

Powerlens Data Sheet

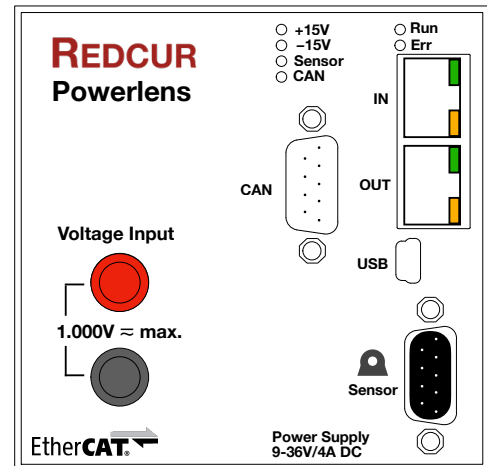
Delivers Synchronous High Precision **Current and Voltage** Measurements to EtherCAT and CAN bus.

Features

- 24-Bit ADCs with **Clock-Sync Sampling** of I and U
- I_{max} +/-2.000 A (with LEM IN-2000)
- U_{max} +/-1.200 V - Single Range
- Included Power Supply for LEM Transducer
- CAN Bus interface
- 5kV Isolation
- Calibration Service (optional)
- Supports LEM IT, IN and ITN series
- Transducer Overload Protection

Standards/Compliance

- EtherCAT®
- CAN Bus ISO 11898
- According to EN61010-1: 2010



Specification

Power Supply	9-36V DC
Power Consumption	5W + LEM Sensor (see www.lem.com)
Mounting	DIN Rail
Weight	0.35kg
Dimensions (HxWxD) in mm	100x90x110
EtherCAT Cycle Time (min.)	50µs
EtherCAT Data Transfer	Single, Bulk transfer up to 16 Measurements
CAN Interface (galvanically isolated)	D-SUB9 Connector (CiA DS-102)
CAN Speed (max.)	1Mbps
ADC Resolution	24 Bit
ADC Technology	ΔΣ (Delta-Sigma)
Filtering	Lowpass ~0.5 x ADC Data Rate (Anti Aliasing)
Accuracy	I: 0.005% of Measuring Range U: 0.005% of Measuring Range
Maintenance Interface	USB
Current Sensor Interface	LEM proprietary 9-pin D-Sub

Phase Shift Voltage Measurement	< 0.2° at 1200Hz
Input Impedance (Voltage Measurement)	>10MΩ 5pF
Bandwidth	1kHz
Isolation of Voltage Measurement Subsystem	5kVrms

EtherCAT Parameters

- Averaged Current/Voltage Value
- Array of 16 Current/Voltage Values for Bulk Transfer
- Operational Status / Overload Protection of the LEM transducer
- Overrun detection of AD converters (plus LED indicator)
- Offset - adjustable (manual/automated)

CAN Bus Parameters

- Averaged Current/Voltage Value
- Operational Status / Overload Protection of the LEM transducer
- Overrun detection of AD converters (plus LED indicator)
- Configurable
 - CAN message ID
 - Bit Rate (1Mbps max.)
 - Measurement frequency

Available as a SW Update early 2021 for both EtherCAT and CAN

- Power
- Charge (+|-|Δ)
- Energy (+|-|Δ)

Charge and Energy will be computed on board based on a calibrated time source.

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