



ACT20C – Voltage measurement for H₂ and battery cells

Reliable cell voltage monitoring up to a stack voltage of 1500 V DC

The ACT20C module precisely monitors single-cells and stack voltages in hydrogen stacks and battery storage systems up to 1500 V DC.

The module detects defects, ageing and safety risks in hydrogen plants and battery systems at an early stage. Data is transferred via Modbus RTU. The ACT20C measures up to 8 individual voltages and reliably protects people and systems with 1500 V DC isolation. The high channel count, compact design, 1500 V DC isolation and reliable communication make the modules ideal for stack monitoring on electrolyzers and battery systems.



NEW 1500 V DC



Your benefits:

- 1500 V DC isolation for maximum safety
- 8 channels for precise cell monitoring
- Compact design with RS485 Modbus RTU
- Efficient voltage division up to 1500 V DC
- Certified for global use

Temperatures

Storage temperature	-40 °C...85 °C
Humidity	10...90 %, no condensation

Operating temperature	-40 °C...60 °C
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Input

Number inputs	8
Resolution	±1,2 mV
Input signal	Voltage source
Input voltage	30 V max.

Type	Voltage input
Input voltage	0...10 V DC
Input resistance, voltage	1 MΩ
Response time	110 ms

General data

Repeat accuracy	± 0,05 %
Installation advice	Indoors only
Protection degree	IP20
Supply voltage	24 V DC ± 10 %
Temperature coefficient	< 0,02 % / °C
Configuration	DIP switch

Anwendungsbereich	Monitoring of H ₂ fuel and battery cells
Genauigkeit	< 0,1 % of end value
Statusanzeige	LED green: supply
Tragschiene	TS 35
Nennleistungsaufnahme	1,5 VA
Einsatzhöhe	≤ 2000 m

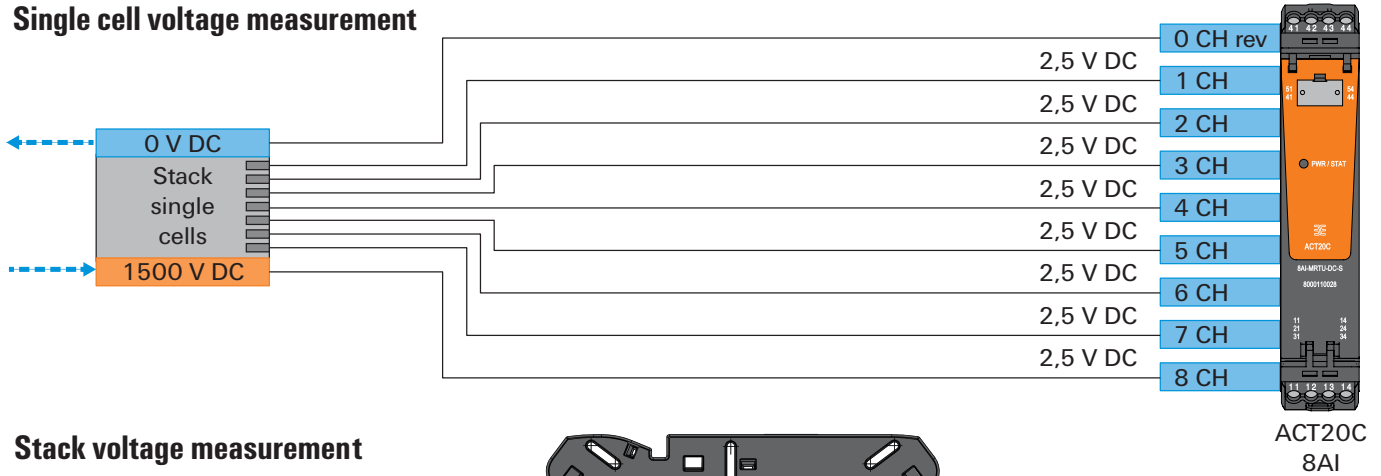


More information on our Website:
www.weidmueller.com/hydrogen

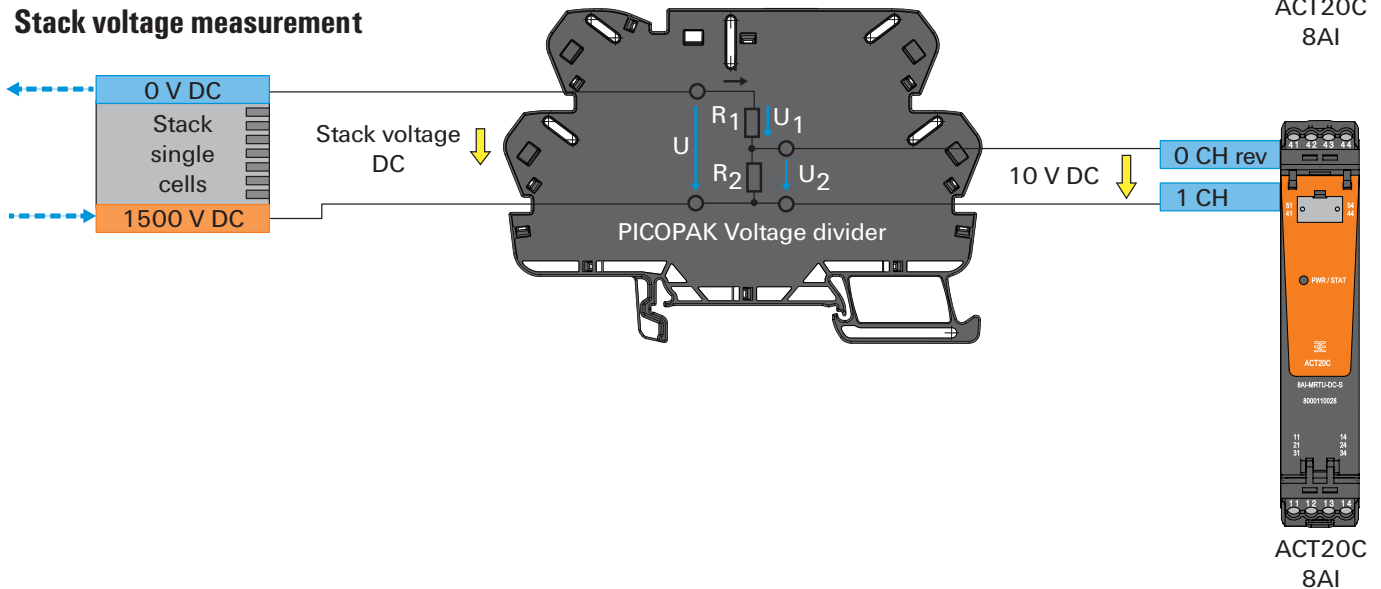
How the ACT20C connects your energy system:

Together with external PICOPAK voltage dividers, the ACT20C safely measures up to 1500 V DC in cascaded setups for hydrogen and energy storage systems. Here is an example of a schematic structure:

Single cell voltage measurement



Stack voltage measurement



In a cascade setup, several voltage dividers are connected in series. Each divider reduces a portion of the total voltage, so the ACT20C only measures safe, low-level voltages at each input. This allows the system to measure up to 1500 V DC in total while keeping every channel safely isolated and within its input range.

Description	Type	Order No.
ACT20C Serial interface converter	ACT20C-8AI-MRTU-DC-S	8000110028
PICOPAK Voltage divider 70 V DC input 10 V output	PICOPAK-VI70-RDIV-P	3127370000
PICOPAK Voltage divider 130 V DC input 10 V output	PICOPAK-VI130-RDIV-P	3127350000
New voltage divider variations up to 400 V DC input possible	PICOPAK-VIXXX-RDIV-P	on request
Plug & Play Monitoring Box	ATEX 1500 V DC	8000171570



More product information in the eShop:
<https://eshop.weidmueller.com>