Data Track

TRACKER 211

Low Cost Digital Panel Indicator

A Budget Priced Universal Input Panel Indicator
for Temperature and Process Measurement

TRACKER 211 PANEL INDICATOR

- ❑ **Low Cost**
- ❑ Transmitter & Transducer Supplies
- ❑ **One Relay Fitted as Standard**
- ❑ Bright Four Digit Display (Red)
- ❑ **Easy Stock Holding**
- ❑ IP65 Front Panel
- ❑ **Universal Mains Power**
- ❑ 110mm Deep
- ❑ **Standard 1/8th DIN size**
- ❑ Available With or Without Front Panel Buttons

OPTIONS

- ❑ **Green Display**
- ❑ Isolated Analogue Output
- ❑ **Low Voltage DC/AC Power Supply Option**
- ❑ Up to 3 Alarm Relays

Universal Input
For Thermocouple, RTD, 20mA, 10v and 100mV signals.

Transducer Excitation Supplies
Fitted as standard to power both pressure/strain gauge (10VDC) sensors or two wire (24VDC) 20mA loops.

Universal Power Input
Wide ranging 90 to 265 VAC input allows world-wide installation. Low voltage AC/DC option available.

Clear Display
The flat, slightly recessed display together with high brightness red or green LEDs ensure maximum visibility even in difficult lighting conditions.

Units of Measurement
Engineering unit labels are supplied for the most common measurements including temperature, flow, distance, power and pressure.

Configuration Buttons
Two hidden configuration buttons behind the front panel allow full configuration.

Tough but Attractive
The enclosure uses flame retarding (VO) materials and the front panel conforms to IP65. Less than 110mm deep behind the panel.

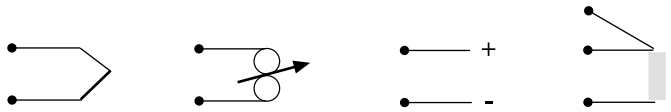
Front Panel Buttons (Optional)
Front Panel Buttons can be fitted to allow fast and easy access to the alarm setpoints or when the Tare, Zero or Max/Min functions are to be used.

The Tracker 211 indicator is designed for cost conscious "no frills" applications in demanding industrial environments. With the universal input, stock/spares holding is kept to a minimum. The Tracker 211 can be used for measurement and display only applications, as an alarm trip and can act as a transmitter with the analogue output option. An alarm relay is fitted as standard with a further two available as options. The Tracker 211 is styled to match other Tracker 200 series indicators.

CE

Tracker 211 indicators have been tested and comply with the European Electromagnetic Compatibility Directives and safety requirements. The units are CE marked.

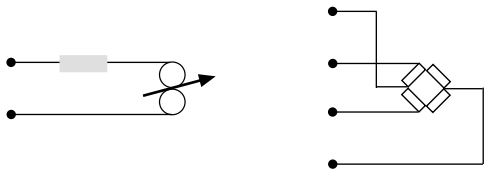
TRACKER 211 FEATURES



Thermocouple mA mV/Voltage 3 Wire RTD

Universal Input

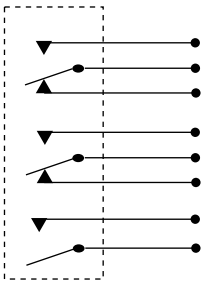
The Tracker 211 can be directly connected to most popular process sensors including Thermocouple, RTD, 20mA loop Transmitters, DC signals up to 100mV and 10V. Temperature can be displayed in °C or °F to 0.1 degree resolution. Millivolt, 10 Volt and 20mA DC signals can be scaled to engineering units using any portion of the -1999 to 9999 display range (with an adjustable decimal point position). There are six linearised thermocouple ranges for types K, T, J, N, R and S. Thermocouple inputs have automatic cold junction compensation (CJC) with up-scale sensor burnout detection. Two RTD ranges are available. Zero, Tare and Max/Min memory functions are available on versions fitted with front panel buttons.



24VDC Loop Supply 10VDC Strain Gauge Supply

Sensor Excitation

An isolated 24VDC transmitter supply is provided as standard to provide power for 2 wire (4-20mA) sensors. In addition a regulated 10VDC (50mA) output is provided for strain gauge type sensors such as pressure transducers and load cells.



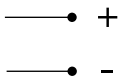
ALARM 1 (Fitted as standard)

ALARM 2

ALARM 3

Alarm Relays

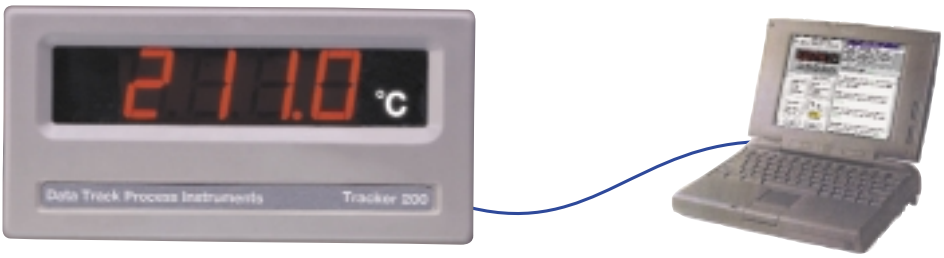
The Tracker 211 has one alarm relay fitted as standard and can be fitted with up to three alarm relays. Setpoints can be set at time of configuration or can be adjusted using the hidden buttons behind the front panel. If the setpoints are to be adjusted frequently, front panel buttons can be fitted as shown above. Each alarm can be configured to be high or low acting.



4 - 20mA

Analogue Output (Optional)

The measured value can be transmitted as a linear 4-20mA signal to other devices such as chart recorders or data loggers. The output can be scaled to any portion of the display range e.g. 4-20 mA = 500 to 800 (psi). The analogue output always follows the displayed value, so when using Thermocouples and RTDs, the analogue output is linear to temperature.



Configuration

The instrument can be configured using concealed buttons, which are situated behind the front panel. The Tracker 211 prompts the user for each set-up parameter. For users that need to configure many units, a Windows compatible software program is available for set-up, storage and downloading to the Tracker 211. A special adapter lead can be provided to connect an RS232 interface on the computer to the programming port on the Tracker 211.

Display

Type: 14.2mm high brightness red LED (green option)
Range: 4 digit (-1999 to 9999)
Update rate: 2 per second

A/D Converter

Type: Dual slope integrating with auto zero
Conversion rate: 100mS
Common mode rejection: >150dB
Series mode rejection: >70dB (50 & 60Hz)

Thermocouple Inputs

CJC Accuracy: Better than 1°C after 30 minutes
Open circuit sensor detection: Upscale
Engineering units: °C or °F
Measurement resolution: 1 or 0.1°C/°F

	Accuracy Including Linearisation		
Thermocouple	**Range (°C)**	**Worst case**	**Typical @ 25°C**
Type J Fe/NiCu	-210 to 1200°C	±1.0°C	±0.5°C
Type K NiCh/Ni/Al	-270 to 1372°C	±1.0°C	±0.5°C
Type T Cu/CuNi	-270 to 400°C	±1.0°C	±0.5°C
Type N Nicrosil-Nisil	-200 to 1300°C	±1.0°C	±0.5°C
Type S Pt10%-RhPt	-50 to 1767°C	±2.0°C	±1.2°C
Type R Pt13%-Rh Pt	-50 to 1767°C	±2.0°C	±1.2°C

Resistance Thermometers

Configuration: 3 wire
Excitation current: 0.25mA (nominal.)
Engineering units: °C or °F
Measurement resolution: 1 or 0.1 °C or °F

	Accuracy Including Linearisation		
RTD Type	**Range (°C)**	**Worst case**	**Typical @ 25°C**
Pt100 (alpha=385)	-200 to 850°C	±0.8°C	±0.5°C
Pt100 (alpha=392)	-200 to 457°C	±0.8°C	±0.5°C

Maths Functions (Front panel buttons must be fitted)

Tare or Zero (programmable), Max/Min Memory.

Safety and EMC

Safety: EN61010
Susceptibility: EN50082-2
Emissions: EN50081-1
CE Certified 2000

ISO 9002 QUALITY

Data Track Process Instruments
153 Somerford Road, Christchurch, Dorset
BH23 3TY, United Kingdom
Tel: +44 (0) 1425 271900
Fax: +44 (0) 1425 271978
Email: dtpisales@dtrack.com • Website: www.dtrack.com

Voltage & Current Inputs

Ranges: ±20mA, ±100mV, ±10V DC.
Scaling: Any portion of the display range (decimal point in any position)
Accuracy: ±0.1% (worst case), 0.05% typical @ 25°C ambient
Drift with temperature: <200ppm/°C
Impedance (Ohms): <5(mA),>100M(mV), >1M(Volt)

Analogue Output (Option)

Output: 4 to 20mA
Maximum output: 22mA
Temperature drift: <200ppm
Accuracy: 0.4% of span (worst case),
0.2% typical @ 25°C ambient
Maximum load: 500 Ohms
Resolution: 0.02mA

Alarm Relays (Relays 2 & 3 are optional)

Relays 1 & 2: Change over contacts
Relay 3: Normally open contacts
Rating (all relays): 1 Amp @ 250VAC, 5 Amp @ 30VDC.

Physical/Mechanical

Front panel: Protection to IP65
Dimensions (mm): 48(H) x 96(W) x 100(D)
Panel cut-out (mm): 45(H) x 93(W)
Weight: 0.4Kg (max), packed weight 0.55Kg

Environmental

Temperature: 10-50°C operating, -10 to 70°C storage.
Humidity: 0-95% RH non condensing.

Ordering Code

2	1	1	-		-		-	
Model Number				Outputs	Buttons	Power		Display

Outputs
- A One Alarm Relay (Fitted as Standard)
- B Two Alarm Relays
- C Three Alarm Relays
- D Analogue Output (1 Relay Fitted as Standard)
- E Analogue Output + 1 Alarm relay (2 relays in total)
- F Analogue Output + 2 Alarm relay (3 relays in total)

Buttons N = Not Fitted B = Fitted
Power 1 = 90-256VAC (50/60Hz), 2 = 10-32VDC/AC
Display R = Red (Std), G = Green (Optional)
Example **211-D-B-1-R**
Tracker 211 with 1 Alarm Relay, Analogue Output and Front Panel Buttons fitted. Mains powered with Red Display