

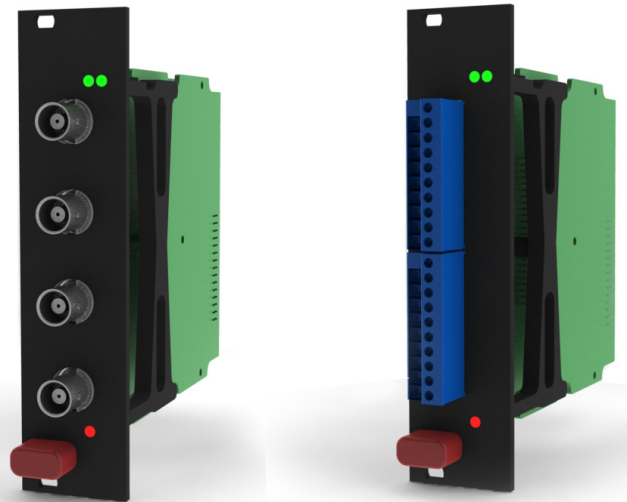
# DS NET Hardware

## DS NET V8 VOLTAGE EXPANSION MODULE

Black line



19 inch



### MAIN FEATURES

- **8 galvanic isolated input channels**  
differential voltage, current via shunt connector  
Isolation voltage 100 VDC
- **High accuracy digitalization**  
24 bit ADU, 10 kHz sample rate per channel with 8 active channels, sum sample rate 80 kHz
- **2 digital in and outputs**  
input: state, tare, memory reset  
output: state alarm, thresh hold
- **Signal conditioning**  
linearization, digital filter, average, scaling, min/max storage, RMS, arithmetic, alarm
- **Galvanic isolation**  
of I/O-signals, power supply and interface  
Isolation voltage 500 VDC
- **Electromagnetic Compatibility**  
according EN 61000-4 and EN 55011
- **Accuracy class 0,01**

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ANALOG INPUTS			
Number of channels	8		
Accuracy	0.01 % typical 0.02 % in controlled environment <sup>1</sup> 0.05 % in industrial area <sup>2</sup>		
Linearity error	0.01 % of the final value typical		
Repeatability	0.003 % typical (within 24 h)		
Input resistance	>10 M $\Omega$		
VOLTAGE MEASUREMENT			
	RANGE	MAX ERROR	RESOLUTION
	$\pm 10$ V	$\pm 2$ mV	40 $\mu$ V
Input resistance	>10 M $\Omega$		
Long term drift	<1 $\mu$ V/24 h		
Acceptable common mode voltage	100 V permanent		
Temperature influence	on zero: <50 $\mu$ V/10 K	on sensitivity: 0.05 %/10 K	
Signal-noise-ratio	bandwidth 100 Hz: > 100 dB	bandwidth 1 Hz: > 120 dB	
CONVERSION ANALOG/DIGITAL			
Resolution	24 bit		
Sample rate	Sample rate 10 kHz at 8 active channels		
Conversion method	Sigma-Delta		
Analog Aliasing Filter	Low pass 3rd order per channel (-3 dB at 4 kHz)		
Filter	FIR, low pass, band pass or high pass; configurable order: 2, 4 or 6; continuously adjustable from 0.1 Hz to 5 kHz, automatic sample rate reduction for low frequencies		
DIGITAL INPUTS/OUTPUTS			
Number	2 (1 digital I/O per channel)		
Input	State, tare, reset		
Input voltage	max. 30 V <sub>DC</sub>		
Input current	max. 0,5 mA		
Upper threshold	>10 V (high)		
Lower threshold	<2.0 V (low)		
Output	state, alarm, limit		
Contact	open drain p-channel MOSFET		
Load	30 V <sub>DC</sub> /100 mA (ohmic load)		

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POWER SUPPLY	
Power supply	10 up to 30 V <sub>DC</sub> , overvoltage and overload protection
Power consumption	approx. 2 W
Influence of the voltage	<0.001 %/V
ENVIRONMENTAL	
Operating temperature	-20°C up to +50°C
Storage temperature	-40°C up to +85°C
Relative humidity	5 % up to 95 % at 50°C, non condensing
Vibration	MIL-STD 810F 514.5, procedure I
Shock	MIL-STD 810F 516.5, procedure I
MECHANICAL	
Case	Aluminum
Dimensions (W x H x D)	(27 x 120 x 105) mm
Weight	approx. 200 g
Mounting	DIN EN-rail
CONNECTION	
Standard	20 pin screw terminal
Option	8 BNC connectors

<sup>1</sup> according EN 61326: 1997

<sup>2</sup> according EN 61326: 1997

### Warm up time

All declarations are valid after a warm up time of 45 minutes.