



"Fast-Cal" Calibration

Adjustable Display Resolution

Max/Min Memory

Isolated Analogue Output

Two Logic Inputs

Front Panel Function Buttons

Transducer Excitation Supply

High Speed Analogue Output

Universal Mains Power Supply

Serial Communications

Dual Alarm Relays (Tracker 264)

Quad TTL Alarm Outputs (Tracker 265)

The Tracker 260 series of digital panel indicators are designed specifically for use with LVDT transducers. Data Tracks "Fast-Cal" feature provides a fast and simple method of calibrating an indicator to the transducer at any two stroke positions. The Tracker 260 is configured for the correct transducer excitation voltage and frequency as recommended by the sensor manufacturer. As LVDT transducers can only be calibrated when in situ, the sensor is set to the mechanical "low" (zero) and then the "high" (span) positions when prompted by the Tracker 260. The measured LVDT signals values are then stored, with their relevant display values, as the calibration parameters. The Tracker 260 can also automatically set the correct input gain to suit the LVDT transducers output. The displayed values can be in millimetres, inches or any other measurement units.

The Tracker 260 series of LVDT indicators have a five digit display, transducer excitation supply and many software features including max/min memory and maths functions. All models are fitted with two analogue outputs. A high speed analogue output for monitoring fast changes of sensor movement as well as a separate, electrically isolated, scaleable analogue output. The serial RS 422/485 communications interface allows connection to data loggers, PLCs and computers. Two logic inputs are provided to allow remote control of user selectable functions. In addition, two of the front panel push buttons can be user defined to allow fast access to pre-programmed functions. The specification of the three models are identical except that the Tracker 264 has two alarm relays, and the Tracker 265 has four TTL alarm outputs.

Display

Type: 14.7mm high, red (standard) or green, high brightness LED

Range: -19999 to +99999

Decimal point position: User selectable

Update rate: User selectable 2, 4 or 10 per second

Filter: User adjustable, 0 (off) to 999 seconds

LVDT Input

Input voltage range: 0.05V to 5Vrms

Gain ranges: 1, 5, 10 & 100

Automatic or manual gain setting facilities

Non linearity: $< \pm 0.02\%$

Temperature drift: $< \pm 0.005\%$ FSO per °C

Stability: $< \pm 0.01\%$ FSO after 15 minutes

Transducer supply: Selectable 3.0 or 5 Volt rms. @ 25mA

Supply frequency: User selectable 2.5 or 5.0Khz

Measurement resolution: Better than 1 part in 120,000

Measurement rate: 10 readings per second

Measurement modes: User selectable 4 wire differential
or 5 wire Ratiometric

Alarms

Setpoints for alarms can be quickly adjusted during normal running via the front panel buttons or by password protected menus (user selectable)

Alarms can be flashed on the display with the measured value.

4 Alarm Menus, each individually user selectable for :-

High, low or deviation alarm action

High and low band limits (deviation action only)

On and off delay timers

On and off hysteresis

Latching or non-latching

Isolated Analogue Output

Isolation: 500Vdc/Peak ac

Output: User selectable 0-10V, 0-20mA or 4-20mA

Scaling: User selectable (e.g. 4 to 20mA = 3.0 to 5.0mm)

Accuracy: Better than 0.2%

Temperature drift: < 100 ppm per °C

Response: 63% within 32mS, 99% within 100mS

Resolution: 0.05% (5mV or 0.01mA)

Maximum voltage output: 11V @ 22mA

Maximum current output: 22mA @ 18V

Maximum load: 900Ω

Programmable output damping filter

"Fast-Cal" Calibration

Automatically calibrates and matches the indicator to a connected LVDT transducer. The Tracker 260 reads the transducer's output at any two sensor positions. The two measured values are stored as the calibration parameters. Calibration can be performed at any time.

Serial Communications

Type: RS 422/485, 2 or 4 wire multidrop

Isolation: 500Vdc/Peak ac

Speed: 1200, 2400, 4800, 9600 baud

Parity: Odd, even or none

Stop Bits: 1 or 2

Protocols: User Selectable for MODBUS™ (RTU or ASCII), J-BUS
and DTPI (Data Track Process Instruments)

Maths

Max/Min: Stores maximum and minimum display values

Averaging: Calculates average value over a user defined period
between 1 and 9999 seconds

On and off hysteresis
Latching or non-latching

Alarm Relays (Tracker 264 Only)

2 off, single change over (form C) contacts
Rated 1A @ 240Vac, 5A @ 30Vdc

Relays can be configured to be energised or de-energised in the alarm condition.

TTL Alarm Outputs (Tracker 265 Only)

4 off, TTL open collector.

Alarm outputs can be configured to be energised or de-energised in the alarm condition.

Status (Logic) Inputs

One or more of the following functions can be user assigned to either of the two logic inputs.

Tare, Auto (offset) Zero, Display hold, Analogue output hold, Display max, Display min, Display average, Display test, Reset (latched) alarms, Reset max/min & average (to the current measured value), "Enter" button lock (disables entry to configuration menus), Alarm inhibit and "Fast-Cal" Calibration enable.

The logic inputs can be switched by external volt free contacts or a TTL signal

Function Keys

One or more of the following functions can be user assigned to either of the two front panel function buttons.

Tare, Zero, Display hold, Display max, Display min, Display average, Display test, Reset (latched) alarms, Reset max/min & average (to the current measured value), "Fast-Cal" Calibration enable.

High speed Analogue Output

This is a buffered output giving a fast response from the LVDT demodulator output. The signal amplitude is dependant on the transducer excitation and the amount of sensor travel.

Output filter: -3dB @ 125Hz



Tracker 260 indicators have been tested and comply with the European Electromagnetic Compatibility Directives and safety requirements. The units are CE marked.

DATA TRACK PROCESS INSTRUMENTS

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Averaging: Calculates average value over a user defined period between 1 and 9999 seconds

Power Requirements

Universal 90 to 265Vac 50 or 60 Hz @ 12VA nominal

Environmental

Temperature: 10 - 50°C operating, -10 to 70°C storage

Humidity: 0-95% RH non condensing

Physical / Mechanical

Dimensions: 48mm (H) x 96mm (W) x 173mm (D)

Panel cut-out: 44mm (H) x 92mm (W)

Depth behind panel: 166mm including terminals

Weight: 0.4kg (0.55kg packed weight)

Safety and EMC

Safety: EN61010

Susceptibility: EN50082-1 & 2

Emissions: To EN50081-1 & 2,

EN50022 Class A for radiated and conducted.

CE Certified 1997

Ordering Code



Model Number

Display Colour

Model Number:

263 LVDT Indicator

264 LVDT Indicator with Dual Alarm Relays

265 LVDT Indicator with Quad TTL Alarm Outputs

Display Colour:

R Red (Standard)

G Green

Example: 264-G

Tracker 264 LVDT Indicator with Dual Alarm Relays and Green Display

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