

CEM17_4-20mAMB 4-20mA MODBUS TRANSDUCER



The transducer converts the 4 to 20mA input signal into a digital value proportional to the current.

The input current is sensed across a 10 Ohm resistor.

The transducer 4-20mA reading is accessed over an RS485 serial bus using the Modbus RTU protocol.

The module is powered from an external 24V DC supply.

Order code:

CEM17_4-20MA_MB-24VDC 4-20mA current transducer

Specifications

Input		: 4-20mA current signal signal
	Resistance	: 10 Ohm
	Range	: 0mA to 32mA
Accuracy		: Class 0.5 to IEC 60688 $\pm 0.5\%$ of nominal range
	Range	: 0 to 150% nominal input range
Overload	Input current	: 3 x nominal input continuous
Output		
Comms		: Isolated RS485 port
		: Selectable 9600(default) or 19200 Baud rate, 8 bit no parity 1 stop bit
Protocol		: Modbus RTU slave, node addressing selectable 1 (default) to 247
Supported Functions		: 03 read holding registers
		: 04 read input registers
		: 06 write single register
		: 16 write multiple registers
Supply Input		: nominal 24V dc, operating range 18V to 30V dc
		: approx. 20mA at 24Vdc
Isolation		: 2kV isolation between the supply and RS485 bus
Temperature	Operating	: -10°C to $\pm 20^\circ\text{C}$ to +70°C
EMC Compliance		: AS/NZS 61000.6.3:2012
Housing		DIN rail mounted polyamide, flame retardant UL 94 V0.
Terminals		Spring steel clamp, tin plated copper alloy terminal
		: up to 2.5mm ² stranded conductor

CARREL ELECTRADE LTD

MANUFACTURERS, IMPORTERS AND DISTRIBUTORS OF ELECTRICAL ENGINEERING PRODUCTS
 POSTAL ADDRESS: P O BOX 11078, ELLERSLIE 1542, AUCKLAND NEW ZEALAND
 FACTORY AND OFFICE: 661 GREAT SOUTH ROAD, PENROSE 1061
 TELEPHONE: +64-9-525 1753 FACSIMILE: +64-9-525 1756
 CHRISTCHURCH BRANCH: 73B BRISBANE STREET, SYDENHAM
 TELEPHONE: 03-366 1242 FACSIMILE: 03-379 1991
 EMAIL: sales@ carrel-electrade.co.nz WEB: www.carrel-electrade.co.nz

CEM17_4-20mAMB 4-20mA MODBUS TRANSDUCER

Modbus Operation

Modbus RTU slave over RS485.

Baud rate 9600 (default) or 19200, no parity 8 bit 1 stop bit.

Node address range 1 (default) to 247.

Supported Modbus functions:

Function 03, read holding registers.

Function 04, read input registers.

Function 06, write single register.

Function 16, write multiple registers.

Broadcast slave address 0 read supported for function 03 and function 04.

Responds with actual node address plus data.

Modbus Registers

Holding registers:

40001 RS485 Baud rate. Unsigned integer, read/write either 9600 (default) or 19200.

40002 Modbus node address. Unsigned integer, read/write range 1 (default) to 247.

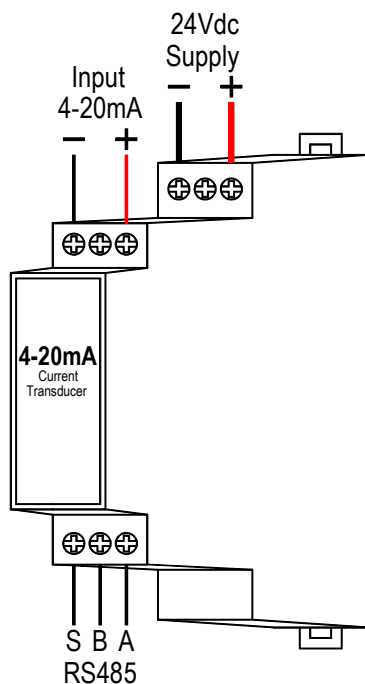
Note. After changing the RS485 Baud rate or the Modbus node address, the transducer will acknowledge the Modbus request and the change will come into effect after 0.5 seconds.

Input registers:

30001 Current reading. Unsigned integer, read only current (mA) x 0.01 (1600 = 16.00mA).

Note. Negative over range value is -32768, positive over range value is +32767.

Connections



Housing Dimensions

