control – **motion** – **interface**

AX 020

Panel Meter with Analogue Input

- Mini housing 48 x 24 mm (1.890 x 0.945'')
- Bright LED display 6 decades/ 8mm (0.315'')
- Add-on frame for 50 x 25 mm (1.969 x 0.984'')
- Analogue inputs 0 – 10V, 0 – 20mA, 4 – 20mA
- Display range – 19 999 to 99 999
- Adjustable scaling factor
- 10 – 30 volts DC supply
- Latch input to freeze the display
- Protection class IP65 on front
- Minimum/ Maximum memory
- Easy to set up by menu support

Operating Instructions

⚠ Safety Instructions

- This manual is an essential part of the unit and contains important hints about function, correct handling and commissioning. Non-observance can result in damage to the unit or the machine or even in injury to persons using the equipment!

- The unit must only be installed, connected and activated by a qualified electrician

- It is a must to observe all general and also all country-specific and application-specific safety standards

- When this unit is used with applications where failure or maloperation could cause damage to a machine or hazard to the operating staff, it is indispensable to meet effective precautions in order to avoid such consequences

- Regarding installation, wiring, environmental conditions, screening of cables and earthing, you must follow the general standards of industrial automation industry

- - Errors and omissions excepted –

Version:	Description:
AX02002a/hk/Dec06	Brochure format A5
AX02002b/hk/Aug07	Modification of temperature range
AX02002c/pp/Apr12	Corrected Specifications : Measuring cycle

Table of Contents

1. Operation of the front keys

To enter the setup mode, keep both front keys down while you switch power on. The display will show

$$\boxed{\mathsf{ProG}}$$

As soon as you release the keys, the display starts alternating between the actual parameter text and the associated setting, in a cycle of two seconds.

Press the key on the right to increment the actual set value to next.
For numeric entries, use the left key to select the decade and the right key to scroll the value.
To continue to the next parameter, keep the left key down while you press the right key.

When you have reached the item „Endpro", you get the choice

–„Yes":   this will store your entries to the unit and switch to normal operation.

–„No":   this will start the menu again and your previous data will not be stored.

2. Operational parameters

Please enter all of the subsequent parameters, like shown in section 1.

2.1. Input range

`rAnGE`		range
	`0.20nA`	0.20mA
	`420nA`	4..20mA
	`0 . 10U`	0..10V
	`2 . 10U`	2..10V

2.2. Maximum value record

`MAX`		MAX	
	`YES`	YES	Maximum record on. (Right front key scrolls display between „Act", „Min" and „Max")
	`no`	no	Maximum record off. Skips next parameter
`rMAX`		rMAX	
	`YES`	YES	Red key sets maximum value to the actual value.
	`no`	no	Maximum Reset disabled

2.3. Minimum value record

`Min`		Min	
	`YES`	YES	Minimum record on. (Right front key scrolls display between „Act", „Min" and „Max")
	`no`	no	Minimum record off. Skips next parameter.
`rMin`		rMin	
	`YES`	YES	Red key sets minimum value to the actual value.
	`no`	no	Minimum Reset disabled.

2.4. Decimal point

dP	dP	
0	0	Provides setting of up to four decimal positions.
0.0000	0.0000	

2.5. Minimum input signal

Lo	Lo	(with 4-20 mA or 2-10V range only)
04.000	04.000	Unit shows "Lo" when input voltage or current gets lower than this setting.
20.000	20.000	

2.6. Display value with lowest input signal

LodiS	LodiS	
-199.99	- 199.99	Setting range – 19 999....99 999. Sets the display value as desired with a 0V / 0mA or 2V / 4mA input signal
999.99	999.99	

2.7. Maximum input signal

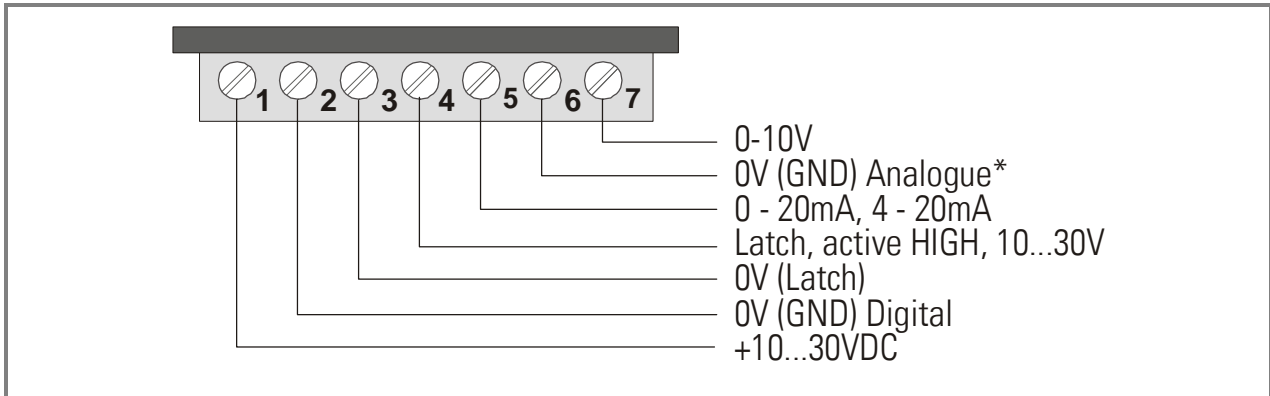|		
hiGh	High	(with 4–20mA or 2–10V range only)
04.000	04.000	Unit shows "Hi" when input voltage or current gets higher than this setting.
20.000	20.000	

2.8. Display value with highest input signal

hi.diS	Hi.diS	
-199.99	-199.99	Setting range – 19 999....99 999. Sets the display value as desired with a 10V or 20mA input signal
999.99	999.99	

2.9. End of program

EndPro	EndPro	
YES	YES	Select "Yes" to store data and exit the menu.
no	no	Select "No" to return to the beginning of the menu for verification of settings.

3.   Terminal Assignment

(also printed to the top of the unit)

Terminal connections:
- 7 — 0-10V
- 6 — 0V (GND) Analogue*
- 5 — 0 - 20mA, 4 - 20mA
- 4 — Latch, active HIGH, 10...30V
- 3 — 0V (Latch)
- 2 — 0V (GND) Digital
- 1 — +10...30VDC

* Potential separated from GND digital/ power supply (terminal 2)

4.   Delivery includes:

–   Panel mounting clip
–   Bezel for screw mount with panel cut out 50 x 25mm
–   Bezel for clip mount with panel cut out 50 x 25mm
–   Sealing
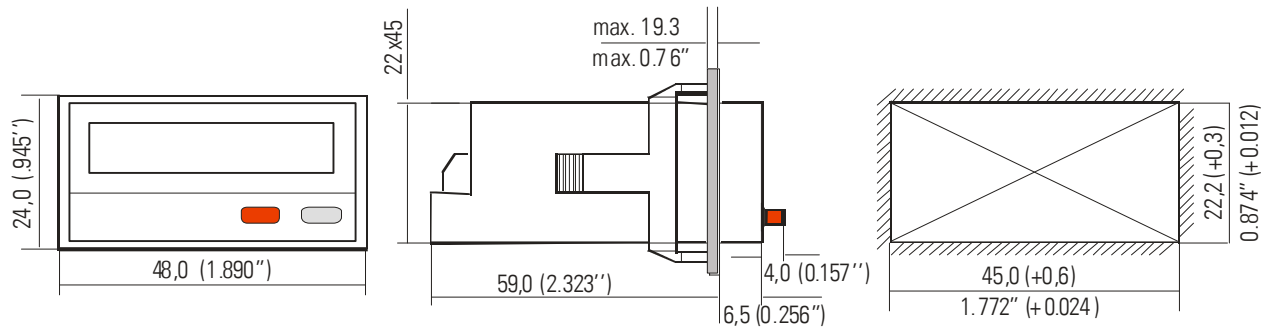–   1 sheet with self adhesive stickers (engineering units)

5. Specifications

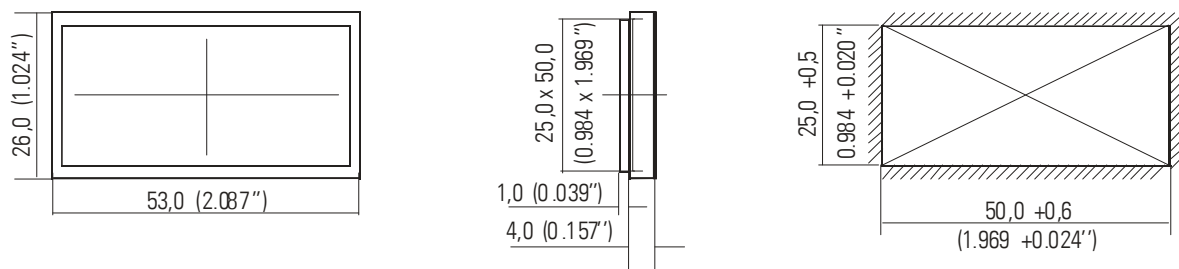|		
Power supply UB	:	10...30 Vdc, max. 50 mA
Display	:	5 decades / 8mm (0.315'')
Inputs	:	0 ... 10 V, 2 ... 10V (Ri = 1M), 0 ... 20mA, 4 ... 20mA (Ri = 100 Ohms)
Resolution	:	14 bit
Measuring cycle	:	run up 2 sec. run back 0,5 sec.
Accuracy	:	< 0.1% +/- 1 digit (20°C, 68°F)
Thermical drift	:	< 70 ppm/K
Operating temperature	:	-20°... + 55° C (-4 … +131° F)
Storage temperature	:	-25°... + 70° C (-13 … +158° F)
Weight	:	50g
Protection Class (front)	:	IP 65
Conformity and Standards	:	EMC 89/336/EEC : EN 61000-6-2 EN 61000-6-3 LV73/23/EEC : EN 61010-1

6. Dimensions

6.1. Mounting without use of add-on frames

6.2. Bezel 50 x 25 mm (1.969 x 0.984'') for clip mounting

6.3. Bezel 50 x 25 mm (1.969 x 0.984'') for screw mounting

A= Senkung   Af3, DIN 74
Counterbore Af3, DIN 74