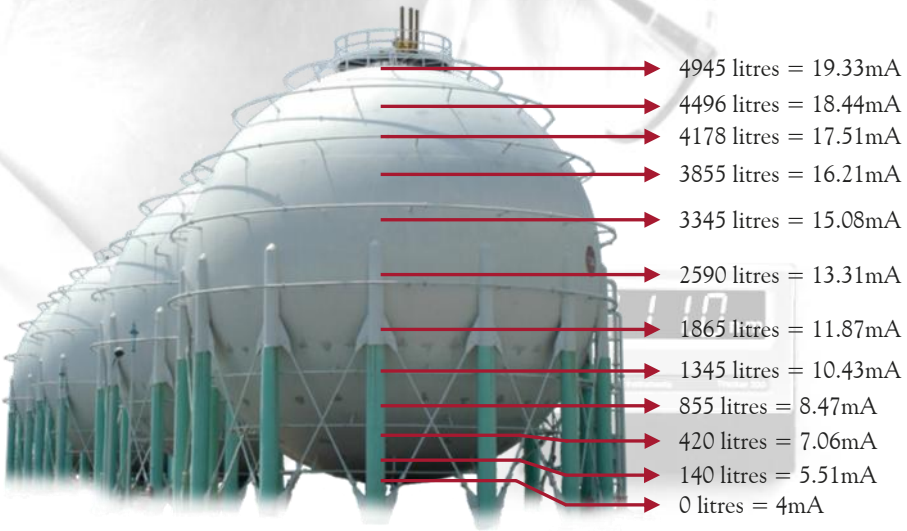
Data Track

Acquisition • Measurement • Control

Tracker 212
Universal 5-Digit, Low Cost, Tank Contents, Process and Temperature Indicator



The new Tracker 212 is an all-in-one, attractively designed and priced unit. It has been engineered as a universal process and temperature indicator with user linearisation features for 4-20mA signals.

- **Low Cost with a 5 Year Warranty**
- **Quick and Easy to Configure**
- **24-Point User Linearisation For 4-20mA Signals**
- **Universal Process or Temperature Measurement**
- **Sensor Excitation For Transducers (10V) or Two Wire Transmitters (24V)**
- **Selectable Degrees C or F**
- **Display Scaling To Any Engineering Units**
- **12-32 VDC/VAC Powered Version Option**
- **Universal Mains Power Input (110-250VAC)**
- **Scalable Isolated Analogue Output Option**
- **PC Programming Option**
- **Alarm Relay Fitted As Standard**
- **2nd and 3rd Alarm Outputs Option**
- **No Internal Pots, Links or Plug In Cards**
- **Accepts mV, mA, V, Ω Signals Plus Type J, K, N, T, R, S Thermocouples and PT100**

Tank Contents and Process Measurement

The Tracker 212 can accept mV, 10 volt and 4-20mA signals from a sensor. Up to 24 user linearisation points can be entered in any order corresponding to the 4-20mA signals. A regulated 10VDC excitation supply is provided for "bridge" type sensors and a 24VDC supply for two wire transmitters and active sensors.

Temperature Measurement

The Tracker 212 can be wired directly to thermocouple, RTD's or temperature transmitters.

Select the correct thermosensor type from the menu and the input is automatically scaled and linearised. Temperature is user selectable for display in °C or °F and for a resolution of 1.0° or 0.1°.

Outputs

The T212 is fitted with a relay output with volt free C/O contacts, as standard. The alarm can be high or low acting with user selectable hysteresis and with the relay configurable to be energised or de-energised (fail safe) when in the alarm condition. Two further alarm relays can be fitted as an option.

The analogue output option gives an isolated 4-20mA signal, which is scalable to any portion of the display range. The output is linear to the displayed value, not the input. This makes the Tracker 212 an ideal tank contents transmitter.

Configuration

The Tracker 212 can be setup using the concealed configuration buttons which are situated behind the front panel. Push buttons can be fitted on the front panel as an option. The T212 prompts the user for each set-up parameter. For users that need to configure a number of units, a PC compatible configuration program is available for setup, storage and downloading of configurations to the T212. A special adapter lead can be provided to connect an RS232 interface on the computer to the programming jack socket on the rear panel of the Tracker 212.

Tracker 212 Specification

Power Supply

90-256 V AC (50/60Hz), 7VA
Option: 12-32VDC/AC

Display

Type: 14.2mm High Brightness Red LED (Green LED Option)
Range: 5 Digit (-19999 to 99999)
Update Rate: 2 per second (500mS)

A/D Converter

Type: Dual Slope integrating converter with Auto Zero
Conversion Rate: 100mS
Common Mode Rejection: >150dB
Series Mode Rejection: >70dB (50 or 60Hz)

Thermocouple Inputs

CJC Accuracy: Better than 0.5 deg 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
Type K NiCh/Ni/Al	-270 to 1372°C	±1.0°C	±0.5
Type T Cu/CuNi	-270 to 400°C	±1.0°C	±0.5
Type N Nicrosil-Nisil	-200 to 1300°C	±1.0°C	±0.5
Type S Pt10%-RhPt	-50 to 1767°C	±2.0°C	±1.2
Type R Pt13%-Rh Pt	-50 to 1767°C	±2.0°C	±1.2

Resistance Thermometers

Configuration: 3-Wire
Excitation Current: 0.25mA (nominal)
Engineering units: °C or °F
Measurement Resolution: 1 or 0.1 °C / °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

Voltage & Current Inputs

Ranges: ±20mA, ±100mV, ±10V DC, 0-400Ω.
Scaling: To 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)

User Linearisation

24 linearisation points for 4-20mA signals
Automatic signal sampling or manual entry of mA values
Linearisation points can be entered in any order and anywhere in the measurement range.

Sensor Excitation

10V regulated and 24V DC semi-regulated @ 35mA
Isolation 500V DC/Peak AC

Analogue Output (Option)

Scalable Output: 4 to 20mA linear to display value (not input)
Maximum Output: 22mA (12V)
Temperature Drift: <150ppm
Accuracy: 0.4% of span (worst case), 0.2% Typical @ 25°C ambient
Maximum Load: 500 Ohms
Resolution: 0.02mA
Isolation 500V DC/Peak AC

Alarm Relay (1 Fitted as Standard)

Change over contacts on alarms 1 and 2
Relay 3 has normally open contacts
Rating: 1 Amp @ 250VAC, 5 Amp @ 30VDC

Physical/Mechanical

Dimensions (mm): 48(H) x 96(W) x 110(D)
Panel Cut-out (mm): 44(H) x 92(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

Safety and EMC
Safety: EN61010
Susceptibility: EN50082-2
Emissions: EN50081-1 CE Certified 2000
Also tested to EN61326 Immunity & Emissions (2001)

Ordering Code

2	1	2							
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 + One Alarm Relay
E	Analogue Output + Two Alarm Relays
F	Analogue Output + Three Alarm Relays

Buttons: **N** = Not Fitted **B** = Fitted
Power: 1 = 90-265VAC 2 = 12-32VDC/AC
Display: **R** = Red (Standard) **G** = Green
Example: 212—D—B—1—R
Tracker 212 with one alarm relay, analogue output and front panel push buttons fitted. Mains powered with red display.

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

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