

Current transformer (CT) to 4-20 mA, three inputs, with OLED display and relay

Article number PR515x001



The PR515x001 measures the current in a network through up to three current transformers (1 A or 5 A, true RMS) and provides a 4-20 mA signal. While the highest measured current stays below the set point, the output is 20 mA; above it, the output ramps down proportionally to 4 mA at the cut-off current, and above that a relay contact switches as well. Because the current transformers measure contactlessly, the existing wiring does not need to be modified. Currents, times and delays are set on the OLED display.

Price on request. Lead time on request. Not in stock? We will make it.

Specifications

Supply	12 and 24 V DC, operating range 11 to 30 V DC
Input	Three inputs for current transformers (CT) of 1 A or 5 A AC, true RMS
Output	4-20 mA, active, on terminal 11; 0-10 V on terminal 13; relay contact (normally open) on terminals 20 and 21, 1000 mA max.
Isolation	4-20 mA output not galvanically isolated (isolated output as an option); the current transformers measure contactlessly and with galvanic isolation
Setup	OLED display with UP, DOWN and OK buttons; changes take effect immediately and are retained after SAVE
CT input load	Not more than 5 A AC continuously; a fuse per input is recommended if the current may exceed this
Control	Set point, cut-off current, restart current and delays adjustable in mA and seconds
Rise and fall rate	Adjustable in seconds
USB	USB port for software updates and reading the status, baud rate 115k
Wi-Fi	Built-in hotspot for software updates
Factory setting	Set for 5 A current transformers

Connections

Terminal 1	Supply plus (11 to 30 V DC)
Terminal 2	Supply minus, also common ground of the analogue signals
Terminal 3	Not used
Terminal 4	Not used
Terminal 5	Current transformer CT1, AC-
Terminal 6	Not used
Terminal 7	Current transformer CT1, AC+
Terminal 8	Current transformer CT2, AC-
Terminal 9	Not used
Terminal 10	Current transformer CT2, AC+
Terminal 11	4-20 mA output (plus), active
Terminal 12	Not used
Terminal 13	0-10 V output (plus); leave unconnected if not used
Terminal 14	Current transformer CT3, AC-
Terminal 15	Not used
Terminal 16	Current transformer CT3, AC+
Terminal 17	CAN bus L; leave unconnected if not used
Terminal 18	CAN bus H; leave unconnected if not used
Terminal 19	Not used
Terminal 20	Relay contact, normally open (NO), 1000 mA max.
Terminal 21	Relay contact, common (COM)
Terminal 22	Not used

Setup

1. Connect the module according to the terminal table: supply on terminals 1 and 2, the current transformers on terminals 5 and 7 (CT1), 8 and 10 (CT2) and 14 and 16 (CT3).
2. If you use 1 A current transformers, select that type on the display; as delivered, the module is set to 5 A.
3. In menu 8 (Setpoint Current in mA), set the current above which the output starts to ramp down from 20 mA.
4. In menu 9 (Cut off current in mA), set the current at which the output is at 4 mA and the relay switches.
5. In menu 10 (Cut off delay in seconds), set how many seconds the current must stay above the cut-off current before the relay switches.
6. In menu 7 (Restart minimum current in mA), set the current below which the module may switch back on.
7. In menu 6 (Restart delay in Seconds), set how many seconds the current must stay below it before the module releases the relay and lets the output rise to 20 mA.
8. In menu 5 (Ramp Up Time) and menu 4 (Ramp Down Time), set how many seconds the output takes to go from 4 to 20 mA and from 20 to 4 mA.
9. Check in menu 1 (LIVE) the highest measured current, the output (0 % = 4 mA, 100 % = 20 mA) and the state of the module (Active, Shutdown Pending, Shutdown or Restart Pending), and in menu 2 (LIVE MONITOR) the current per input.
10. Other menus: menu 3 (mV States) and 11 to 18 are for calibration and must not be changed; menu 19 shows the Wi-Fi status, 20 the operating time and 28 the software version; menu 22 switches on the Wi-Fi hotspot for a software update; menus 21, 23, 24, 26 and 27 are for factory use.
11. Go to menu 25 (SAVE), press OK, select YES and press OK again. Without SAVE the module returns to the last saved settings after it is switched off.

More information, price and lead time: www.procircuits.nl/en/products/pr515x001

ProCircuits B.V. · Van Nijenrodeweg 903, 1081 BJ Amsterdam, Netherlands · +31 6 45 77 55 93 · willem@procircuits.nl ·

Chamber of Commerce (KVK) 87009870

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