DI20-201-TMS
STAND ALONE TANK MONITORING & MANAGEMENT SYSTEM

DATA ACQUISITION NETWORKS
Data Logging Solutions

The DAN DI20-201-TMS provides a complete programmable tank monitoring solution providing many unique features making the management of storage tanks simple. Housed in a polycarbonate enclosure the unit may be mounted indoors or under cover outdoors. As an option, the DI20 may be fitted with on board batteries that will allow it typically to operate for up to 24 hours without external power.

The DI20-201-TMS has 5 analogue inputs each able to accept signals of 0 to 20mA or 4 to 20mA from either loop powered or separately powered probes. For this application up to 5 inputs may be utilised for monitoring up to 5 identical tanks. Alarm conditions may be set to operate on board relays able to activate visual or audible alarms.

Included within the DI20 are 12 digital inputs. Each digital input will recognise a change of state and activate a relay. This adds further to the overall tank monitoring and operational capability. Digital inputs may be used to monitor bund levels or other on/off conditions.

Submersible pressure gauges are used to monitor the amount of liquid in each tank. The system is initially calibrated for depth versus %age full. Entering the tank configuration data, provides conversion of level to volume. The display includes volume, ullage and %age full.

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In its standard form, the DI20 may be operated as a 'stand alone' unit without web interface. All set up data required for its operation may be simply configured through the keypad by responding to questions displayed on the screen. No need for separate software or computer connections. In addition changes may be made later conveniently via the keypad without searching for software. Operational set up data includes calibration, alarm levels and relay operation that can be related to alarm recognition.

Later upgrading to a web based system is simply achieved with the addition of hardware and joining the DAN SENTRY service where access to the DAN web site is provided. All communication is via the mobile phone network making the DI20 an independent system. Parameters loaded into the unit via the keypad are transferred to the web site providing the capability to then change or input data either by the keypad or via the web site. When web connected, email and/or SMS alarms may be generated based on set alarms.

ABN 92 125 999 868
12/4A Meridian Place BELLA VISTA NSW 2153
T: 1300 326 328 **E:** sales@danmonitoring.com **International T:** +61 415 180 818
W: www.danmonitoring.com

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Inputs:

Type	5 X Analogue 12 X Digital (Analogue inputs support loop or separately powered probes)
Alarm Points:	2 per input analogue input 1 common for digital inputs
Analogue Inputs:	
Current Range	0 – 20mA/4 – 20mA
Sampling Rate	19/Second
Resolution	10 Bit (>0.1%)
Digital Input Options:	When any digital input is used it will recognise a change of state from 'off' to 'on'.
Relay Operation:	
Analogue Inputs	-- Relay 4 pre-set to operate on all tank low level alarm points - 2 additional relays may be set to operate on each alarm
Digital Inputs	- One relay pre-programmed to operate on any digital input change
SYSTEM SETUP	Tank profile, alarm points and relay settings may be simply entered via the front keypad

Set-Up/Configuration:

Tank Profile	The system is capable of monitoring up to 5 tanks. Each tank to be of the same profile for accurate measurements. The common tank profile may be entered in up to 100 litres v's level increments. The minimum input required is 0% and 100%.
Input Alarm/Control Points	Variable set points Variable dead band 2 alarms per analogue input Alarm detail displayed on screen with mute facility available/alarm
Relay Activation	2 relays may be activated per alarm
Access Security	Pin access required to enter programming mode and set up or change operation

Output:

Relay Outputs	4 x SPST N.O. relays with contacts rated 24Vdc @ 5A,

Operating Conditions:

Operating Temperature	-10°C to +60°C
Relative Humidity	0 – 90% RH non-condensing
Temperature Stability	<0.01% of span/°C
Long Term Stability	<0.1% of span/10,000 Hrs

Field Hardware:

Battery back-up (option)	2 x 12V sealed lead acid
Charging options	12V power pack supplied
Housing	IP66
Housing dimensions	170 x 220 x 110 deep
Weight	3.5Kg (Including batteries) 2.1Kg (excluding batteries)

IMPORTANT NOTICE: Due to continued product development, specifications may change without notice. Always refer to Data Acquisition Networks for the latest information.

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