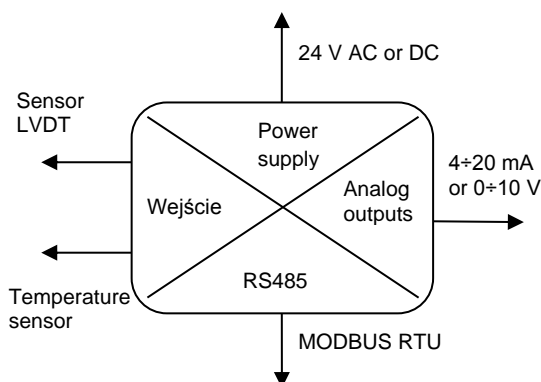


Amplifier WG09



Amplifier WG09 is dedicated to work with linear displacement sensor (LVDT). Amplifier feeds sensor and convert its output signal to analog amplifier's signal 0÷10V or 4÷20 mA and also to digit signal in standard RS485 Modbus RTU. The device has calibration keys which enable calibration with any sensor to any measuring range. Additionally amplifier enables internal and external temperature measurement (fe. temp. of LVDT). The device has an rail mounted enclosure DIN 35mm standard.

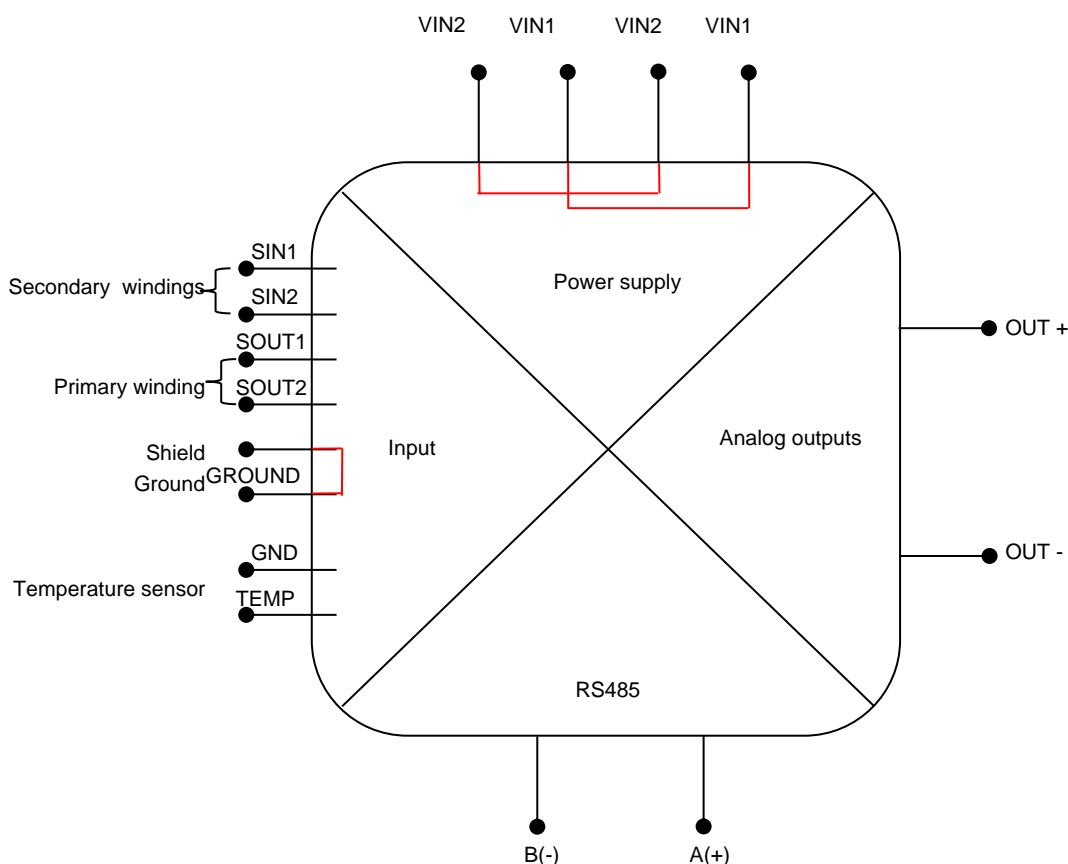
TECHNICAL DATA	
Power supply	24VDC/24VAC
Current consumption	100 mA
Working temperature	-25°C ÷ +40 °C
Installation	Rail DIN 35 mm
Enclosure	ABS, green, width 22,5mm
Dimension	X:22,5mm; Y:101mm; Z:120mm;
LVDT excitation	2 Vrms, 5 kHz
LVDT output signal	1 Vrms
Temperature sensor	Resistance fe. KTY210
Output signals	4÷20 mA or 0÷10V
Interface	RS485 twist, two wires
Transmission speed	9600 ÷ 57600 bps
Protocol	Modbus RTU slave
Length	to 1200 m
Memory	EEPROM
Programmimg	DIPSwitch: address slave and speed



Peltron Towarzystwo Produkcyjno Handlowe Sp. z o.o.

ul. Turystyczna 4, 05-462 Wiązowna

tel. +48 (22) 615-63-56 fax: +48 (22) 615-70-78 email: peltron@home.pl



Setting configuration parameters:
DIP switches enable slave address and transmission speed setting:

Slave address	Transmission speed
00000001 xx #1	xxxxxxxx 00 9600
00000010 xx #2	xxxxxxxx 01 19200
.....	xxxxxxxx 10 38400
11111111 xx #255	xxxxxxxx 11 57600

Registers map - Input:

Register number	Quantity
30003	RMS of the signal feeding the sensor
30004	RMS of the sensor's output signal
30005	counted as $(\text{reg300004}/\text{reg300003}) * 10000$ in 0.01%
30010	printed board temperature in 0.1 °C
30011	outer sensor temperature KTY81-210
30006	measurement for range -10000 do 10000

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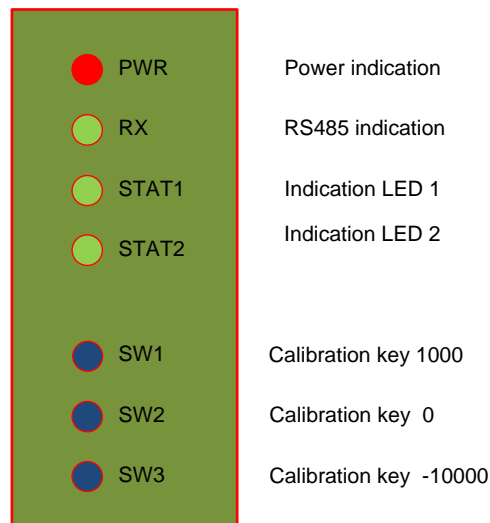
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LVDT calibration procedure. 3-point calibration (sensor's core in position : MIN, 0, MAX):

1. Start
Holding key SW3, turn on device's power supply. Calibration mode will be shown by fast LED blinking STAT2 and single short blink of STAT1.
2. Calibration of 10000 point.
Set max displacement of sensor's core and press key SW1. End of calibration will be signaled by two short flashes of STAT1.
3. Calibration of 0 point.
Set sensor's core in half length and press key SW2. End of calibration will be signaled by 3 short flashes of STAT1.
4. Calibration of -10000 point:
Set sensor's core in min displacement and press key SW3. Calibration point will be written down to memory of the device. WG09 comes back to standard working mode.



For amplifier with 4÷20 mA:

- a. -10000 point is 4 mA,
- b. 10000 point is 20 mA

For amplifier with 0÷10 V

- a. -10000 point is 0V
- b. 10000 point is 10 B

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