Snap In Front Panel Programmer with Modbus over RS-485

DRST Series Communication Programmer

Item# DRST-CM

Programming Display for DRST-AC, DRST-DC, DRST-UN, DRST-UR

Modbus Protocol Interface Over RS485

Monitor Process Value From the Built-In Display

High 2.5 kV Isolation to Host Unit

Application

The DRST-CM detachable display adds Modbus RTU RS-485 serial communications to DRST-AC, DRST-DC, DRST-UN, and DRST-UR units. The unit converts a wide array of sensors and analog device signals like uni- and bipolar mA and voltage signals, potentiometer, Lin. R, RTD and TC, to a Modbus communication line signal. All individual unit operating parameters can easily and quickly be configured by using the Modbus communication or by using the front display menu. The easily readable DRST-CM display can be used to read the process signal, simulate the output signal, indicate sensor errors and internal device errors.

Technical characteristics

DRST-CM has full DRSL-DISPLAY functionality for unit programming, process signal monitoring and diagnostics handling. Modbus RTU protocol is supported using a serial RS-485 communication wiring. Multidrop half-duplex connection via shielded RJ45 connector. High safe galvanic isolation of 2.5 kVAC between the serial wiring and the connected DRST-AC, DRST-DC, DRST-UN, and DRST-UR units. Modbus parameters such as address, baud rate, stop bit(s), and parity bit are configured from the DRST-CM display, which also stores parameters.

Mounting / installation / programming

The DRST-CM can be moved from one device to another. The individual DRST-AC, DRST-DC, DRST-UN, and DRST-UR unit configuration of the first device can be saved and downloaded to subsequent devices. Programmed parameters can be protected by a userdefined password. When mounted on devices that are installed upside down, a menu item allows the display on the 4511 to be rotated 180 degrees and the up/down buttons to switch function.

Environmental Conditions

Operating temperature..... -20°C to +60°C

Storage temperature..... -20°C to +85°C

Relative humidity..... < 95% RH (non-cond.)

Protection degree..... IP20

Installation in..... Pollution degree 2 & meas. /overvoltage cat. II

Mechanical specifications

Dimensions (HxWxD)..... 73.2 x 23.3 x 26.5 mm

Dimensions (HxWxD) w/

DRST-AC, DRST-DC, DRST-UN, DRST-UR

unit..... 109 x 23.5 x 131 mm

Weight approx..... 30 g

Connection..... RJ45 - shielded

Common specifications

Supply

Max. required power..... ≤ 0.15 W

Isolation voltage

Isolation voltage, test/working..... 2.5 kVAC / 250 VAC reinforced isolation

Response time

Response time..... < 20 ms

Signal / noise ratio..... > 60 dB

Update rate..... > 50 Hz

Extended EMC immunity: NAMUR

NE21, A criterion, burst..... No loss of communication

Signal type..... RS-485 half duplex

Serial protocol..... Modbus RTU

Modbus mode..... RTU - slave

Devices on an RS485 line..... Up to 32 (w/o a repeater)

Data rates, baud..... 2400, 4800, 9600, 19200,38400, 57600, 115200

Automatic baudrate detection..... Yes - can be configured ON or OFF

Parity..... Even, Odd, None

Stop bit(s)..... 1 or 2

Digital addressing..... 1...247

Response delay..... 0...1000 ms

Observed authority requirements

EMC..... 2014/30/EU

LVD..... 2014/35/EU

EAC..... TR-CU 020/2011