Model TR3 - Heavy Duty Tru-Trac
Encoder and Spring Loaded Measuring Wheel

Features
- Heavy Duty Encoder And Measuring Wheel Solution Integrated Into One Industrial Strength Unit
- Spring Loaded Torsion Arm Makes Wheel Pressure Adjustments So Easy
- Easily Installed In A Vertical, Horizontal, or Upside-Down Orientation
- Operates Over A Variety Of Surfaces At Speeds Up To 1000M Per Minute
- Integrated Module Simplifies Your System Design, Reducing Cost

The NEW TR3 Heavy Duty Tru-Trac by EPC / BECo is an integrated heavy duty encoder and spring loaded measuring wheel assembly all in one, easy-to-use, compact unit. Available in a single, or optional dual-wheel format, the TR3 Heavy Duty Tru-Trac is a versatile solution for tracking velocity, position or distance over a wide variety of surfaces in almost any industrial application. Its spring loaded torsion arm provides a simple-to-adjust torsion load, allowing the TR3 to be mounted in any orientation, even upside-down. The TR3 housing is an all metal work horse, specifically designed to take on your toughest application environments at operating speeds up to 1000M per minute. Just one look and it’s easy to see the TR3 is the ideal solution for countless applications.

Common Applications
- Corrugated, Converting, Metal Roll Forming, Paper Monitoring, Glue Dispensing
- Linear Material Monitoring, Conveyor Systems, Printing, Labeling, Mining, Construction

Model TR3-Heavy Duty Tru-Trac Ordering Guide

Red type indicates price adder options. Not all configuration combinations may be available. Contact Customer Service for details.

**Model TR3 PPR Options**
- 0200 0250 0254 0256 0300 0380 0400 0500 0512 0600 0720 0800 0840 1000 1024 1200 1220 1250 1270 1500 1800 2000 2048 2500 2540 3000 4096 5000 6000 8192 10000

**For specification assistance call Customer Service at +44 (0)1978 262100**

Notes:
1. With input voltage higher than 16 VCC, the operating temperature is limited to 85°C.
2. Increased torque with IP65 option.
Model TR3 Specifications

**Electrical**
- **Input Voltage**: 4.75 to 28 VCC max for temperatures up to 85º C
- **Input Current**: 100 mA max (65 mA typical) with no output load
- **Output Format**: Incremental - Two square waves in quadrature with channel A leading B for clockwise shaft rotation, as viewed from the wheel side. See Waveform Diagrams below.
- **Output Types**: Open Collector - 20 mA max per channel, Push-Pull - 20 mA max per channel, Line Driver - 20 mA max per channel (Meets RS 422 at 5 VCC supply)
- **Index**: Once per revolution. 0200 to 10000 PPR: Gated to output A. See Waveform Diagrams below.
- **Freq. Response**: 200 kHz standard (up to 1MHz)
- **Noise Immunity**: Tested to BS EN61000-6-2; BS EN61000-4-2; BS EN61000-4-3; BS EN61000-4-6, BS EN50081/1
- **Symmetry**: 180º (±1º) electrical
- **Quad. Phasing**: 90º (±2.5º) electrical
- **Min. Edge Sep**: 67.5º electrical
- **Accuracy**: Within ±1º mechanical or 1 arc-minute from true position.

**Mechanical**
- **Max Shaft Speed**: Not to exceed a maximum shaft speed of 6000 RPM
- **Shaft Material**: Stainless Steel
- **Shaft Tolerance**: ±0.002 g6
- **Radial Shaft Load**: 5kg max. Controlled by spring tension.
- **Starting Torque**: 2.02 x 10^-2 Nm for IP65 seal
- **Electrical Conn**: 2M cable (foil and braid shielded, 24 AWG conductors), 8-pin M12 (12 mm) in-line connector with 0.5M cable (braid shield)
- **Mounting**: Powder coated aluminium
- **Wheel Width**: Up to 20mm
- **Weight**: 1.40Kg typical with dual wheel

**Environmental**
- **Operating Temp**: -20º to +70º C for standard models
- **Storage Temp**: -20º to +85º C for high temperature option
- **Humidity**: 90% RH non-condensing
- **Vibration**: 10 g @ 58 to 500 Hz
- **Shock**: 80 g @ 11 ms duration
- **Sealing**: IP50 standard, IP65 available

Model TR3 Mounting Bracket (Order #176389-01)

Model TR3 Wheel Pivot (Order #176391-01)

Waveform Diagrams

Wiring Table

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<th>Function</th>
<th>Wire Color</th>
<th>Pin</th>
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<td>+VDC</td>
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<td>3</td>
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<td>Yellow</td>
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<tr>
<td>Shield</td>
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