ADT42 – 4-channel measuring module for force sensors

with 0-10V/4-20mA outputs, USB and RS485 MODBUS interfaces

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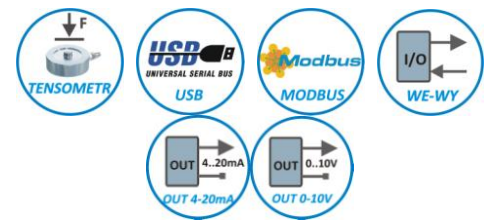tel. 61 22 27 422, fax. 61 22 27 439
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Description:

ADT42 is a multipurpose **4-channel** measuring module for load cells. It enables very precise measurement with resolution up to 100.000 of measuring range.

ADT42 has **2 transistor outputs**, and **2 insulated inputs** (one tare input). Built-in operating modes enable the device to be used for dosing without any additional controllers. Measured values can be converted into analogue signal in **0-10V** or **(0)4-20mA** standard. Access to device is also possible through **RS485** bus in **MODBUS-RTU** protocol, which allows direct communication one or several modules simultaneously with PLC drivers or HMI panels.
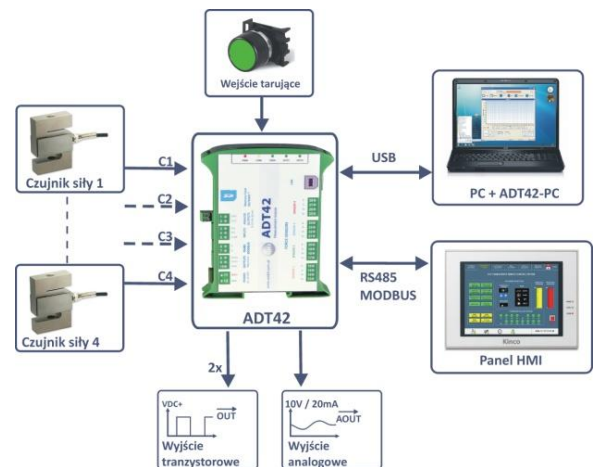
Features:

- Signal measurement from four load cells
- Result conversion into force in N or weight in g, kg, T, f
- Read out of each channel separately or aggregate of all channels
- Measurement filtering function
- 0-10V / (0)4-20mA output with calibration function
- 2 opt insulated inputs (general-purpose and tare)
- 2 transistor outputs with configurable thresholds
- RS485 interface for communication with other devices in MODBUS-RTU protocol
- USB connector for transducer configuration and measurement data acquisition

Technical parameters:

Description	Parameter
Power supply	12 … 24VDC, 150mA + OUT1, OUT2 output current
Force sensor inputs	Sensor power supply: 5V (also 10V sensors)Max. differential voltage: ±39mV,Resolution: 0,001% FS (for typical bridge with sensitivity 2mV/V) Temperature error: 0,0025%/C°
Digital inputs IN1, IN2	Opt insulated, Low state: 0V (max. 1V), high state: +24V (5…24V) Min. pulse length >10ms,
Transistor inputs OUT1, OUT1	Transistor OC , PNP type Max. ampacity: 0,5A Low state: OUT = 0V High state: OUT = VDC (voltage supply of the module)
Analog output -10V/4-20mA	**0-10V :** V min = 0,015V, V max = 10V, max. load 20mA Resolution : ±3mV, Accuracy 10mV (0,1% FS) **(0)4-20mA** : I min = 0,1mA, I max = 24mA Resolution: ±13μA, Accuracy 0,05mA (0,25% FS)
Interfaces	**RS485 MODBUS-RTU**, (by default: 38400bps, 8:n:1, address: 1) **USB**: 1.1, 2.0
Operation temperature range	5..50°C
Weight	100g
IP class	IP20

Example of connection to ADT42

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Datasheet ADT42 – 28.10.2014r. v.1.1   str. 1

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