

DIGITAL DISPLAY

for Industry Applications



Serie PAX I

Key-Features:

- 6 digits, 14 mm high LEDs, annunciators
- 2 independent inputs
- Input signals TTL, NPN- and PNP-Sensors
- Measurement frequency max. 34 kHz
- 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
- 10 point scaling for non-linear processes

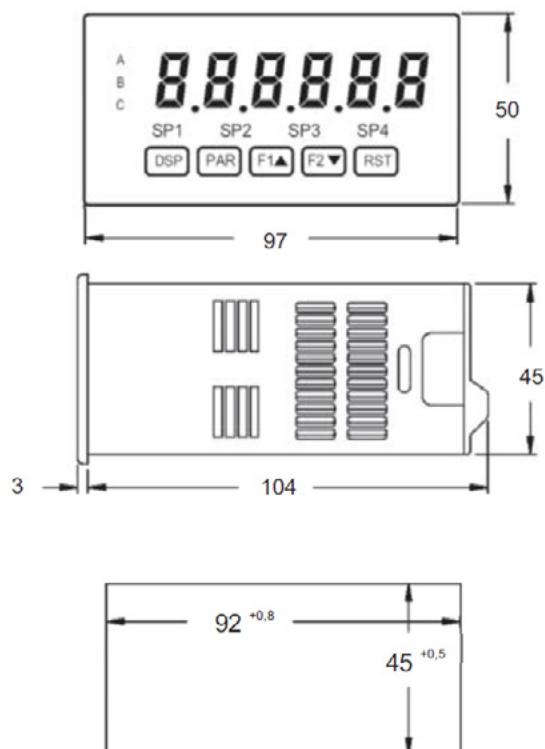
Content:

TECHNICAL DATA

Display	6 digits, 14 mm high, red LEDs
Panel cut-out	92 mm x 45 mm
Annunciators	A, B, C (counter), SP1, SP2, SP3, SP4 (the respective output is active)
Programmable user inputs	3, logic state: jumper selectable for sink/source logic PNP: active Vin >2.4 VDC, inactive Vin <0.9 VDC, NPN: active Vin <0.9 VDC, inactive Vin >2.4 VDC
Input signal	incremental sensors with TTL signal, NPN and PNP sensors (settings by DIP switches)
Output signal (via plug-in cards)	Relay output, transistor output, analog output
Serial Interfaces (via plug-in cards)	USB port (programmable), RS485, RS232, Profibus
Prescaler Output	NPN Open Collector: ISNK = 100 mA, max VOH = 30 VDC
Supply voltage	PAXI003B: 11...36 VDC/24 VCA, PAXI002B: 85...250 VAC
Sensor supply	12 VDC, $\pm 10\%$, regulated, max. 100 mA
Measurement rate	max. 34 kHz
Tachometer	Accuracy $\pm 0.01\%$
Scaling	All counters and the tachometer can be scaled independently of each other
Protection class	IP65 (face only)
Humidity	max. 85%, no condensation
Working temperature	0...+50°C, unit supplied with 3 plug-in cards: 0...+45°C
Housing	Plastics, 97 mm x 50 mm x 104 mm
Weight	300 g, unit without plug-in cards
Electromagnetic compatibility	conform to CE , EN 50081-2, EN50082-2
Delivery	Display, mounting material, sealing, manual

TECHNICAL DRAWING

PAX I



ELECTRICAL CONNECTION PAX I

Connection

Anschlüsse PAXP:

1	AC +	Spannungsversorgung PAXI002B: 85 bis 250 VAC PAXI003B: 11 bis 36 VDC, bzw. 24 VAC
2	AC -	Spannungsversorgung PAXI002B: 85 bis 250 VAC PAXI003B: 11 bis 36 VDC, bzw. 24 VAC
3	+EXC	Sensorversorgung 12 VDC/100 mA
4	COMM.	Masse Signaleingang
5	CNT A	Zähler A
6	CNT B	Zähler B
7	USER 1	Benutzereingang 1
8	USER 2	Benutzereingang 2
9	USER 3	Benutzereingang 3
10	COMM.	Masse Benutzereingang
11	PS OUT	Impulsausgang

AC/+	AC/-	+EXC	COMM.	CNT A	CNT B	USER1	USER2	USER3	COMM.	PS OUT
1	2	3	4	5	6	7	8	9	10	11

HOUSING

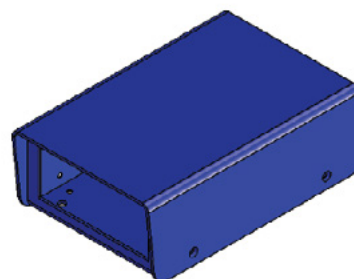
Aluminium housing GEH0IP65

- 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



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 supply: 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 $V_{sat}=0,7 V_{max}$, $V_{max}: 30V$

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:

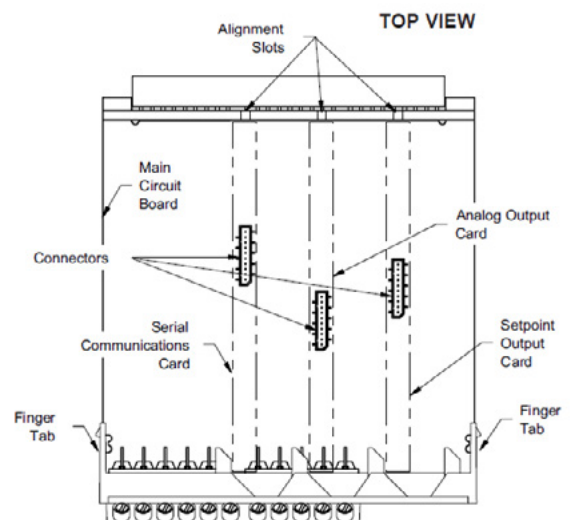
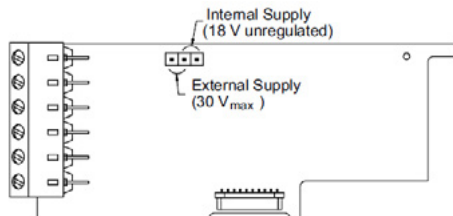
- RS232, programmable, version with Sub-D connector: PAXCDC2C or with terminal: PAXCDC20
 - Multipoint RS485, programmable: PAXCDC10
 - DeviceNet, programmable: PAXCDC30
 - Profibus-DP: PAXCDC50
- Isolation 500V, not isolated from all other commons.

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

The meter normally operates in the Display Mode. No parameters can be programmed in this mode. The Programming Mode is entered by pressing the PAR key. If it is not accessible then it is locked by either a security code, or a hardware lock.

Two types of programming modes are available. Quick Programming Mode permits only certain parameters to be viewed and/or modified. All meter functions continue to operate except the front panel keys change to Programming Mode Operations. Quick Programming Mode is configured in Module 3. Full Programming Mode permits all parameters to be viewed and modified. In this mode, incoming counts may not be recognized correctly, the front panel keys change to Programming Mode Operations and certain user input functions are disabled. Throughout this document, Programming Mode (without Quick in front) always refers to "Full" Programming.

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.

ORDER CODES

PAXI002B	Voltage supply: 85 to 250 VAC
PAXI003B	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

Miscellaneous

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

Software

Crimson 2	on request
ProLOG	on request

Housings

GEH0IP65	Aluminium housing, IP65
TG9648	Table housing

Subject to change without prior notice.