DIGITAL DISPLAY

for Industry Applications

Series PAX P, PAX DP

Key-Features:

- 1-channel model PAX P and 2-channel model PAXDP
- 5 digits, 14 mm high LEDs, annunciators
- Input signal 4...20 mA and 0...10 VDC
- 20 measurements/s (PAX P)
- 5,3 bis 105,3 measurements/s, selectable (PAX DP)
- 2, resp. 3 programmable user inputs
- Protection class IP65
- Working temperature 0 to 50 °C,
- Easy programming directly, or via PC
- Plug-in output-cards: analog, USB,
  Relay (thresholds), Transistor, RS232, Profibus
- Summation, min-/max value display
- 16 point scaling
- two galvanically isolated input channels (PAX DP)

Content:

14.06.18

eddylab

TECHNICAL DATA

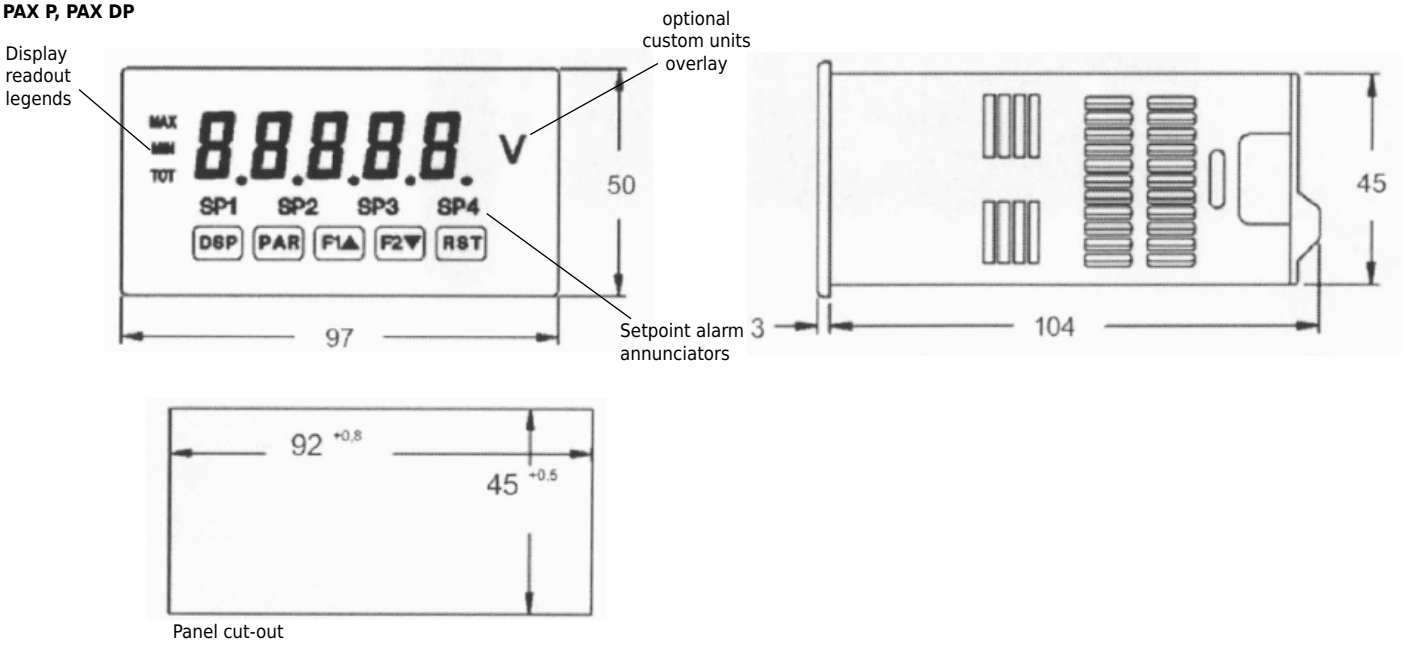
Display		5 digits, 14 mm high, red LEDs
Panel cut-out	[mm]	92 x 45
Annunciators PAX P		MAX, MIN, TOT (sum), SP1, SP2, SP3, SP4 (the respective output SP is active)
Annunciators PAX DP		A, B, C (respective programmable display of the channel), SP1, SP2, SP3, SP4 (the respective output is active)
Programmable user inputs		3 (PAX P), 2 (PAX DP), logic state: jumper selectable for sink/source logic
Sensor inputs PAX P	[mA]	20 (-2 to 26), accuracy (18-28 °C): 0.03% of reading, display resolution 1 µA
	[VDC]	10 (-1 to 13), accuracy (18-28 °C): 0.03% of reading, display resolution 1 mV
Sensor inputs PAX DP	[mA]	20 (-26 to 26), accuracy (18-28 °C): 0.03% of reading, display resolution 1 µA
	[VDC]	10 (-13 to 13), accuracy (18-28 °C): 0.03% of reading, display resolution 1 mV
Output signal (via plug-in cards)		Relay output, transistor output, analog output
Serial Interfaces (via plug-in cards)		USB port (programmable), RS485, RS232, Profibus
Supply voltage PAXP000B, PAXDP00B	[VDC]	85...250
Supply voltage PAXP001B, PAXDP01B	[VDC]	11...36
Update rates A/D conversion PAX P		20 readings/sec. 16 Bit resolution
Update rates A/D conversion PAX DP		5.3 to 105.3 readings/sec selectable, 16 Bit resolution
Sensor supply PAX P (transmitter power)	[VDC]	24, ±5%, regulated, max. 50 mA
Sensor supply PAX DP (transmitter power)	[VDC]	18, ±20%, not regulated, max. 90 mA per input channel
Update rates display PAX P	[ms]	200 to within 99% of final readout value, max. 700
Update rates display PAX DP	[ms]	60 to within 99% of final readout value, max. 770
Protection class		IP65 (face only)
Humidity		max. 85%, no condensation
Working temperature	[°C]	0...+50, unit supplier with 3 plug-in cards: 0...+45
Housing		Plastics, 97 mm x 50 mm x 104 mm
Weight	[g]	300, unit only without plug-in cards
Electromagnetic compatibility		conform to CE , EN 50081-2, EN50082-2, EN61326:2006
Delivery		Display, mounting material, sealing, manual

FUNCTIONS

	PAX P	PAX DP
Scaling	■	■
Linearisation	■	■
Totaliser	■	■
Minimum- and Maximum value display	■	■
Mathematics function		■
Tara	■	■
Alarm	optional	optional
Scaling via applying a signal	■	■
Programming mode lock-out	■	■
Password protection	■	■
Programming with software	■	■

TECHNICAL DRAWING

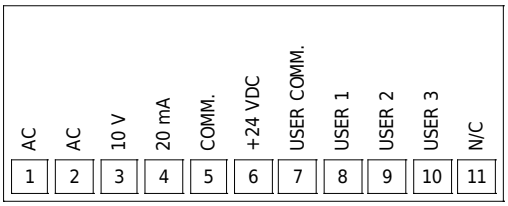
PAX P, PAX DP



Panel cut-out

ELECTRICAL CONNECTION PAX P

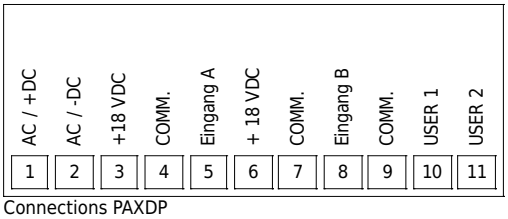
Assignment PAXP:		
1	AC / +DC	PAXP000B: 85 - 250 VAC PAXP001B: 11 - 36 VDC, resp. 24 VAC
2	AC / -DC	PAXP000B: 85 - 250 VAC PAXP001B: 11 - 36 VDC, resp. 24 VAC
3	10 V	Voltage signal
4	20 mA	Current signal
5	COMM.	GND signal input
6	+24 VDC	Sensor suppy 24 VDC/50 mA
7	USER COMM.	GND user input
8	USER 1	User input 1
9	USER 2	User input 2
10	USER 3	User input 3
11	N/C	Not connected



Connections PAXP

ELECTRICAL CONNECTION PAX DP

Assignment PAXDP:		
1	AC / +DC	PAXP000B: 85 - 250 VAC PAXP001B: 11 - 36 VDC, resp. 24 VAC
2	AC / -DC	PAXP000B: 85 - 250 VAC PAXP001B: 11 - 36 VDC, bzw. 24 VAC
3	+18 VDC	Sensor supply channel A
4	COMM.	GND channel A
5	Input A	Input channel A
6	+18 VDC	Sensor supply channel B
7	COMM.	GND channel B
8	Input B	Input channel B
9	USER 1	User input 1
10	USER 2	User input 2
11	COMM.	GND user input



Connections PAXDP

PLUG-IN CARDS

The display can be fitted with up to three optional plug-in cards. The details for each plug-in card can be reviewed in the specification section below. Only one card from each function type can be installed at one time. The plug-in cards can be installed initially or at a later date.

Analog Output Card (retransmitted linear DC output): PAXCDL10:

- Types: 0 to 20 mA, 4 to 20 mA, or 0 to 10 VDC.
- Isolation to sensor + user input commons: 500 Vrms for 1 min., working range 50V, not isolated from all other commons.
- Accuracy: 0.17 % of FS (10 to 28 degree Celsius), 0.4% (0 to 50 degree Celsius)
- Resolution 1/3500
- Compliance: 10 VDC, 10 kOhm load min., 20 mA, 500 Ohm max. load

Setpoint Alarm Output Cards:

Quad sourcing open collector card: PAXCDS40

- 4 isolated sourcing x PNP transistors
- Internal suppy: 24 VDC +/- 10%, 30 mA max. total
- Isolation to sensor + user input commons: 500 Vrms for 1 min., working range 50V, not isolated from all other commons.
- External supply: 30 VDC max., 100 mA max. each output

Quad sinking open collector card: PAXCDS30

- 4 isolated sinking x NPN transistors
- Isolation to sensor + user input commons: 500 Vrms for 1 min., working range 50V, not isolated from all other commons.
- Rating: 100mA max. at Vsat=0,7 Vmax,, Vmax: 30V

Dual relay card: PAXCDS10

- 2 x FORM-C relays, 5 A at 120/240 VAC or 28 VDC (Ohm load) at 120 VAC (80 VA inductive load)
- Life expectancy: 100.000 cycles min. at full load.

Quad relay card: PAXCDS20

- 4 x FORM-A relays, 3 A at 250 VAC or 30 VDC (Ohm load) at 120 VAC (80 VA inductive load)
- Life expectancy: 100.000 cycles min. at full load.

Interface Cards:

- RS232, programmable, version with Sub-D connector: PAXCDC2C or with terminal: PAXCDC20
- Multipoint RS485, programmable: PAXCDC10
- DeviceNet, programmable: PAXCDC30
- Profibus-DP: PAXCDC50

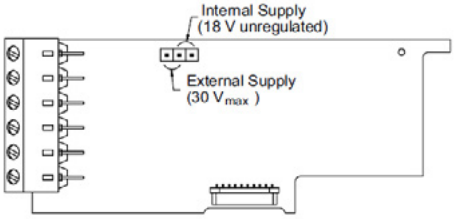
Isolation 500V, not isolated from all other commons.

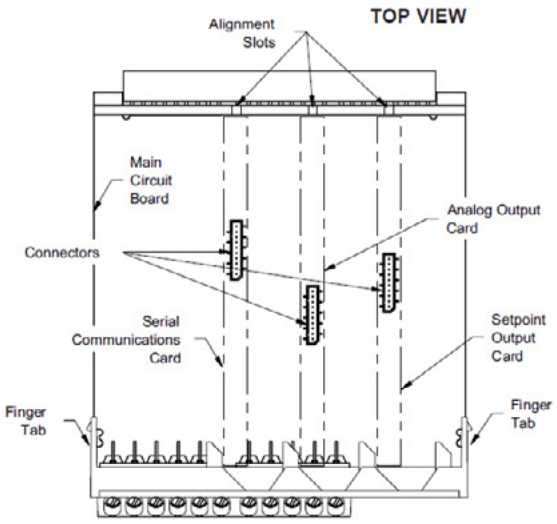
USB CARD: PAXUSB00:

- only suited for slow measurement (for high dynamic measurement please use the RS232 card).
- USB virtual COM Port
- Connection: type mini B

Installing plug-in cards:

- With the display removed from the case, locate the plug-in card connector for the card type to be installed. The types are keyed by position with different main circuit board connector locations. When installing the card, hold the display by the rear terminals and not by the front display board. If installing the Quad sourcing card, set the jumper for internal or external supply operation before continuing.
- Install the card by aligning the card terminals with the slot bay in the rear cover.
- Slide the display back into the case. Be sure the rear cover latches fully into the case.
- Apply the plug-in card label to the bottom side of the display in the designated area.





PROGRAMMING

Directly by the displays keys

DISPLAY MODE:
The meter normally operates in the Display Mode. In this mode, the meter displays can be viewed consecutively by pressing the DSP key. The annunciators to the left of the display indicate which display is currently shown; Max Value (MAX), Min Value (MIN), or Totalizer Value (TOT). Each of these displays can be locked from view through programming. (See Module 3) The Input Display Value is shown with no annunciator.

PROGRAMMING MODE:
Two programming modes are available:

Full Programming
Mode permits all parameters to be viewed and modified. Upon entering this mode, the front panel keys change to Programming Mode operations. This mode should not be entered while a process is running, since the meter functions and User Input response may not operate properly while in Full Programming Mode.

Quick Programming Mode
permits only certain parameters to be viewed and/or modified. When entering this mode, the front panel keys change to Programming Mode operations, and all meter functions continue to operate properly. Quick Programming Mode is configured in Module 3. The Display Intensity Level d-LEu parameter is available in the Quick Programming Mode only when the security code is non-zero. For a description, see Module 9—Factory Service Operations. Throughout this document, Programming Mode (without Quick in front) always refers to “Full” Programming Mode

By Software

Additionally, the meters have a feature that allows a remote computer to directly control the outputs of the meter. With an RS232 or RS485 card installed, it is possible to configure the meter using a Windows® based program. The configuration data can be saved to a file for later recall.

You will find a detailed description of the programming in the manual that is included in the delivery.

ProLOG

Analysis- and Visualisation software for Windows-based Systems

Visualisation of the measurement data on a Windows PC, with the option of storing the data in a CSV file.

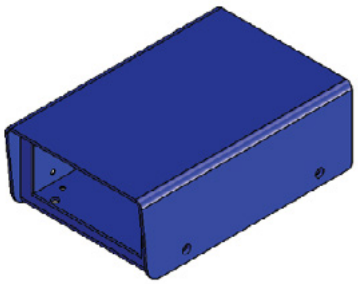
HOUSING

Aluminium housing GEH0IP65

- black powder coating
- internal grounding terminal.
- protection class: IP65
- dimensions: (W x H x D) 168 mm x 83 mm x 220 mm
- delivery: housing, mounting material
- without cable passages (must be drilled individually)

Table housing TG9648

- The housing is suited for all displays with front dimensions 96 x 48 mm
- self assembly
- dimensions: (W x H x D) 114 mm x 62 mm x 176 mm
- delivery: housing, mounting material



ORDER CODES

PAXP000B	Voltage supply: 85 to 250 VAC Voltage supply: 85 to 250 VAC
PAXP001B	Voltage supply: 11 to 36 VDC/24 VAC

PAXDP00B	Voltage supply: 85 to 250 VAC
PAXDP01B	Voltage supply: 11 to 36 VDC/24 VAC

ACCESSORIES

Plug-in cards	
PAXCDC10	Serial communication card RS485
PAXCDC20	Serial communication card RS232, terminal
PAXUSB00	Interface card USB
PAXCDC50	Interface card PROFIBUS-DP
PAXCDL10	Analog output card
PAXCDS10	Dual relay, Form-C, normally open & closed
PAXCDS20	Quad relay, Form-A, normally open only
PAXCDS30	Quad sinking NPN open collector
PAXCDS40	Quad sourcing PNP open collector
PAXCDC2C	Serial communication card RS232, 9 pole SUB-D connector

Software	
Crimson 2	on request
ProLOG	on request

Miscellaneous	
PAXLBK10	Units label kit
Einstellung	Pre-adjustment according to customer demands

Housings	
GEH0IP65	Aluminium housing, IP65
TG9648	Table housing

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