

VALUE PROP

CMS – Circuit Monitoring System

You can't improve what you can't measure



The CMS – Circuit Monitoring System provides a compact system for measuring performance of branch circuits and comprehensive energy monitoring of incoming feeders down to individual branch circuits. With simple and intuitive installation and configuring, CMS can be part of the original design or retrofit in the field.



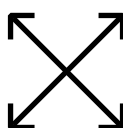
Improve efficiency

- 17.5 mm or 25 mm – most compact sensors available on the market
- Reduce downtime by detecting potential issues early
- Up to 96 sensors can be monitored by one control unit
- Sensor mounting options: Direct on device¹, DIN rail or direct on cable



User-friendly integration

- Simple and intuitive configuration of the control unit and sensors via touchscreen or directly via web client
- Easy plug, push, and play sensor connecting
- Measurement data can be extracted via Ethernet port or polled via Modbus RTU by PLC or other system
- No special software or programming required



Increase flexibility

- Sensors can measure AC or DC up to 160 A TRMS
- Simple 4-wire flat cable eliminates clutter of bundling traditional 2-wire CTs
- Control unit can measure mixed currents in the same system
- Able to interconnect multiple CMS control units via Ethernet TCP/IP/SNMP and Modbus RTU

¹ Direct mount on device available on certain series only

CMS – Circuit Monitoring System

Technical details

Control units

	CMS-600	CMS-700
Supply voltage	24 VDC ($\pm 10\%$)	80 – 277 VAC (L1-N, +5%), 50 / 60 Hz
Power input	4 – 24 Watt (dep. on number of sensors)	5 ... 40 Watt (L1-N) (dep. on number of sensors)
Interface	RS485 2 wire	RS485 2 wire, and Ethernet LAN
Protocol	Modbus RTU	Modbus RTU and Ethernet TCP/IP, SNMP
Data rate	RS485 2-wire, 2400 ... 115 200 bits/sec.	RS485 2-wire, 2400 ... 115 200 bits/sec., LAN 100 Mbits/sec.
Refresh rate	≤ 1 sec with max. 64 sensors	≤ 1 sec with max. 96 sensors
Mounting method	35 mm DIN rail (DIN 50022) or SMISLINE TP plug base	35 mm DIN rail (DIN 50022)
Degree of protection	IP20	IP20
Dimensions	71.8 x 87.0 x 64.9 [mm]	160.0 x 87.0 x 64.9 [mm]
Operating temperature	- 25 ... +70 [°C]	- 25 ... +70 [°C]
Standards	IEC 61010-1, UL 508/ CSA C22.2 No. 14	IEC 61010-1, UL 508/ CSA C22.2 No. 14

Sensors

	Closed core 18 mm	Open core 18 mm
Measurement range	80, 40, 20 A	80, 40, 20 A
AC accuracy (TA = + 25 °C) ¹	$\leq \pm 0.5\%$	$\leq \pm 1\%$
DC accuracy (TA = +25 °C) ¹	$\leq \pm 0.7\%$, $\leq \pm 1.0\%$, $\leq \pm 1.7\%$	$\leq \pm 1.2\%$, $\leq \pm 1.4\%$, $\leq \pm 1.8\%$
Response time ($\pm 1\%$) sec.	typ. 0.25	typ. 0.34
Feed through conductor size	10 mm	9.6 mm
	25 mm	
Measurement range	160, 80, 40 A	
AC accuracy (TA = + 25 °C) ¹	$\leq \pm 0.5\%$	
DC accuracy (TA = +25 °C) ¹	$\leq \pm 0.7\%$, $\leq \pm 1.0\%$, $\leq \pm 1.7\%$	
Response time ($\pm 1\%$) sec.	typ. 0.25	
Feed through conductor size	10 mm	

Common specifications across all sensor types

Measurement method	TRMS, AC 50 / 60 Hz, DC
Peak factor, distorted waveform	≤ 1.5 , ≤ 3 , ≤ 6
Resolution	0.01 A
Sampling rate, internal	5000 Hz
Insulation strength	690 VAC /1500 VDC
Operating / storage temperature	- 25 ... +70 / - 40 ... + 85 °C
Standards	IEC 61010-1 and UL508 / CSA C22.2 No 14

¹ Of full range

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