

**OVERVIEW**

The ASHE CZ series Modbus Interface I/O modules are a range of micro-controller based Converters for Analog Inputs & Outputs to RS485 Modbus Serial protocol. The CZ series instruments realize the signal acquisition between sensor and the host DCS. The instruments are offered in a highly compact execution, suitable for DIN Rail mounting. The RS485 signal output can be offered in either Modbus RTU or Modbus TCP/IP Master-Slave protocols (to be pre-specified).

The instruments can be factory configured for various types of analog signals, which need to be pre-specified. The instruments convert the Digital and Analog signals to a 16 bit digital format. The data is transmitted by the Modbus RTU or the Modbus TCP/IP protocol on RS 485 signal. The CZ series instruments are accurate to  $\pm 0.1\%$  full scale and have less than  $0.01\% / ^\circ\text{C}$  thermal drift. Data transmission is done at 19200 Baud.

The CZ series Converters offer isolation between the Power Supply and the Input signals to 1500 V AC to eliminate the effects of any ground loops and allow the use of these modules in heavy environmental conditions found in industrial applications.

The CZ Converters are designed with both, Modbus RTU as well as Modbus TCP/IP protocols (to be pre-specified), which allow the instrument to be directly interfaced in a wide range of PLC and SCADA applications.



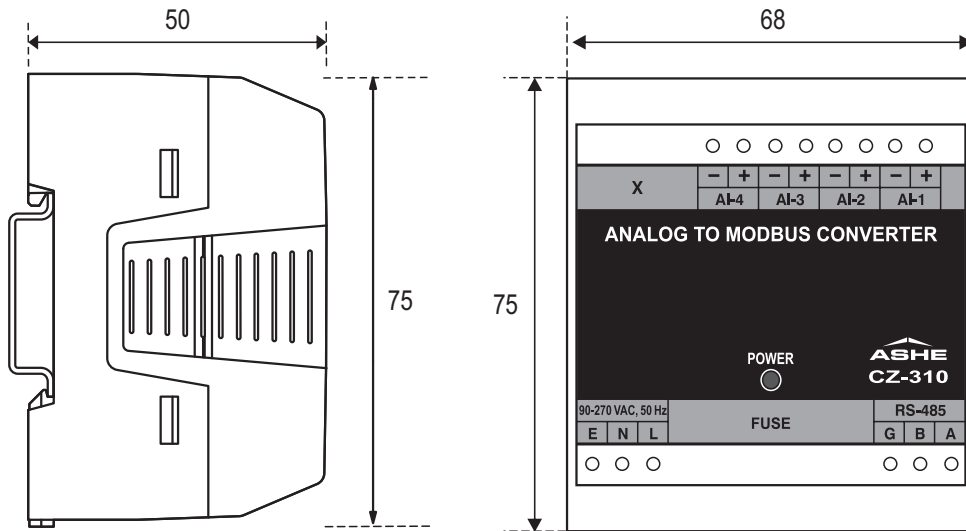
**SPECIFICATIONS**

<b>Model</b>	ASHE CZ-310
<b>Type</b>	Microcontroller based Analog signal to RS485 Modbus Converter.
<b>Input Signals</b>	4 to 20 mA (or to be specified)
<b>No. of Channels</b>	4 Channels
<b>Modbus Output Protocol</b>	Modbus RTU or Modbus TCP/IP (to be pre-specified)
<b>Input Impedance (for mA)</b>	47 Ohm. for each input
<b>Isolation Input to RS-485</b>	Optical 1500 V AC for 1 minute.
<b>Thermal Drift</b>	$\pm 0.01\% / ^\circ\text{C}$ .
<b>Baud Rate</b>	19200 bps.
<b>Maximum Distance</b>	1.2 km.
<b>Memory</b>	Non-Volatile (on EEPROM).
<b>Power Supply</b>	90 to 270 V AC, 50/60Hz.
<b>Dimensions</b>	68x75x50 mm. [H x W x D]
<b>Execution</b>	DIN Rail mounting
<b>Enclosure</b>	Industrial grade ABS
<b>Weight</b>	Approximately 0.5 kgs.
<b>Operating temperature</b>	0 to 55°C.

**FEATURES**

- Microcontroller based Signal Converter
- Range of Analog and Digital Input signal acquisition
- Analog and Digital output options
- Various Analog signal types possible
- Supports Modbus RTU or Modbus TCP/IP protocol outputs
- 12-bit A-D Converter
- High Accuracy ( $> \pm 0.1\%$ )
- Isolation level of 1500 V AC
- Baud Rate of 19200 (can be modified)
- High reliability
- Compact DIN35 Rail mount execution
- Universal AC Power Supply, 90 to 270 VAC, 50/60 Hz
- Compact dimensions 68x75x50 mm [WxHxD]
- Very low power consumption
- Negligible heat dissipation
- Proven track record

**DIMENSIONAL DIAGRAM**



**HOW TO ORDER**

MODBUS INTERFACE MODULES	CZ-310				
Configuration and add-on options					
<b>1 INPUT SIGNAL</b> ▶ 4 to 20 mA DC ▶ Other (to be specified)	L Y				
<b>2 INPUT CHANNEL OPTIONS</b> ▶ One channel ▶ Two channel ▶ Three channel ▶ Four channel		1 2 3 4			
<b>3 MODBUS OUTPUT PROTOCOL</b> ▶ Modbus RTU ▶ Modbus TCP/IP			M T		
<b>4 EXECUTION</b> ▶ Din Rail Mounting ▶ Field Mounting in Weather-proof execution (Polycarbonate enclosure, Ingress Protection)				D W	

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Designed and Manufactured by :

**ASHE CONTROLS PRIVATE LIMITED**

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