LABOM

Dual process input meter
Type series PH1410

Features

- Indication and control of flow, level, differential pressure and others
- 5-digit 0.56" red sunlight readable display
- 2 input channels, galvanic isolated
- Supply 2 x 18 V DC, max. 90 mA per channel
- Input signal 0 to 20 mA or 0 to 10 VDC
- Optional plug-in cards: 2 or 4 set points, analog output 0/4...20 mA, 0...10 V
- Math function on 2 input channels, e.g. as diff. indicator
- Quick programming mode
- Add up, min-/max values, 16 step liniearization
- IP 65 sealed front bezel

Application

The dual process input meter PH1410 offers many features and performance capabilities to suit a wide range of industrial applications. The meter has the capability to accept two, 0 to 20 or 0 to 10 VDC signals. In addition, a math function can be performed on the two signals. This unit is rated for NEMA 4X/IP65 outdoor use. The optional plug-in output cards allow the opportunity to configure the meter for current applications, while providing easy upgrades for future need.

Techn. Data

Sensor inputs

input (range)	accurary (18 to 28°C)	accuracy (0 to 50°C)	impedance compliance	max. contin. overload	display resolution
±20mA (-26...26 mA)	0,03% of reading+2µA	0,12% of reading+3 µA	24,6 Ohm	150mA	1µA
±10VDC (-13...13VDC)	0,03% of reading+2mV	0,12% of reading +3mV	500 kOhm	50 V	1mV

Display
5 digit, 0.56" (14.2 mm) variable intensity red sunlight readable

Units label kit
Each meter has a units indicator with backlighting that can be customized using the units label kit. The backlight is controlled in the programming.

Annunciators
A   programmable display
B   programmable display
C   programmable display
SP1   setpoint alarm 1 is active
SP2   setpoint alarm 2 is active
SP3   setpoint alarm 3 is active
SP4   setpoint alarm 4 is active

Power
PH1410-A1: 85 to 250 VAC 50/60Hz, 15VA.
PH1410-A2: 11 to 36 VDC, 11 W or 24 VAC +/-10%,15 VA.

Transmitter power
18 VDC, +/-20%, unregulated, 70 mA max. per input channel

Update rates
A/D conversion rate: adjustable 5.3 to 105 readings/sec.

Step reponse
60 msec. within 99 % of final readent value up to max. 770 msec.

Low frequency noise rejection NMR
> 60 dB bei 50/60Hz +/-1 % (can be increased with digital filter).

Keypad
3 programmable function keys, 5 keys total

KEY	Display Mode Operation	Programming Mode Operation
DSP	Index display through main displays as programmed	Quit programming and return to display mode
PAR	Access parameter list	Store selected paramater and index to next parameter
F1▲	Function key 1, hold for 3 seconds for Second Function 1	Increment selected parameter value
F2▼	Function key 2, hold for 3 seconds for Second Function 2	Decrement selected parameter value
RST	Reset (function key)	Hold with F1▲, F2▼ to scroll value by x1000

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Protection
IP 65 sealed front bezel

El. connection
screw-clamp terminals

Humidity
0 to 85 % max. RH non-condensing

Ambient tmeperature
Operating temperature range: 0...+50°C (0 to 45 °C with all three plug-in option cards installed)

EMC
- noise immunity according to EN50082 section 2
- emitted interference according to EN 50081 section 2 for industrial areas, only

Weight
approx. 295 g (without plug-in options)

Scope of delivery
panel gasket and mounting clip included

Output cards
The optional plug-in output cards allow the opportunity to configure the meter for current applications, while providing easy upgrades for future need. The plug-in cards can be installed initially or at a later date.

Plug-in card relay output
1. Type: Two FORM-C relays
Contact rating: one relay energized: 5 amps @ 120/240 VAC or 28 VCD (resistive load), 1/8 HP @ 120 VAC, inductive load.
Total current with both relays energized not to exceed 5 amps
Life expectancy: 100 K cycled min. at full load rating. External RC snubber extends relay life for operation with inductive loads.
2. Type: Four FORM-A relays
Contact rating: one relay energized: 3 amps @ 240 VAC or 30 VDC (resistive load), 1/10 HP @ 120 VAC, inductive load.
Total current with all four relays energized not to exceed 4 amps.
Life expectancy: 100 K cycles min. at full load rating. External RC snubber extends relay life for operationg with inductive loads.

Plug-in card linear dc output
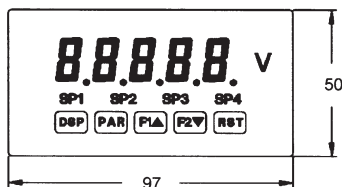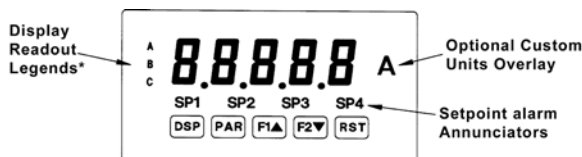Types: 0 to 20 mA, 4 to 20 mA or 0 to 10 VDC
Isolations to sensor & user input commons: 500 Vrms for 1 min.
working voltage: 50 V. Not isolated from all other commes.
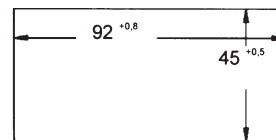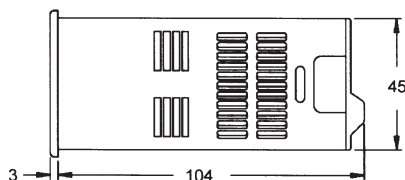Accuracy: 0.17 % of FS (18 to 28 °C); 0.4 % of FS (0 to 50 °C)
Resolution: 1/3500
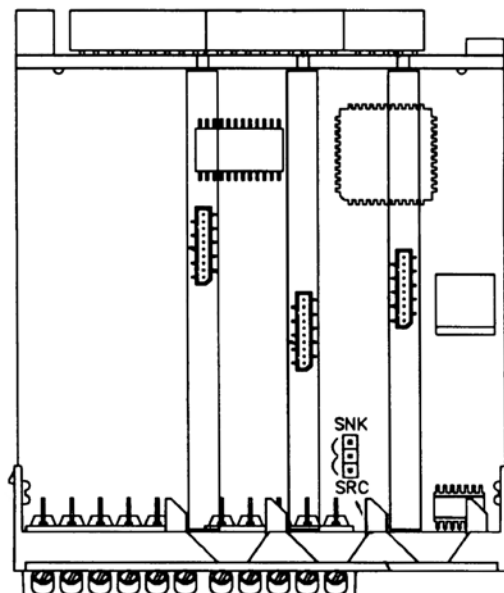Compliance: 10 VDC: 10 KΩ load min., 20 mA: 500 Ω load max.
Update time: see update rates step response specification

connections PH1410

Basic instrument		
1	AC	85-250 VAC
2	AC	50/60 Hz
3	+ 18 VDC	input A
4	COMM	input A
5	Input A	input A
6	+ 18 VDC	input B
7	COMM	input B
8	Input B	input B
9	USER 1	
10	USER 2	
11	COMM	

dimensions mm

panel cut-out

Order Details - please give additional specifications for models not listed -

Dual process input meter	PH1410			
power 85 up to 250 V AC		A1		
power 11 up to 36 V DC		A2		
without configuration			F11	
configuration as per config. sheet¹			F12	
Accessories				MC1300
plug-in card linear dc output				A1
plug-in card relay output 2 FORM-C relays				A2
plug-in card relay output 4 FORM-A realys				A3
Order code (example):	PH1410	A1	F11	

¹ please ask for config. sheet M6-044-E1