

DAYTECH DT-CD940 Series Datasheet

Intelligent Process Display / Controller

DAYTECH

Features & Benefits

- Optional Digital Display Only or Digital Display with Process Controller and 16 bit A/D resolution;
- Intelligent Digital instrument with microprocessor control;
- Used for all transmitters with standard 0-5V, 1-5V, 0-10V, 0-20mA, 4-20mA output signal and bridge sensor with mV voltage signal;
- 8 sections Nixietube, max display range -19999~999999;
- Unit m, kPa, Bar, Mpa, mH20, deg C, m3, kg, mA or other parameters optional, ;
- 2 Voltage/Current analogue inputs and 1 optional full isolated current/voltage analogue output;
- 4 relay outputs; user can set the control area and limit values freely, 4 LED lights on display showing switch status. Can be used for LL, L, H, HH alarms and outputs;
- Standard series RS232 OR RS485 digital interface;;
- Digital Display for local indication;
- AC or DC input power with instrument 24VDC regulated power supply output;
- Basic value settings are freely programmable;
- Setting values saved to memory, if power switches off the controller automatically reads setting values. Self-diagnostics at start up with inspection of display and components on power up;
- Two Transmitters could be connected to measure DP for level in a sealed tank or water-level difference between front and back of a trash rack, or for controlling a filtration system.
- Double watchdog construction, electromagnetism source isolation, strong EMC anti-interference capability;
- The controller can select the transmitter output range to enlarge or reduce the measured range;
- Drawer construction, the core could be pull out from housing for easy repair and maintenance, DAYTECH has the facility to perform this as required;
- Aluminium-alloy instrument housing, light weight and anti-electromagnetic radiation;



Applications

- Continuous Liquid/Solids level, pressure or temperature measurement and control;
- Level control for surface water (lakes, rivers, dams), ground water (bores, aquifers), tanks or other vessels.
- Continuous Air/Gas pressure or temperature measurement and control;
- Alarming for level, pressure or temperature conditions;
- Pump or valve control;
- Heater element control;
- Air Compressor control;
- Differential Pressure measurement and control for tanks, filters or other DP applications;

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Measurement and Control Technology for the Process and Environmental Industries.

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Description

DAYTECH's DT-CD940 measuring, controlling and display instrument is mainly used for environmental, water and electricity and industrial level, pressure or temperature measurement and control applications. Examples include pond, tank or pool level/pressure/temp, well level/pressure, water supply pressure/temp, filtration DP measurement and control, as well as digital display and local monitoring.

The product can also transmit data through RS232/RS485 series communication or isolated / repeated analogue signal to central control room or standard signal receiving devices such as PLCs, RTUs or dataloggers. The controller provides the ability to put the controllers and the readings from sensors onto an RS485 multidrop bus network.

Display and Set Up

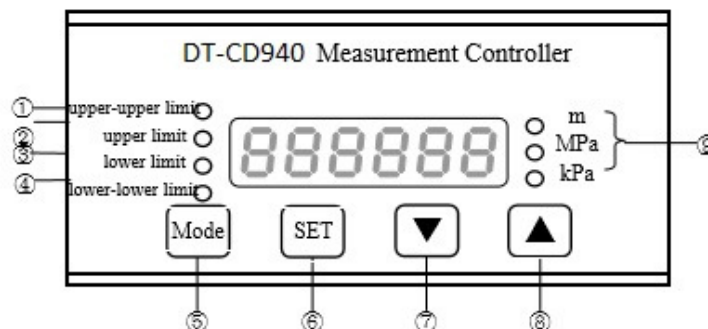


Figure 7

- ① Upper- upper limit alarm indicator light;
- ② Upper limit alarm indicator light;
- ③ Lower limit alarm indicator light;
- ④ Lower- lower limit alarm indicator light;
- ⑤ Mode Key: show password dialog box after constantly pressing the key for five seconds, input the right password and enter setting and standard situation;
- ⑥ Set Key: press Set key to confirm the input value;
- ⑦ ▲ Key: could increase setting value or modify unit indicator light and radix point;
- ⑧ ▼ Key: could reduce setting value or modify unit indicator light and radix point;
- ⑨ Unit indicator light: kPa、 MPa、 m (according to different environment the unit could be changed to t、 kN、 mA、 □ 、 Ω, etc) ;

- Simple set up by programming using push buttons.
- Tuning parameters are intuitive and easy to use.
- Digital display shows the Units.
- Display shows status of the control/alarm points and the 4 relay outputs.
- User can calibrate the controller during the lifetime of the installation, the controller comes factory calibrated so there is no need to calibrate immediately.
- The Controller is password protected to prevent unauthorised access.

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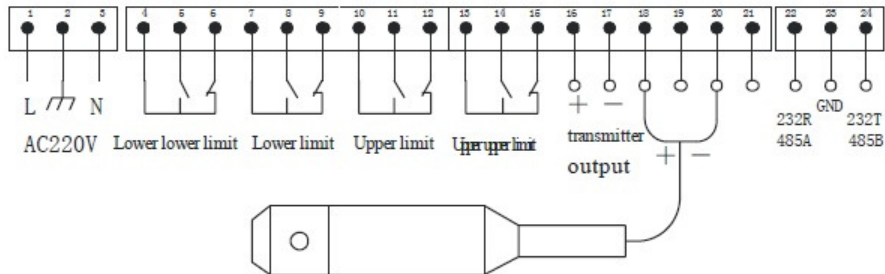
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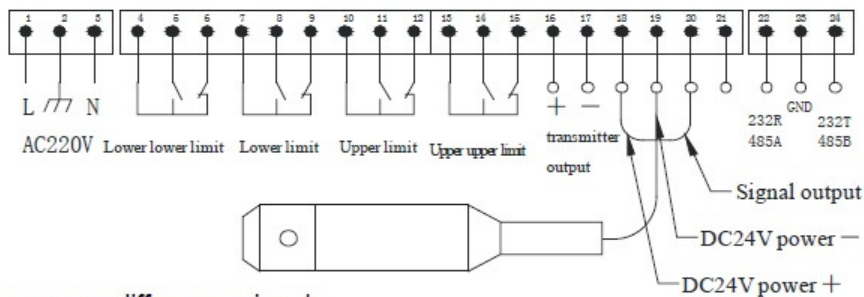
Typical Wiring Diagram

Typical Wiring Chart

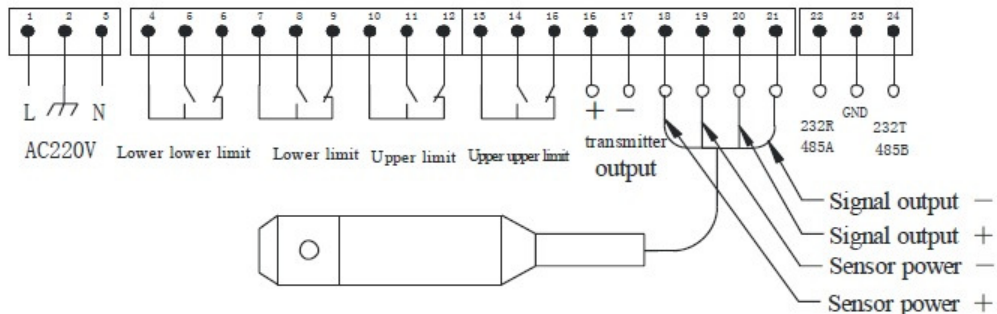
2-wire 4~20mA output



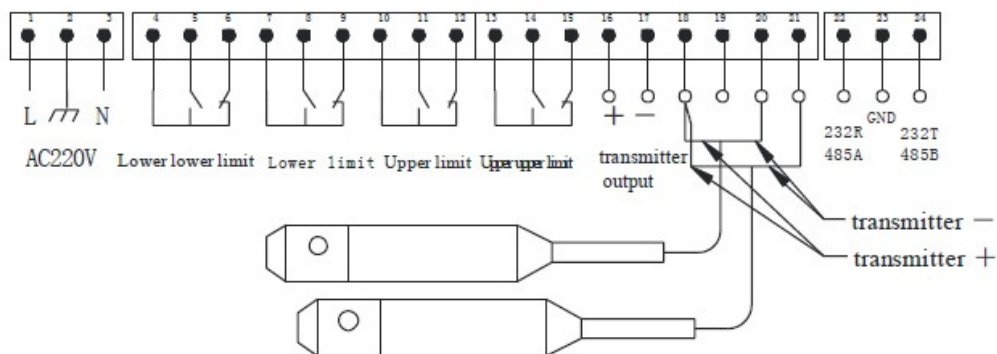
3-wire transmitter



Bridge sensor difference signal:



Double 4~20mA output transmitter:



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Technical Specifications

Parameter	Value				Notes
Measurement / Display Resolution	Max. display: -19999~999999 Max. Measurement: -1999~9999 16bit A/D inputs & outputs, internal resolution of 65,535				
Indicator and Units (analogue)	kPa, BAR, MPa, m, mH2O, degC or other units as specified.				
Indicator and Units (digital)	Upper Upper Limit, Upper Limit, Lower Limit, Lower Lower Limit,				
Basic Input accuracy	$\leq \pm 0.1\% \text{ F.S}$				
Output accuracy	$\leq \pm 0.5\% \text{ F.S}$				
Non-Linearity Stability	$\leq \pm 0.1\% \text{ F.S}$ $\leq \pm 0.5\% / \text{year}$				
Sampling Speed	18 times/s				
Transmitter / Sensor Input Signal	4~20mA, 0~20mA, 0~10mA, 1~5V, 0~5V, 0~10V (transmitter), 0~5~1000mV (sensor)				
Sensor Power Supply Output	24VDC / 50mA Constant voltage or current (adjustable)				
Transmitter / Sensor Output	Full-isolated 4~20mA, 0~20mA, 0~10mA, 1~5V, 0~5V, 0~10V (transmitter)				
Main Power Supply Power Consumption	85~420VAC / 47~630Hz OR 24VDC <8W				
Display Size / Colour	13mm (0.5 inch) 6 digit highlight red				
Input Transmitter Wires	Two-wire	Three -wire		Four-wire Bridge	
Input Signal	0/4-20mA	0/1-5Vdc 0-10Vdc	0/4-20mA	4-20mA	
Power Supply Output from unit	24VDC	24VDC	24VDC	Constant Voltage OR Current	
Relay Output (for alarm or control):	Relay Power: 250VAC/7A (resistive load); 30VDC/7A (resistive load). Relay quantity: 4NO/NC (normally open / normally closed) relay. State programmable.				
Communication	RS232 / RS485 Communications (optional)				
Electrical Connection	Screw terminal interface on back of unit				
Environmental Temp	-10°C ~ 60°C				
Environmental Humidity	Less than 90%				
Storage Temp	-30°C ~ 75°C				
IP Rating	IP54				

Selection Guide

Please contact our sales and engineering team for application assistance.

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