



CSMshunt

- ▶ **Universal applicable, shunt-based adapter solution for current measurement**
- ▶ **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**

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**. Additionally CSMshunt is suitable for operating at all kinds of analog measurements.

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



CSMshunt 2,5 A / 25 A



CSMshunt 125 A / 250 A

- ▷ 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 us for further details.**

Specifications CSMshunt

Technical Data	CSMshunt 2.5 A	CSMshunt 25 A	CSMshunt 125 A	CSMshunt 250 A
Input measurement range	±2.5 A (Shunt 10 m Ω)	±25 A (Shunt 1 m Ω)	±125 A (Shunt 0.2 m Ω)	±250 A (Shunt 0.1 m Ω)
Threshold frequency	1.4 kHz			
Measurement 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	< 0.5 % of meas. value ⁽¹⁾	< 1 % of meas. value ⁽¹⁾	< 5 % of meas. value ⁽¹⁾	< 5 % of meas. value ⁽¹⁾
Galvanic insulation ⁽²⁾ power supply measurement signal	no safety insulation in terms of high-voltage applications			
Power supply	12 V DC			
Minimum	15 V DC			
Maximum	typ. 12.5 mA 12 V DC			
Power consumption	±10 V at ± I _{rated} (±25 mV at ± I _{rated}) ⁽¹⁾			
Output voltage	R _i > 20 k Ω			
Maximum load	10 A	70 A	200 A	750 A
Maximum overcurrent				
Housing				
Protection class				
Shunt	IP67		IP54	
Amplifier	IP67			
Weight				
Shunt	approx. 50 g		approx. 250 g	
Amplifier	approx. 60 g			
Dimensions (w x h x d)				
Shunt	41 x 15 x 30 mm		135 x 35 x 40 mm	
Amplifier	80 x 30 x 30 mm			
Connectors				
Input	open end, 2.5 mm ² copper wire		M6 threaded bolt	
Output	LEMO 0B 6-pole ⁽⁴⁾			
Operating and storage conditions				
Operating temperature	-40°C to +125°C			
Relative humidity	5 % to 95 %			
Storage temperature	-55°C to +125°C			
Conformity	CE			

1) CSMshunt passive.

2) This CSMshunt is designed to measure within 12 V-, 24 V-, or 42 V- vehicle onboard power supply. The maximum operation voltage at the measuring inputs is 60 V. **Not suitable** for direct usage at systems with higher operating voltages, e.g. HV-battery of hybrid or e-cars.

3) The galvanic isolation of the measurement signal must be done in the measurement module.

4) Optionally available in other variants.

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

Part numbers

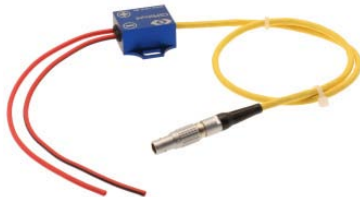


ART1220101 CSMshunt 2,5 A, 2.5 m LEMO 0B 6-pole

ART1220701 CSMshunt 25 A, 2.5 m LEMO 0B 6-pole

ART1221301 CSMshunt 125 A, 2.5 m LEMO 0B 6-pole

ART1221701 CSMshunt 250 A, 2.5 m LEMO 0B 6-pole

Further articles of CSMshunt

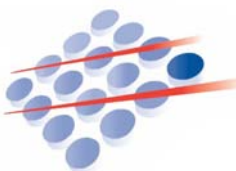
Articles	Variants	Picture
CSMshunt passive	2,5 A / 25 A	
	125 A / 250 A	
Amplifier CSMshunt passive		

Part numbers

ART1220501	CSMshunt 2,5 A passive, 0.5 m LEMO 0B 6-pole
ART1221101	CSMshunt 25 A passive, 0.5 m LEMO 0B 6-pole
ART1223001	CSMshunt 125 A passive, 0.5 m LEMO 0B 6-pole
ART1222901	CSMshunt 250 A passive, 0.5 m LEMO 0B 6-pole
ART1230101	Amplifier CSMshunt passive, 0.5 m LEMO 0B 6-pole



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