



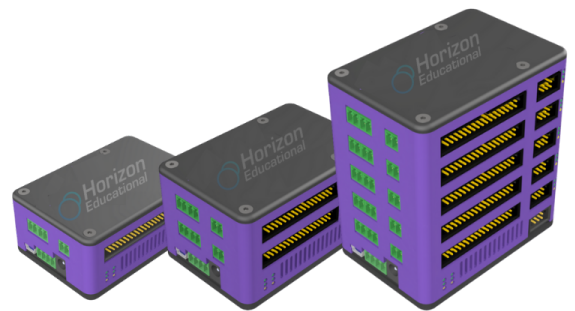
DATASHEET



Cell voltage monitor kit for H₂ fuel-cell stack research and applications can be used to prevent damage to individual cells, to monitor lifetime conditions, and to ensure optimal working conditions in applications.

FCM-32A kit is a complete set ready to use in your special application. It can be connected directly to a PC with USB interface or to a PLC using RS485 bus.

FCM-32A modules are designed as a cost-effective solution mainly for applications. For research, testing, automotive and precision applications see CVM24P or TEVOMET.



FEATURES

- 32 channel per board
- Basic channel voltage range ± 1.5 V
- Maximum voltage span of all channels is 34 V
- Multiple boards can be chained for > 32 cell stack, connector for easy adjacent cell chaining
- Resolution 1 mV (12-bit)
- Input impedance > 100 M Ω
- Sample rate 100 sps
- Cell connection via 34-pin IDC connector
- Compatible with all other Kolibri.net modules (KMS, DIN-rail I/O modules, Tevomet, ...), communication bus XC2/RS485
- IO (1x digital output, 1x digital input)
- Available customizations: up to 3x opto-isolated input or output; additional opto-isolated UART; different channel voltage range; customized communication protocol; higher sample rate up to 1 ksp/s
- Available accessories: power supply module for 12/24V DC; USB & serial (RS232) interface; Raspberry PI connection
- Application examples: H₂ fuel-cell tests stands, H₂ fuel-cell application monitoring, Control systems



Cell Voltage Monitor

Kits based on CVM32A module

FCM-32A

TECHNICAL PARAMETERS



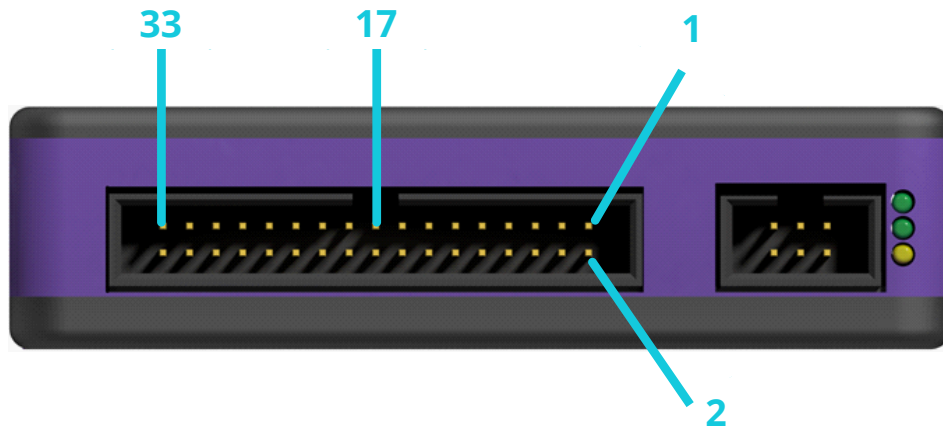


Cell Voltage Monitor

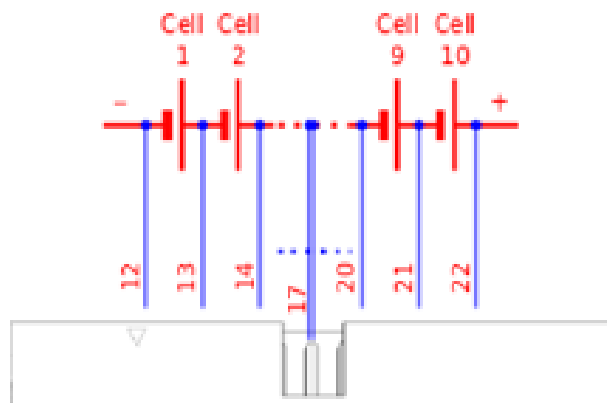
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FCM-32A

CELL CONNECTION

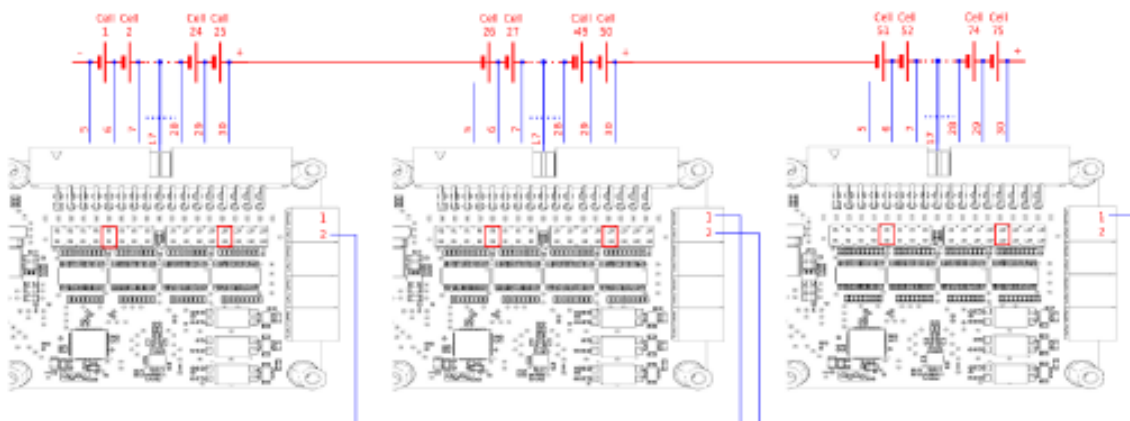


CVM pinout description



Example of 10-channel cell connection.

PIN 17 has to be always approximately in the middle of voltage potential



Example of 75-channel cell connection with 3 CVM devices (3x25 cell)







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FCM-32A



ORDERING INFORMATION

Types	Description	Figures
FCM-Kit32A	Power source KMS-PWR; 1x CVM32A: 32 channels total, 1x output, 1x input 24 V; Assembled kit	
FCM-Kit64A	Power source KMS-PWR; 2x CVM32A: 64 channels total, 2x output, 2x input 24 V; Self-assembly kit	
FCM-Kit160A	Power source KMS-PWR; 5x CVM32A: 160 channels total, 5x output, 5x input 24 V; Self-assembly kit	
FCM-EXT32A	Extension for assembly kit; 1x CVM32A: 32 additional channels, 1x output, 1x input 24 V; Extension for self-assembly	

PACKAGE CONTAINS

Types	Contains
FCM-Kit32A	1x KMS-PWR; 1x CVM32A; 1x Power supply 110-230V/24V; 1x USB cable; 1x XC2 bus cable; 2x IDC plug for channels; 4x spacers; 1x enclosure; DIN holder
FCM-Kit64A	1x KMS-PWR; 2x CVM32A; 1x Power supply 110-230V/24V; 1x USB cable; 1x XC2 bus cable; 4x IDC plug for channels; 8x spacers; 1x enclosure; DIN holder
FCM-Kit160A	1x KMS-PWR; 5x CVM32A; 1x Power supply 110-230V/24V; 1x USB cable; 1x XC2 bus cable; 10x IDC plug for channels; 20x spacers; 1x enclosure; DIN holder
FCM-EXT32A	1x CVM32A; 2x XC2 bus plug; 2x IDC plug for channels; 4x spacers; 1x enclosure extension