

CSMshunt

- ▶ Universal applicable, shunt-based adapter solution for current measurement
- ▶ Designed for extreme environmental conditions
- ▶ Rugged housing with external measurement amplifier
- ▶ Available in 2.5 A, 25 A, 125 A, and 250 A ranges
- ▶ Suitable for direct connection to CSM AD-Scan MiniModules
- ▶ Operating temperature under full load: -40 °C to +125 °C
- ▶ Outstanding accuracy within the temperature range



CSMshunt 125A/250A

The **CSMshunt** expands the usability of AD-Scan MiniModules, enabling the user to measure current in a **precise and accurate** manner – **even under the harshest environmental conditions**.

The power supply of the external amplifier is **electrically isolated**. The electronic isolation of the measurement signal is handled by the measurement module, so that interspersion will not cause any measurement errors.

The shunt-based measurement solution is characterized not only by the optimum integration to AD-Scan Mini Modules (in particular by the **high temperature-resistance – up to +125°C under full load**), but also its **excellent accuracy**.

The CSMshunt is designed to be inserted directly into the current path. Any pre-existing / original fusing remains completely unaffected.

As the standard offering, the CSMshunt 2.5 A and 25 A is delivered with 2.5 mm² open end copper wire. The CSMshunt 125 A and 250 A is delivered with an M6 thread bolt.

Typical fields of application

- ▶ Acquisition and monitoring of current in operational mode.
- ▶ Acquisition and monitoring of current in sleep mode.
- ▶ Detection of "electricity hogs" to avoid battery problems in serial production.
- ▶ Monitoring of sleep- and recovery behaviour of ECUs.
- ▶ Measurement of discharge and charge current of the battery (charge balance).
- ▶ Monitoring and logging of the battery status for vehicle transport, particularly ocean transport.
- ▶ Error analysis in the service garage for error identification in "non-mobility vehicles" and other electric-/electronic-problem vehicles.
- ▶ Long term monitoring of vehicle current during continuous vehicle operation.

Customer modification

In addition to the standard version of the CSMshunt, almost any custom input/output connector combinations are possible. **Please contact CSM for additional information.**

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Specifications CSMshunt

Technical Data	CSMshunt 2.5 A	CSMshunt 25 A	CSMshunt 125 A	CSMshunt 250 A
Input Measurement Range ¹⁾	± 2.5 A (Shunt 10 mOhm)	± 25 A (Shunt 1 mOhm)	± 125 A (Shunt 0.2 mOhm)	± 250 A (Shunt 0.1 mOhm)
Threshold Frequency	1.4 kHz			
Accuracy at 25 °C	<0.5 % of meas. value ± 0.25 mA	<0.5 % of meas. value ± 2.5 mA	< 0.5 % of meas. value ± 12.5 mA	< 0.5 % of meas. value ± 25 mA
Temperature Drift	typ. ± 60 ppm/K			
Galvanic Isolation Supply Measurement Signal	500 V DC none ¹⁾			
Power Supply	12 V ... 15 V DC			
Current Consumption	typ. 12.5 mA @ 12 V DC			
Output Voltage	± 10 V @ ± I _{rated}			
Maximum Load	R _L > 20 kOhm			
Dimensions Shunt (W x H x L)	41 x 15 x 30 mm		135 x 35 x 40 mm	
Dimensions Amplifier (W x H x L)	80 x 30 x 30 mm			
Weight Shunt Weight Amplifier	approx. 50 g approx. 60 g		approx. 250 g approx. 60 g	
Operating Temperature	-40 °C to +125 °C			
Protection Class Shunt Protection Class Amplifier	IP67 IP67		IP54 IP67	
Storage Temperature Relative Humidity	-55 °C to +125 °C 5 % to 95 %			
Connectors Input Output	Open end, 2.5 mm ² copper wire LEMO 0B 6-pole ²⁾		M6 thread bolt LEMO 0B 6-pole ²⁾	
Conformity	CE			

1) The galvanic isolation of the measurement signal must be done within the measurement module

2) Other versions on request

Part numbers:

CSMshunt 2.5 A 2.5 m LEMO 0B 6-pole	ART1220101
CSMshunt 25 A 2.5 m LEMO 0B 6-pole	ART1220701
CSMshunt 125 A 2.5 m LEMO 0B 6-pole	ART1221301
CSMshunt 250 A 2.5m LEMO 0B 6-pole	ART1221701

For further technical information and references, please contact our technical sales.