WACHENDORFF
Prozesstechnik GmbH & Co. KG

DMS display PAX2S

- Universal AC and DC power supply unit
- Integrated USB programming port / free software
- Input for +/-24 mVDC or +/-240 mVDC
- Free scaling with 16-step linearization
- 2-line backlit LCD display
- Front protection class IP65
- Easily programmable via front buttons
- Minimum and maximum value memory, summation function
- Display of a physical unit of measurement possible

https://www.wachendorff-prozesstechnik.de/en/PAX2S

Description

The new PAX2S was developed on the basis of the previous PAX series, which is characterized by its robustness, durability and flexibility. The 2-line, three-colour backlit LCD display shows the process value in the upper area, for example, and has the option of displaying a totalized value or an alarm value in the lower area, for example. The flexible color selection in the upper display, which can also change for alarm values, ensures that the values are displayed appropriately. In addition to the input for common strain gauge sensors, the stabilized bridge supply and the universal AC/DC power supply ensure that the PAX2S can be used in almost all applications. This is supported by the expansion with optional plug-in cards (serial interface up to Profibus DP, analog output, alarm values). Functions such as minimum and maximum value memory, integration over time and taring are just as much a matter of course as the programming lock and definition of access rights. The high sampling rate of up to 160 measurements/second, coupled with the integrated USB interface for programming, makes the PAX2S one of the most modern displays on the market.

Product details

Entrance area:	+/- 24 mVDC or +/- 240 mVDC
Display:	Backlit dimmable LCD display Upper line: 6-digit, three-color (red, green, orange) with 18 mm digits Lower line: 9-digit, green with 8.9 mm digits
Physical unit:	A physical 3-digit (red, green or orange) unit can be orange) unit can be easily programmed from a list. from a list.
Indicators:	Four red backlit indicators for switching outputs.
Buttons:	4 push buttons on the front, 2 of which are freely programmable function buttons.
Resolution:	24 bits of the internal A/D converter.
Update rates:	A/D conversion rate: programmable from 5 to 160 measurements/sec. Display update: 1 to 20 updates/sec. Switching output: delay time from 0 to 3275 sec. Analog output: update time from 0 to 10 sec.
Error messages:	"OLOL" - input signal is greater than the + signal range "ULUL" - input signal is smaller than the - signal range "...." - Display value exceeds upper display value "-....." - Display value falls below lower display value
Data backup:	Non-volatile data memory
Entrance areas:	The accuracy in the following range table is given as a percentage of the display value. The maximum/ permanent measuring signal must not exceed 30 V. The measuring range can be set via jumpers.
Sensor connection	as 4-wire (differential) or 2-wire.
Sensor supplies:	Ext. sensor supply selectable via jumper: + 5 VDC @65 mADC max. ; +/-2% + 10 VDC @125mADC max. ; +/-2% Temperature coefficient: 20 ppm/°C max.
User input:	Three programmable user inputs NPN- or PNP-switching, Response time: 12 msec, max. input signal: 30 VDC **NPN switching** (20 k pull-up resistor to +3.3 V : Active at V <1.1 V; Inactive at V >2.2 V **PNP switching** (20 k pull-down resistor): Active at V >2.2 V; Inactive at V <1.1 V
Sum function:	Time base: second, minute, hour or day Batch counter: Summation of the display value via user input Time accuracy: 0.01% typical Scaling factor and decimal point freely programmable; low signal suppression.
Power supply:	40 VAC to 250 VAC, 50/60 Hz, 14 VA or 21.6 VDC to 250 VDC, 8 W
Protection class:	Water jet-proof and dust-tight to IP65 from the front and IP20 protection from the rear.

Housing:	Black, impact-resistant plastic housing made from a single cast. The electronic slot can be pulled out to the rear. The plug-in cards can be installed very easily.
Programming:	Programming is carried out either via the integrated USB interface and the free Crimson 2 programming software or via the four front buttons. The simple and logically structured menu navigation allows very fast commissioning. In addition, access rights can be assigned, e.g. quick access to the switching points can be enabled.
Relative humidity:	max. 85%. rH, non-condensing.
Ambient temperature:	Operation: 0 °C to +50 °C. Storage: -40 °C to +60 °C.
Dimensions:	W 97 mm x H 50 mm x D 105 mm.
Panel cut-out:	according to DIN: 92mm x 45 mm.
Fastening:	via mounting frame with clamping screws.
Connection:	Via screw terminals.
Weight:	approx. 227 g.
Scope of delivery:	Device, fixing material, seal, operating instructions.
Customs tariff number:	9030 33 70
Manufacturer:	Red Lion, USA
Output cards:	The device can be easily upgraded with various output cards. output cards. Each device can be equipped with a maximum of one interface card, one relay or transistor output card and one analog output card.
Pluggable interface card:	1. half-duplex RS232, programmable (terminal strip or plug). 2. multipoint RS485, programmable (terminal strip or plug). 3. DeviceNet, programmable. 4. PROFIBUS-DP, programmable.
Pluggable relay output cards:	• 2 x relay changeover contact 5 A at 120/240 VAC or 28 VDC (ohmic load), at 120 VAC (80 VA inductive load). Service life of the relays is 100,000 cycles at max. load. The service life increases with lower loads. • 4 x NO relay 3 A at 240 VAC or 30 VDC (resistive load), at 120 VAC (80 VA inductive load). Service life of the relays is 100,000 cycles at max. load.
Pluggable transistor output cards:	• 4 x NPN-OC transistors: max. 100 mA at Vsat = 0.7 V, Vmax 30 V, galvanic isolation of 500 V against the signal input. • 4 x PNP-OC transistors: Internal supply: 24 VDC +/-10%, max. 30 mA all 4 transistors. External supply: max. 30 VDC, 100 mA for each individual transistor.
Pluggable analog output card:	Selectable output signal: 0/4 mA to 20 mA, 0 VDC to 10 VDC. Digitally scalable, offset. Accuracy: 0.17 % of range at 18 °C to 28 °C operating temperature, 0.4 % of range at 0 °C to 50 °C operating temperature. Resolution 1/3500. Voltage: 10 VDC (500 Ohm max. load). Current: 20 mA (500 Ohm load max.). Galvanically isolated from the signal input up to 500 V.

Drawings

Voltage input, bipolar (+/- DC)

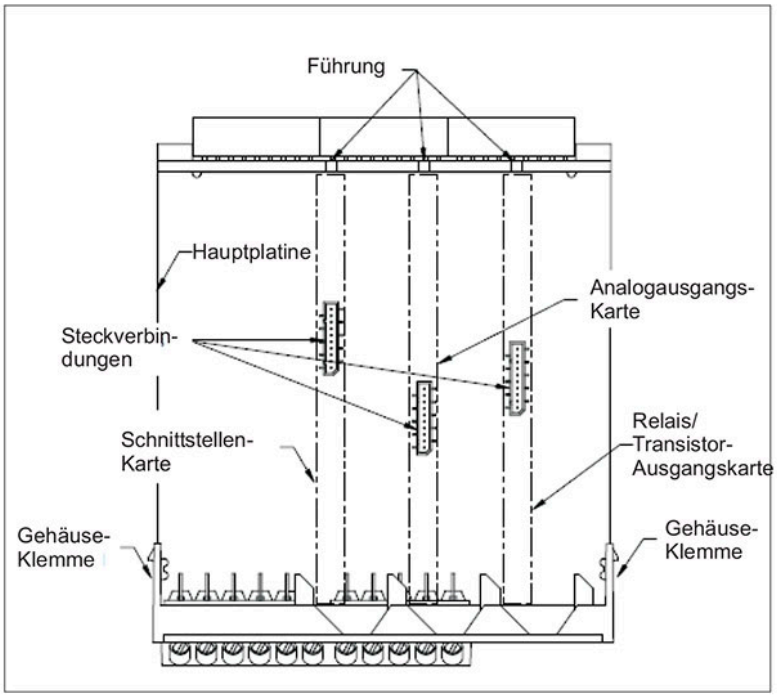
Spannungseingang, bipolar (+/- DC)

Bereich	Genauigkeit in x,x % des Anzeigewertes		Impedanz	Auflösung*
	(+18 °C bis +28 °C)	(0 °C bis +50 °C)		
24 mV	0,02 % + 3 µV	0,07 % +4 µV	100 MΩ	1 µV
240 mV	0,02 % +30 µV	0,07 % +40 µV	100 MΩ	10 µV

* Höhere Auflösung kann durch die Eingangsskalierung erreicht werden

Drawings

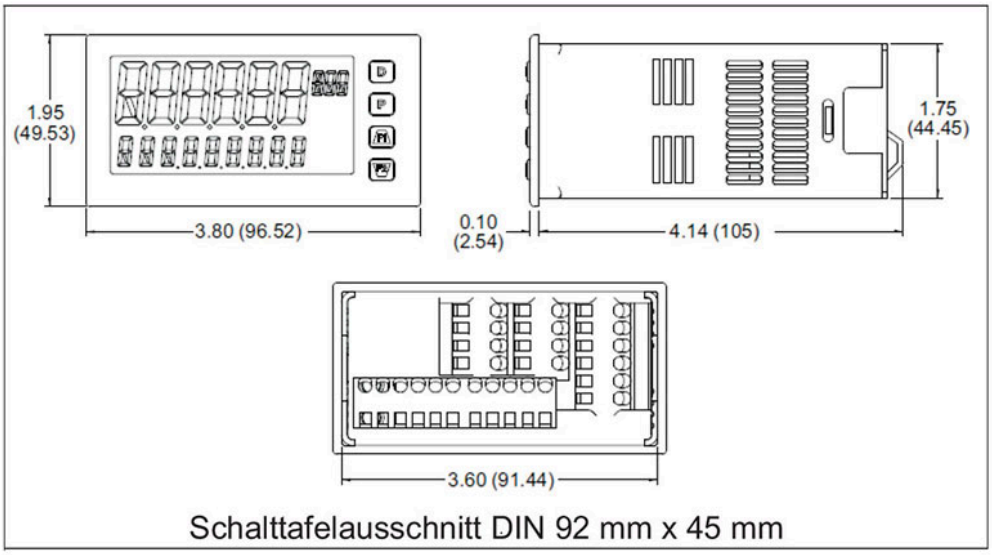
Mechanical structure



Mechanischer Aufbau

Drawings

Dimensions (mm)



Abmessungen (in Inch (mm))

WACHENDORFF
Prozesstechnik GmbH & Co. KG

Wachendorff Prozesstechnik GmbH & Co. KG
Industriestrasse 7 • 65366 Geisenheim
Germany

Phone: +49 (0) 67 22 / 99 65 - 20
E-Mail: wp@wachendorff.de
www.wachendorff-prozesstechnik.de