Current transformer
300A AC/DC TRMS - RS485 MODBUS

S9IA300AM
Part No. 2800030

- 0,5 % Accuracy
- RS485 Modbus integrated
- TRMS measurement (monopolar) or DC (bipolar)
- 0-10V analog output
- Din rail mountable
- Fully configurable by free interface software
- Range: 300A TRMS or 150A TRMS
  ±300A / ±150A DC bipolar
  or RS485 customize setting

Technical data

Function
AC/DC current transformer with RS485 Modbus and 0-10V interface.

1. Mechanical design
PBT plastic housing, IP rating IP20
DIN-rail mountable with DIN-rail clips (included) for horizontal/vertical mounting, screw predisposition for horizontal/vertical mounting
Mounting position: any
Dimensions: 89,1 x 99,25 x 28,5mm (without connectors)
Ø33mm (current transformer)
Terminals: - 1,5mm² 5-pole connector (3,5mm pitch)
DIP-switch: 8 poles (4 x Baudrate, 4 x Address, Monopolar/ Bipolar, 150A/300A)
Weight: 370g

2. Indicators
Yellow LED ON: indication of supply voltage
Yellow LED flashing: indication of communication via RS485

3. Power Supply
Input: 12...30 V DC; terminals Pow(+), GND(-)
Protection against polarity reversal and overtemperature
Absorption: max. 20mA

4. RS485 Modbus RTU
Baudrate: 1200 ... 115200 Baud (Standard: 9600); terminals GND, A+, B-
Response time: 30ms

5. Analog output
Output range: 0-10V
Response time: 1000ms

6. Measuring circuit
Type of Measure: TRMS (monopolar) or DC (bipolar)
Range: 300A / 150A (DIP-switch setting)
bipolar ±300A DC / ±150A DC (DIP-switch setting), RS485 customize setting
Crest factor: 1,4
Working frequency: 20 ... 2000Hz or DC
Overload: 2000A pulse, 1000A continuous
Hysteresis: 0,2% f.s.
Resolution: 12 bit

7. Accuracy
Current: < 0,5% f.s.

8. General specifications
Temperature coefficient: < 200 ppm/°C
Operation temperature: -15 to +65°C
Storage temperature: -40 to +85°C
Humidity: 10 to 90% (not condensing)
Altitude: Up to 2000m above sea level
Isolation: 3kV on bare wire

Standards: EN61000-6-4/2006 + A1 2011;
EN64000-6-2/2005;
EN61010-1/2010
Certifications: CE, UL recognized component

Configuration: With software or via RS485 Modbus.
Communication to free interface program for configuration of all the available parameters

Remarks:
- Modbus connections: A+ and B- as per Modbus RTU standards
- Modbus Register reference: with reference to the logical address, for ex. 40010, corresponds to physical address n°9 as per Modbus RTU standard
- Dip Switch Settings: the setting is not enabled if the first four dip-switches are set to 0000, the rest of dip-switch are disabled. All settings coming from EEPROM.
- Modbus functions supported: 3 (Read multiple registers, max 4), 6 (Write single).
- **Any changes made by dip-switch requires to reset via power supply or sending reset command**

DIP-switch:

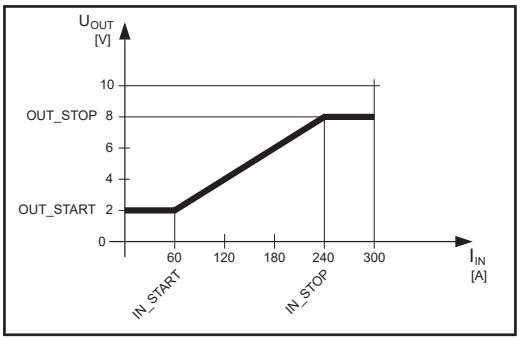
Description	DIP-switch							
	1	2	3	4	5	6	7	8
All setting from EEPROM	0	0	0	0				
ADD = 1	0	0	0	1				
ADD = 2	0	0	1	0				
ADD = 15	1	1	1	1				
2400 Baudrate					0	0		
9600 Baudrate					0	1		
38400 Baudrate					1	0		
57800 Baudrate					1	1		
Monopolar (TRMS)							0	
Bipolar (mean value)							1	
300A measuring range								0
150A measuring range								1

Configuration software
The free interface software is downloadable from our website www.tele-online.com/products/sensact
To communicate with the module you have to connect via USB port directly on your PC using the serial converter S-USB485; part No. 498513.
You can configure the module via RS485 using the register map downloadable at www.tele-online.com/products/sensact

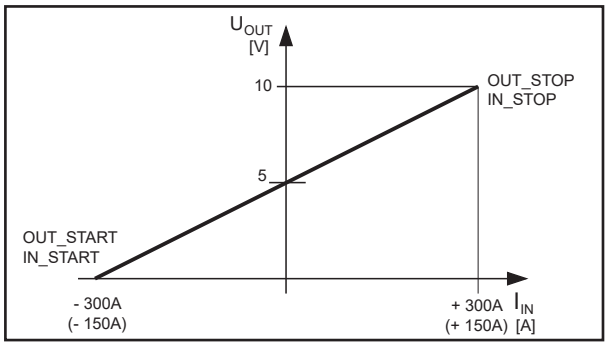
Input / Output diagram

Example:

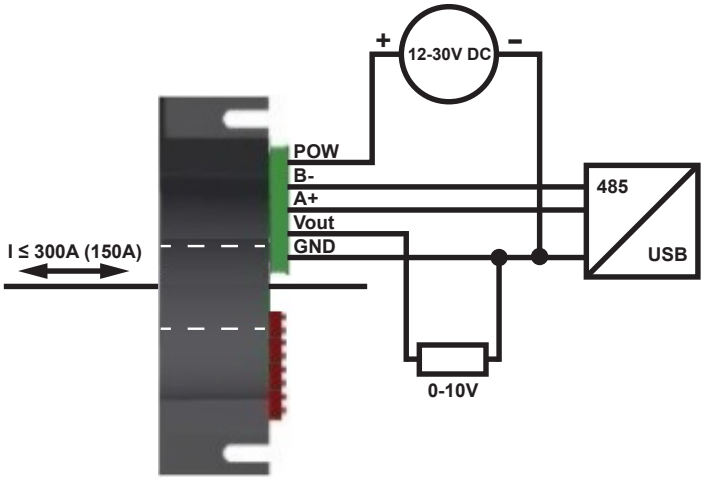
OUT_START: 2V
OUT_STOP: 8V
IN_START: 60A
IN_STOP: 240A



Bipolar

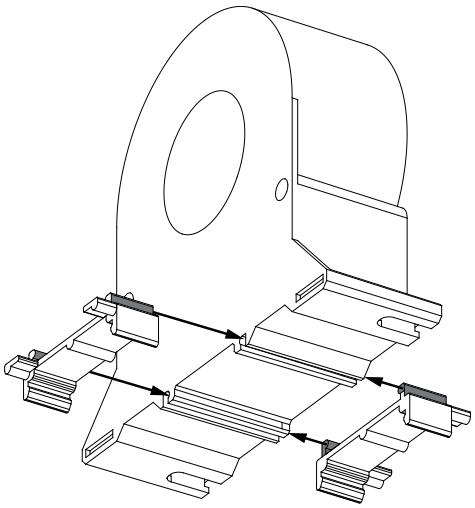


Connections

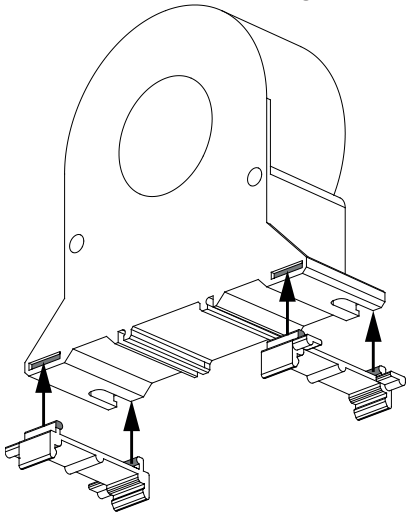


Positioning clips for DIN-rail

For vertical DIN-rail mounting



For horizontal DIN-rail mounting



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