange</td>
<td>E69-FBA</td>
</tr>
<tr>
<td></td>
<td>E69-FBA02 (E69-2 Mounting Bracket included)</td>
</tr>
<tr>
<td>Mounting Bracket</td>
<td>E69-2</td>
</tr>
</tbody>
</table>

Application Example

Filling Control

![Filling Control Diagram]
Specifications

### Ratings/Characteristics

#### Electrical

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply voltage</td>
<td>5 VDC –5% to 24 VDC +15%</td>
<td>12 VDC –10% to 24 VDC +15%</td>
<td>5 VDC –5% to 12 VDC +10%</td>
<td>5 VDC ±5%</td>
</tr>
<tr>
<td>Current consumption</td>
<td>70 mA max.</td>
<td>80 mA max.</td>
<td>100/200/300/400/500/600/ 1,000/2,000 P/R</td>
<td>130 mA max.</td>
</tr>
<tr>
<td>Resolution</td>
<td>10/20/30/40/50/60/100/200/300/400/500/600/720/800/1,000/1,024/1,200/1,500/1,800/2,000 P/R</td>
<td>100/200/300/400/500/600/1,000/2,000 P/R</td>
<td>10/20/30/40/50/60/100/200/300/400/500/600/1,000/1,024/1,200/1,500/1,800/2,000 P/R</td>
<td></td>
</tr>
<tr>
<td>Output configuration</td>
<td>Open collector</td>
<td>Open collector</td>
<td>Voltage</td>
<td>Line driver (see note 2)</td>
</tr>
<tr>
<td>Output capacity</td>
<td>30 VDC max.</td>
<td>35 mA max.</td>
<td>35 mA max.</td>
<td>AM26LS31 equivalent</td>
</tr>
<tr>
<td></td>
<td>Residual voltage:</td>
<td>0.4 V max.</td>
<td>Residual voltage:</td>
<td>Output current:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>High level = I_o = –20 mA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Low level = I_s = 20 mA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Output voltage:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>High level = V_o = 2.5 V min.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Low level = V_s = 0.5 V max.</td>
</tr>
<tr>
<td>Max. response frequency</td>
<td>100 kHz</td>
<td>50 kHz</td>
<td>100 kHz</td>
<td>100 kHz</td>
</tr>
<tr>
<td>(see note 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase difference on output</td>
<td>90°±45° between A and B (1/4T±1/8T)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rise and fall times of</td>
<td>1 μs max.</td>
<td>1 μs max.</td>
<td>1 μs max.</td>
<td>0.1 μs max.</td>
</tr>
<tr>
<td>output</td>
<td>(control output voltage: 5 V; load resistance: 1 kΩ; cable length: 0.5 m)</td>
<td>(cable length: 2 m; I_{sink}: 10 mA max.)</td>
<td>(cable length: 0.5 m; I_{sink}: 10 mA max.)</td>
<td>(cable length: 0.5 m; I_o: ~20 mA; I_s: 20 mA)</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>20 M2μ min. (at 500 VDC) between carry parts and case</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dielectric strength</td>
<td>500 VAC, 50/60 Hz for 1 min between carry parts and case</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
1. The maximum electrical response revolution is determined by the resolution and maximum response frequency as follows:
   Maximum electrical response frequency (rpm) = Maximum response frequency/resolution x 60
   This means that the E6B2-C Rotary Encoder will not operate electrically if its revolution exceeds the maximum electrical response revolution.
2. The line driver output is a data transmission circuit compatible with RS-422A and long-distance transmission is possible with a twisted-pair cable.
3. An inrush current of approximately 9 A will flow for approximately 0.3 ms when the power is turned ON.

#### Mechanical

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaft loading</td>
<td>Radial: 30 N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thrust: 20 N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moment of inertia</td>
<td>1 x 10^{-6} kg • m² max.; 3 x 10^{-7} kg • m² max. at 600 P/R max.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Starting torque</td>
<td>980 μN • m max.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. permissible revolution</td>
<td>6,000 rpm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vibration resistance</td>
<td>Destruction: 10 to 500 Hz, 150 m/s² or 2-mm double amplitude for 11 min 3 times each in X, Y, and Z directions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shock resistance</td>
<td>Destruction: 1,000 m/s² 3 times each in X, Y, and Z directions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 100 g max. (cable length: 0.5 m)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Environmental

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature</td>
<td>Operating: –10°C to 70°C (with no icing)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Storage: –25°C to 85°C (with no icing)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient humidity</td>
<td>Operating: 35% to 85% (with no condensation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IEC60529 IP50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
 Operation

■ Output Circuits

**E6B2-CWZ6C**

- **Main circuit**
  - NPN transistor
  - 3.3 Ω
- **Output signal**
  - Black, white, orange
  - 5 VDC -5% to 24 VDC +15%
- **Blue**
  - 0 V
- **Ground**
  - (Shielded)

**E6B2-CWZ3E**

- **Main circuit**
  - NPN transistor
  - 3.3 Ω
- **Output signal**
  - Black, white, orange
  - 5 VDC -5% to 12 VDC +10%
- **Blue**
  - 0 V
- **Ground**
  - (Shielded)

**E6B2-CWZ5B**

- **Main circuit**
  - PNP transistor
  - 3.3 Ω
- **Output signal**
  - Black, white, orange
  - 35 mA max.
- **Blue**
  - 0 V
- **Ground**
  - (Shielded)

**E6B2-CWZ1X**

- **Main circuit**
  - AM26LS31 or equivalent
- **Output signal**
  - Black, white, orange (with red stripes)
  - 20 mA max.
- **Blue**
  - 0 V
- **Ground**
  - (Shielded)
Timing Charts
Open Collector Output
E6B2-CWZ6C
E6B2-CWZ5B

Direction or resolution: CW
(As viewed from the end of the shaft)

<table>
<thead>
<tr>
<th>Phase</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase A</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>Phase B</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>Phase Z</td>
<td>ON</td>
<td>OFF</td>
</tr>
</tbody>
</table>

Note: Phase A is 1/4±1/8T faster than phase B. The ONs in the above timing chart mean that the output transistor is ON and the OFFs mean that the output transistor is OFF.

Direction or resolution: CCW
(As viewed from the end of the shaft)

<table>
<thead>
<tr>
<th>Phase</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase A</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>Phase B</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>Phase Z</td>
<td>ON</td>
<td>OFF</td>
</tr>
</tbody>
</table>

Note: Phase A is 1/4±1/8T slower than phase B.

Voltage Output
E6B2-CWZ3E

Direction or resolution: CW
(As viewed from the end of the shaft)

<table>
<thead>
<tr>
<th>Phase</th>
<th>H</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase A</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Phase B</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Phase Z</td>
<td>H</td>
<td>L</td>
</tr>
</tbody>
</table>

Note: Phase A is 1/4±1/8T faster than phase B.

Direction or resolution: CCW
(As viewed from the end of the shaft)

<table>
<thead>
<tr>
<th>Phase</th>
<th>H</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase A</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Phase B</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Phase Z</td>
<td>H</td>
<td>L</td>
</tr>
</tbody>
</table>

Note: Phase A is 1/4±1/8T slower than phase B.

Line Driver Output
E6B2-CWZ1X

Direction or resolution: CW
(As viewed from the end of the shaft)

<table>
<thead>
<tr>
<th>Phase</th>
<th>H</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase A</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Phase B</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Phase Z</td>
<td>H</td>
<td>L</td>
</tr>
</tbody>
</table>

Direction or resolution: CCW
(As viewed from the end of the shaft)

<table>
<thead>
<tr>
<th>Phase</th>
<th>H</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase A</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Phase B</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Phase Z</td>
<td>H</td>
<td>L</td>
</tr>
</tbody>
</table>

Note: The line driver output circuit is an RS-422A data transmission circuit consisting of two balanced output lines. The relationship between the two output lines is on an equal status. This means that if the level of the signal on a line is H, the level of the signal on the other line is L. The noise-resistant line driver output circuit assures high-speed data transmission.
**Input to More than One Counter from Encoder (with Voltage Output)**

Use the following formula to obtain the number of counters to be connected to a single E6B2-C Rotary Encoder.

\[
\text{Number of counters (N)} = \frac{R1 \cdot (E-V)}{V \cdot R2}
\]

- **E**: Voltage supplied to Rotary Encoder
- **V**: Minimum input voltage of the counter
- **R2**: Output resistance of the Rotary Encoder
- **R1**: Input resistance of the counter

**Origin Indication**

It is easy to adjust the position of phase Z with the origin indication function. The following illustration (on the left-hand side) shows the relationship between phase Z and the origin. Set cut face D to the origin as shown in the illustration (on the right-hand side).

**Output Protection Circuit**

The E6B2-C (open collector model with voltage output) incorporates a circuit preventing the E6B2-C from damage due to a short-circuited load and reversed connection.
Dimensions

Note: All units are in millimeters unless otherwise indicated.

E6B2-C

Coupling
- E69-C06B (Included)
- E69-C68B (Sold Separately, Different Diameter)
- E69-C610B (Sold Separately, Different Diameter)

Note: The coupling is made of glass-reinforced PBT.

E69-C06M (Sold Separately, Different Diameter)

Note: The coupling is made of extra super duralumin.

Flange (Sold Separately)
- E69-FBA
- E69-FBA02

Mounting Bracket (Three Pieces as a Set)
- E69-2 (One Set Provided with the E69-FBA02)

5-dia. 5-conductor insulated round PVC shielded cable (18 x 0.12 dia.); standard length of 50 cm; (8 conductors for the line driver)

Origin of phase Z
Three, M3 holes
Depth: 7 mm

30±0.2 dia.
30°
Four, M3 hexagon socket head setscrews

Brass bushing
6H8 dia.
15 dia.

24.8
6H8 dia.
19 dia.

25.6
6H8 dia.
22 dia.

Four, 4 hexagon socket head setscrews

6H8 dia.
19.1 dia.

Four, M3 hexagon socket heat setscrews

6H8 dia.
15 dia.

Four, M4 hexagon socket heat setscrews

Brass bushing
6.8
3.6

9.6
6.8
3.6

Four, M5

58±0.2 dia.

Three, M5

120°

20 dia.
120°

30 dia.
120°

42 dia.
120°

15 dia.
120°

20.2 dia.
120°

42 dia.
120°

20.2 dia.
120°

The flange is made of SPCC. $t = 3.2$

3.3-dia. holes
Three, 3.5-dia. holes with 6.5-dia. countersinking
20.2-dia. hole

Four, R3
33±0.15

33±0.15

46 dia.

46 dia.

20.2±0.1 dia.

20.2±0.1 dia.

Three, 3.5-dia. holes with 6.5-dia. countersinking

The flange is made of SPCC. $t = 3.2$

Three, M5

58±0.2 dia.

20 dia.
Installation

Connection
Be sure to connect the external terminals correctly or the E6B2-C Rotary Encoder may be damaged.

**E6B2-CWZ6C/-CWZ5B/-CWZ3E**

<table>
<thead>
<tr>
<th>Color</th>
<th>Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown</td>
<td>Power supply (+VCC)</td>
</tr>
<tr>
<td>Black</td>
<td>Output phase A</td>
</tr>
<tr>
<td>White</td>
<td>Output phase B</td>
</tr>
<tr>
<td>Orange</td>
<td>Output phase Z</td>
</tr>
<tr>
<td>Blue</td>
<td>0 V (common)</td>
</tr>
</tbody>
</table>

**E6B2-CWZ1X**

<table>
<thead>
<tr>
<th>Color</th>
<th>Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown</td>
<td>Power supply (+VCC)</td>
</tr>
<tr>
<td>Black</td>
<td>Output phase A</td>
</tr>
<tr>
<td>White</td>
<td>Output phase B</td>
</tr>
<tr>
<td>Orange</td>
<td>Output phase Z</td>
</tr>
<tr>
<td>Black/red stripes</td>
<td>Output phase X</td>
</tr>
<tr>
<td>White/red stripes</td>
<td>Output phase Y</td>
</tr>
<tr>
<td>Orange/red stripes</td>
<td>Output phase Z</td>
</tr>
<tr>
<td>Blue</td>
<td>0 V (common)</td>
</tr>
</tbody>
</table>

Note: 1. The external conductor (shield) of the shielded cable is not connected to the internal conductors nor to the case.
2. All the phases A, B, and Z are in the same circuit.
3. Connect the GND to the 0-V line or to the ground terminal.

Connections with Peripheral Devices

<table>
<thead>
<tr>
<th>Coupling</th>
<th>Specification</th>
<th>Resin, standard type</th>
<th>Resin, non-standard opening diameter</th>
<th>Metal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internal shaft diameter (mm)</td>
<td>4 (H8), 13</td>
<td>6 (H8), 15</td>
<td>8 (H8), 19</td>
</tr>
<tr>
<td>E6B2, 6-mm diameter</td>
<td>C</td>
<td>A</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>

Note:  A: Possible to connect directly in most cases.
B: Possible to connect, but an independent power supply or pull-up resistor will be required.
C: Impossible to connect.

Connection Examples

Connection to H7CR-CW Counter

![Connection Diagram](connection_diagram.png)

Features of H7CR

- DIN-sized (DIN 48) counter incorporating a prescale function converting the measured value to the actual value.
- Synchronized output and ± indication are available (± area models).
- Models with a general-purpose six-digit display and four-digit display are available.

Connection to K3NR-NB/K3NP-NB Rotary Intelligent Signal Processor

Features of K3NR/K3NP

- Each model incorporates a prescale function with an input range of 50 kHz and the measurement accuracy is 0.006%.
- A variety of outputs, including relay, transistor, BCD, linear, and communications outputs, are available.
Precautions

Mounting

Mounting Procedure

1. Insert the shaft into the coupling.

2. Secure the Rotary Encoder.

Refer to the table on the right for the maximum insertion length of the shaft into the coupling.

<table>
<thead>
<tr>
<th>Coupling</th>
<th>Insertion length</th>
</tr>
</thead>
<tbody>
<tr>
<td>E69-C06B</td>
<td>5.5 mm</td>
</tr>
<tr>
<td>E69-C68B</td>
<td>6.8 mm</td>
</tr>
<tr>
<td>E69-C610B</td>
<td>7.1 mm</td>
</tr>
<tr>
<td>E69-C06M</td>
<td>8.5 mm</td>
</tr>
</tbody>
</table>

3. Secure the coupling.

4. Connect the power and I/O lines.

5. Turn ON the Rotary Encoder and check the output.

Do not secure the coupling and shaft with screws at this stage.

Turn OFF the Rotary Encoder when connecting the lines.

Installation

Be careful not to spray water or oil onto the E6B2-C Rotary Encoder. The E6B2-C Rotary Encoder consists of high-precision components. Handle it with utmost care and do not drop the Rotary Encoder, otherwise malfunctioning may result.

When the E6B2-C Rotary Encoder is used in reversing operation, pay utmost attention to the mounting direction of the E6B2-C Rotary Encoder and the directions of increment and decrement rotation.

To match phase Z of the E6B2-C Rotary Encoder and the origin of the device to be connected to the E6B2-C Rotary Encoder, confirm the phase Z output when connecting the device.

Do not impose an excessive load on the shaft if the shaft is connected to a gear.

If the Rotary Encoder is mounted with screws, the tightening torque must be approximately 0.49 N·m.

Refer to the following illustrations when using a standard coupling.

- Eccentricity tolerance
  - 0.15 mm max.

- Declination tolerance
  - 2° max.

- Displacement tolerance in the shaft direction
  - 0.05 mm max.

If the eccentricity or declination value exceeds the tolerance, an excessive load imposed on the shaft may damage the Rotary Encoder or shorten the life of the Rotary Encoder.
Mounting
When connecting the shaft of the Rotary Encoder with a chain timing belt or gear, connect the chain timing belt or gear with the shaft via the bearing and coupling as shown in the following illustration.

Do not hit the shaft or coupling with a hammer when inserting the shaft into the coupling. No shock must be applied to the shaft or coupling.

When connecting or disconnecting the coupling, do not bend, press, or pull the coupling excessively.

Bearing Life
The following graph shows the life expectancy (theoretical values) of the bearing with radial and thrust loads imposed on the bearing.

![Bearing Life Graph]

Connections
When extending the cable, select the kind of cable with care, taking the response frequency into consideration. The longer the cable is, the more the residual voltage increases due to the resistance of the cable and the capacitance between the wires. As a result, the waveform will be distorted.

OMRON recommends models with a line driver output if the cable needs to be extended.

To reduce inductive noise, the cable must be laid the shortest distance, especially when the signal is input to an IC.

Insert a surge absorber between the power supply terminals if there is any surge.

To reduce noise, the total cable length must be as short as possible.

Incorrect pulses may be generated when the E6B2-C Rotary Encoder is turned ON or OFF. Do not use the connected device for 0.1 s after the E6B2-C Rotary Encoder is turned ON and for 0.1 s before the E6B2-C Rotary Encoder is turned OFF.

Cable Extension
The rise time of each output waveform will increase when the cable is extended. This will affect the phase difference characteristics of phases A and B.

The rise time varies with the resistance of the cable, the kind of cable, and the length of the cable.

The residual output voltage will increase according to the length of the cable.

![Cable Extension Graph]

Wiring
If the Rotary Encoder is mounted in a panel, do not pull the cable with more than a force of 29.4 N.

Do not pull the cable of the E6B2-C rotary Encoder after the E6B2-C Rotary Encoder is mounted to a panel. Do not apply any shock to the hollow shaft or the body.

Preventing Miscounting
If the operation of the E6B2-C Rotary Encoder is stopped near a signal rising or falling edge, incorrect pulses may be generated, in which case the E6B2-C Rotary Encoder will miscount. Use an increment-decrement counter to prevent miscounting.
Extension of Line Driver Output

Use twisted-pair cable to extend the line driver cable. Recommended cable: Tachii Densen’s TKVVBS4P-02A. Use an RS-422A receiver.

The twisted-pair wires shown in the following illustration are suitable for RS-422A signal transmission. Normal mode noise can be eliminated by twisting the wires because the generated electrical forces on the lines cancel each other.

Check that the E6B2-C is supplied with 5 VDC when a line driver output is used. There will be an approximately 1 V voltage drop if the cable length is 100 m.

Using a Line Receiver IC

Recommended IC: Texas Instruments AM26LS32, AM26C32

Others

Input to More than One Counter from Rotary Encoder (with Voltage Output)

Use the following formula to obtain the number of counters to be connected to a single E6B2-C Rotary Encoder.

\[
\text{Number of counters (N)} = \frac{R_1(E-V)}{V + R_2}
\]

**AM26LS32, AM26C32**

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\[
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\]
ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. Q085-E1-2 In the interest of product improvement, specifications are subject to change without notice.

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Printed in Japan
0601-0.3M (1092) (A)