

Model TR1 - Tru-Trac Encoder and Spring Loaded Measuring Wheel



Features

- Encoder And Measuring Wheel Solution Integrated Into One Compact 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 3000 Feet Per Minute
- Integrated Module Simplifies Your System Design, Reducing Cost

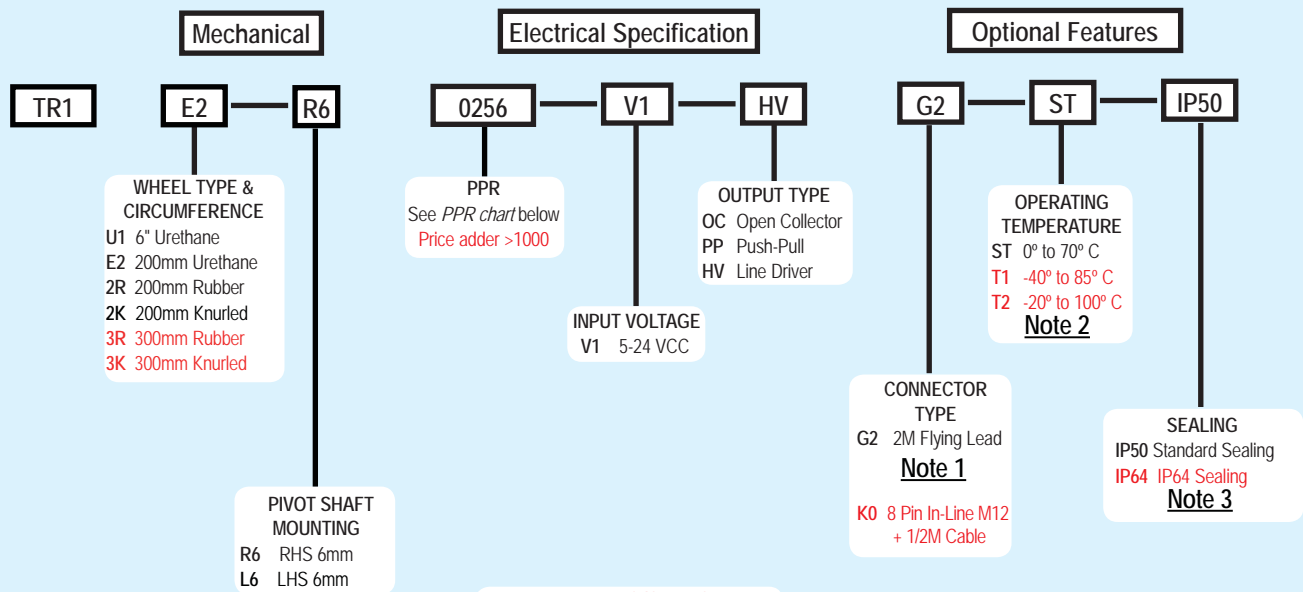
FINALLY! An integrated encoder and spring loaded measuring wheel assembly available in one, easy-to-use, compact unit. The NEW Tru-Trac is a versatile solution for tracking velocity, position, or distance over a wide variety of surfaces in almost any application. Its spring-loaded torsion arm provides a simple-to-adjust torsion load, allowing the Tru-Trac to be mounted in almost any orientation, even upside-down. The threaded shaft on the pivot axis is field reversible providing mounting access from either side. The Tru-Trac housing is a durable, conductive composite material that will eliminate static build up. With operating speeds up to 3000 feet per minute and a wide variety of configuration options, it's easy to see the Tru-Trac is the ideal solution for countless applications.

Common Applications

Web Tension Control, Paper Monitoring, Glue Dispensing, Linear Material Monitoring, Conveyor Systems, Printing, Labelling, Document Handling

Model TR1 Tru-Trac Ordering Guide

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



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

Model TR1 TRU-TRAC PPR Options

0200	0250	0254	0256	0300	0360	0400
0500	0512	0600	0720	0800	0840	1000
1024	1200	1220	1250	1270	1500	1800
2000	2048	2500	2540	3000	3600	4096
4000	6000	8192	10000			

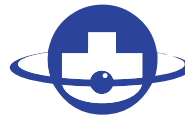
*Contact Customer service for High Temp option

Contact Customer Service for other disc resolutions; not all disc resolutions available with every commutation option.

NOTES:

- 1 For non-standard cable lengths - Contact Customer Service for availability and cost.
- 2 With input voltage higher than 16 VCC, The operating temperature is limited to 85°C.
- 3 Increased starting torque with IP64 selection.

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**BRITISH
ENCODER**
PRODUCTS COMPANY



Model TR1 - Tru-Trac™ Specifications

Electrical

Input Voltage	4.75 to 28 VCC max for temperatures up to 85° C 4.75 to 24 VCC for temperatures between 85° C to 100° 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 <i>Waveform Diagrams</i> 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 VDC supply)
Index	Once per revolution. 0190 to 2540 PPR: Gated to output A 0001 to 0189 PPR: Ungated See <i>Waveform Diagrams</i> below.
Freq. Response	200 kHz standard (up to 1MHz)
Noise Immunity	Tested to BS EN61000-6-2; BS EN50081-2; BS EN61000-4-2; BS EN61000-4-3; BS EN61000-4-6, BS EN500811
Symmetry	180° (±18°) electrical
Quad. Phasing	90° (±22.5°) electrical
Min. Edge Sep	67.5° electrical
Accuracy	Within 0.017° mechanical or 1 arc-minute from true position. (for CPR>189)

Mechanical

Max Shaft Speed	6000 RPM. Higher speeds may be achievable, contact Customer Service.
Shaft Material	Stainless Steel
Shaft Toleranceg6
Radial Shaft Load	2.5kg max. Rated load of 1.25kg to 1.75kg for bearing life of 1.2×10^{10} revolutions
Axial Shaft Load	2.5kg max. Rated load of 1.25kg to 1.75kg for bearing life of 1.2×10^{10} revolutions
Starting Torque	IP50 3.531×10^{-4} Nm IP64 2.825×10^{-3} Nm
Electrical Conn	2M cable (foil and braid shield, 24 AWG conductors), 8-pin M12 (12 mm) in-line connector with 0.5M cable (braid shield)
Mounting	Pivot shaft can be mounted from either side of the Tru-Trac™ housing, and is reversible in the field. Specify 1/4-20 or M6 threads
Housing	Stainless steel fibers in a high temperature nylon composite
Wheel Width	0.25"
Weight	150 gms typical

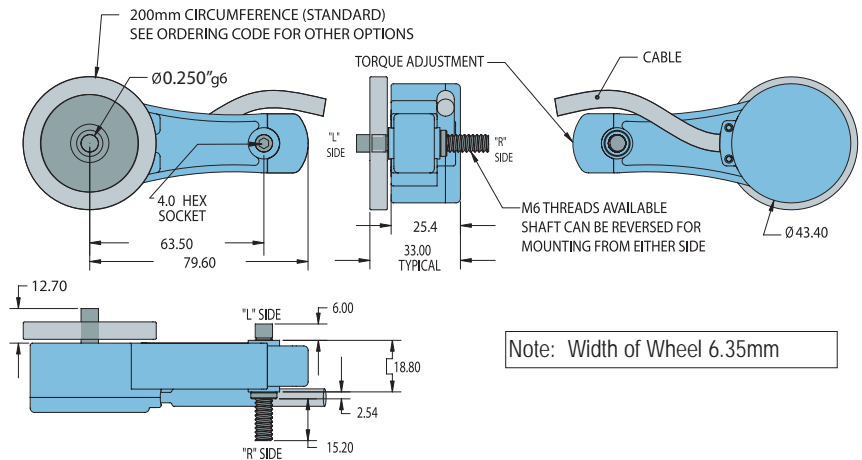
Environmental

Operating Temp	-0° to +70° C for standard models -40° to +85° C for low temperature option -20° to +100° C for high temperature option
Storage Temp	-25° to +85° C
Humidity	98% RH non-condensing
Vibration	10 g @ 58 to 500 Hz
Shock	80 g @ 11 ms duration
Sealing	IP50 standard; IP64 available



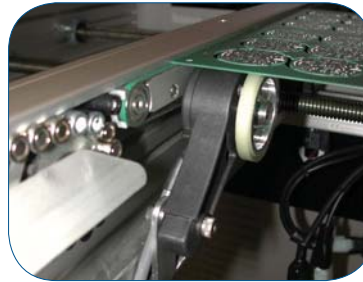
Angle Mounting Bracket for TR1 Tru-Trac can be ordered separately as part No: 140104 Dimensional drawing shown on accessory Data-sheet

Model TR1 - Tru-Trac™



Note: Width of Wheel 6.35mm

Model TR1 - Tru-Trac™ Applications



For **Linear Applications** the Tru-Trac™ can be mounted above or below the moving object, and the tension on the wheel adjusted for a wide range of applications such as packaging, conveyors, mail sorting, cut to length, labelling, gantries etc.

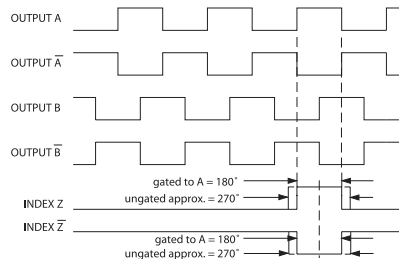


For **Rotational Applications** the Tru-Trac™ can be mounted in any orientation to monitor the position or velocity of many types of rotating equipment such as web tension control drums, rotary tables, printing, spooling, etc.



Waveform Diagrams

INCREMENTAL SIGNALS



Waveform shown with optional complementary signals \bar{A} , \bar{B} , \bar{Z} for HV and OD outputs only.

Wiring Table

Function	Cable Wire Color	8-pin M12**
Com	Black	7
+VDC	White	2
A	Brown	1
A'	Yellow	3
B	Red	4
B'	Green	5
Z	Orange	6
Z'	Blue	8
Shield	Bare *	--