Honeywell Honeywell Series Service Manual

05701-A-0283

1. Description

Honeywell 05701-A-0283 Sensor Drive Module, 4 - 20mA,

3. Product Information

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Honeywell 05701-A-0283 Sensor Drive Module, 4 - 20mA,

The Sensor Drive Module conditions the incoming catalytic or 4 - 20mA sensor signal and provides the necessary sensor power supply. It contains all the circuitry necessary to generate the voltages and currents required to drive the sensor, the circuitry to acquire the sensor signal and to scale the sensor signal to a standard output. The sensor drive modules are factory fitted and plug directly onto the channel control card.

Operating Temperature: -5°C to +55°C.

Storage Temperature: -25°C to +55°C.

Humidity: 0 to 90% RH (Non-condensing).

8.2 EMC/RFI CONFORMITY

EN50081 Part 1 and Part 2 EMC/RFI (Generic Emission).

EN50082 Part 1 and Part 2 EMC/RFI (Generic Immunity).

8.3 SERIAL COMMUNICATION

Format: Asynchronous Serial Data.

Data Bits: 8.

Speed: 19200, 9600, 4800, 2400 baud.

Stop Bits: 1 or 2.

Parity: Odd, Even or None.

Mode: Half Duplex.

8.4 MODBUS PROTOCOL

Mode: RTU.

MODBUS Functions: 02, 03, 04, 06 and 16.

8.5 RS485/422 INTERFACE MODULE

Power Supply: Powered from Engineering Card.

Power Consumption: 1.5W (maximum).

Weight: 30g.

Field Terminals: 2.5mm² (14 AWG) located on DC Input Card.

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Cable Type: Screened twisted pair with separate drain wire recommended.

Inputs/Outputs: Two RS485 transceivers - Channel 1, Channel 2.

Operating Modes: Single RS485 Highway.

Dual RS485 Highway

(Primary and Secondary).

RS422 Highway.

Multi-drop Capability: 31 nodes maximum (RS485).

or 10 nodes maximum (RS422).

Transceiver Specification:

Maximum Cable Length: 1200m (3900ft).

Maximum Data Rate: 19.2k baud.

Common Mode Voltage: -7V minimum to +12V maximum.

Input Sensitivity: ±200mV.

Input Hysteresis: 20mV typical.

Output Drive: 1.5V minimum, fully loaded.

Output Load: 54 ohms minimum.

Protection: Thermal shutdown.

Isolation: 50V relative to system 0V.

8.6 RS232 MODULE

Power Supply: Powered from Engineering Card.

Power Consumption: 0.75W (maximum).

Weight: 30g.

Field Terminals: 2.5mm² (14 AWG) located on DC Input Card.

Cable Type: Screened multi-core wire recommended.

Inputs/Outputs: Two data (RXD, TXD)

and two handshake (DTR, DSR)

Input/Output Specification:

Maximum cable length: 15m (49ft).

Maximum Data Rate: 9600 bits per second.

Output Voltage: ±5V minimum.

Positive Going Input

Threshold: 3.0V maximum.

Negative Going Input

Threshold: 0.6V minimum.

Input Hysteresis: 500mV typical.

Common mode voltage: -15V minimum to +15V maximum.

Protection: Thermal shutdown.

Isolation: 50V relative to system 0V.

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