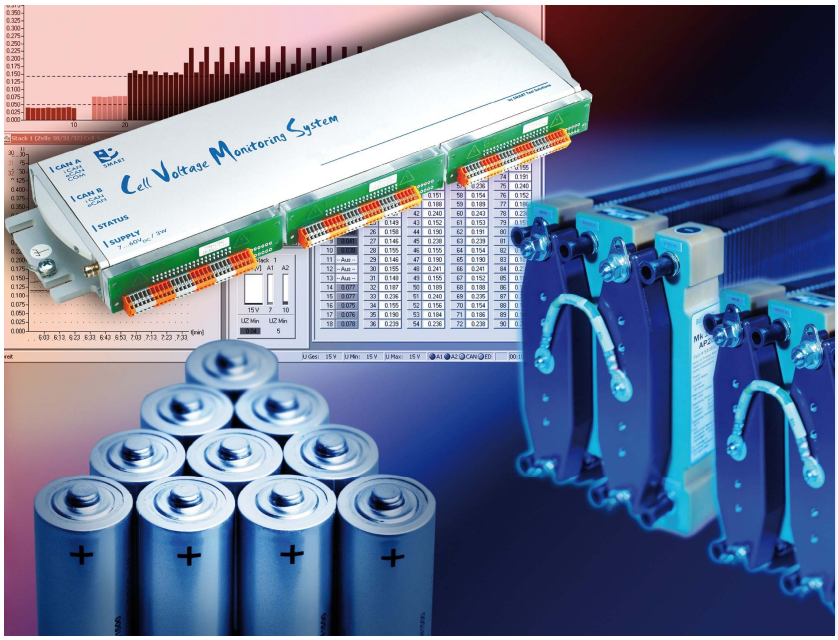
Preliminary

CVMpro32 (-R4) iLOG Chameleon



Multi-channel measurement and monitoring of batteries, fuel cells and electrolyzers

The CVMS real time data acquisition system is used for the multi-channel voltage and temperature measurement of fuel cells, lithium ion batteries, lithium polymer batteries, solar cells and electrolyzers.

Application examples

- Mobile monitoring of fuel cell systems and lithium ion / lithium polymer battery systems in vehicles.
- Stationary use on fuel cell and lithium ion / lithium polymer battery test benches.

Principal features

- Master module with communication gateway for Ethernet, USB 2.0, CAN 2.0B and 32x 0-5V voltage measurement channels.
- Extension modules offering 32 channels each for Voltage measurement: 0-5V, 0-50V Temperature measurement: Thermocouple type K, PT100, PT1000.
- Cascading of up to 512 channels per communication gateway.
- Resolution 16 bit, accuracy better than ±1 mV.
- Master strobe trigger for time-synchronous measurements of all measurement channels connected to a gateway.
- Measurement of cell voltage at both terminals +/- (two-wire measurement)
- Three-wire measurement with PT100/PT1000.
- Typical conversion and data transfer time per channel: 10 us (with 100 channels e.g., this corresponds to a min. measurement frequency of only 1 ms).4 kV dielectric strength
- Contact loss detection available.
- Sturdy, compact measurement module in aluminium flat-pack housing.
- Form factors available for mobile use, DIN-rail mounting and 19" rack.
- Offline data storage on SD card or USB stick.

Customer benefits

- Low costs and small unit volume per channel combined with high performance.
- Easily integrated into existing measurement environments, operates with interface cards from National Instruments, Vector Informatik etc.
- Suitable for mobile and stationary applications.
- Independent operation without PC link ("set & forget").
- Early digitalization reduces interference.
- Rapid and efficient commissioning of the measurement set-up.

Business Unit ▸New Energy Electronics

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Technical data

PARAMETER	MIN.	TYP.	MAX.	UNIT
Number of channels per module		32		
Conversion time per channel		10		µs
Cascading per communication gateway/master module			16	modules
Input voltage range/As atard	0		5	V_{DC}
Input voltage range/group	0		50	V_{DC}
Resolution		16		Bit
Resolution @ 0-5V input voltage range		76		µV
Accuracy @ 0-5V input voltage range		<1		mV
Temperature measurement range: PT100 / PT1000	-50		+300	°C
Temperature measurement range: Thermocouple type K	0		+1200	°C
Temperature accuracy		TBD		°C
Insulation voltage of all input channels to earth/outputs		>4		kV
Power input per channel		120		mW
Power supply	7		60	V_{DC}

PARAMETER	VALUES
Communication connections	Ethernet with UDP protocol and config. address, USB 2.0, CAN 2.0B
Electrical isolation	For all input channels.
Status displays	LED operation, error and communication display
Digital outputs	4 x, 0-5V, user-specific configuration
Degree of protection	IP54 as per EN60529 (terminals: IP20) depending on housing
Data storage	SD card, USB stick
Connection/housing	Wall mounting, optionally DIN rail and 19" rack mounting
Connection/analog input, voltage	(provisionally) – HD post-type field connector, D-sub, cage terminals
Connection/analog input, temperature	(provisionally) – screw terminal, thermocouple connector
Connection/digital output	(provisionally) – HD post-type field connector, D-sub, cage terminals
Operating / storage temperature range	-25 °C to +80 °C
Operating / storage humidity range	20 % to 65 % rel. humidity / 0% to 85% rel. humidity, non-condensing
Permissible operating altitude / installation location	max. 2000 m above sea level / any
Safety	Safety class II

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