

## ID3-VUP

20000 count universal panel meter with 2 alarm switches and analog output

- Universal input (mA, V, potentiometer)
- RTD or thermocouple temperature
- 20000 count display
- keyboard configuration or by USB terminal
- 2 alarm switches – form C relay
- 4-20mA or 0-10V analog isolated output
- wide universal power supply



4-20mA CURRENT LOOP  
STROM KREIS 4-20mA

ID3-VUP is a universal programmable panel meter with capability of transmitter supply, 2 alarm switches and a 4-20mA or 0-10V analog isolated output. The device configuration is done easily either by the front panel keyboard or by a USB terminal. This configuration can be locked. Filter function can be selected to smooth a signal, modulo function can in some cases give a comfortable display using always the best specifications of the instrument.

ID3-VUP features 2 alarm switches programmable on value, delay, hysteresis, switching status and separation for LED status.

ID3-VUP is a panel mounting meter, 20000 count 14mm LED with wiring on removable screw-on terminal blocks.

### DISPLAY

-19999 to +19999 counts red LED - programmable decimal point  
Overflow: display dEP. or dEP  
Reading rate 10 measurements/second

### POWER SUPPLY

Wide universal 24 to 250Vac and 22 to 140Vdc -Consumption 3,5VA

### ENVIRONMENTAL

Operating temperature : from 0 to 50°C  
Storage temperature : from -40 to +85°C

### INPUT AND CONDITIONING

#### Current or voltage or potentiometer input

Input and display programmable by front panel keyboard or by USB terminal

Transmitter supply :  $\approx 20V$  – permanent short-circuit max 23mA

Current input shunt value :  $\approx 75\Omega$

Voltage input impedance 100M $\Omega$

Accuracy  $\pm 0.1\%$  FS  $\pm 1$  count

Thermal drift: max. 100ppm/°C

Range	100mV	1V	10V
Measurement scale	-25mV to 190mV	-0.5V to 1.9V	-0.5V to 11.5V

#### Temperature input

Range	PT100	TCJ	TCK	TCT	TCE	TCR	TCS	TCB	TCN	TCW5
Scale °C	-200 to +850	-210 to 1200	-270 to 1372	-270 to 400	-270 to 1000	-50 to 1768	-50 to 1768	0 to 1820	-270 to 1300	0 to 2320
Resolution	0.1°/1°C	0.1/1°C	0.1/1°C	0.1/1°C	0.1/1°C	0.1/1°C	0.1/1°C	0.1/1°C	0.1/1°C	0.1/1°C
Accuracy $\pm 1$ cnt	0.2°C	1°C	1°C	1°C	1°C	1°C	1°C	1°C	1°C	1°C
Thermal drift	100ppm/°C	50ppm/°C + 0.01°C/°C with cold junction compensation (ADAPTC-VUP terminal)								

If not any cold junction compensation is required (external compensation) wire directly thermocouple input.

Otherwise a specific terminal with ambient temperature measurement (ADAPTC-VUP) is mandatory.

### MECHANICALS

noryl UL94V0 case (panel mounting) – front panel waterproof IP54  
Wiring on removable screw-on terminal blocks

Dimensions : front panel 48x96 –

Overall depth 104mm panel width max 10mm

Cut out 45(-0/+0.5) x 91.5(-0/+0.5)mm- Fixed by means of screw clips

### ALARMS

2 independent alarm switches programmable on value, delay, hysteresis, relay status and separation for LED status. LED alarm status on front panel. 2 relays form C - 1A 220V  $\cos\phi$  0,7

### 4-20mA or 0-10V ANALOG ISOLATED OUTPUT

SA2 (0-10V) - SA3 (4-20mA) - SA4 (4-20mA passive)

Isolation voltage input/output : 500 Veff

Output load 400 $\Omega$ (8V) max current 22mA

Accuracy : full scale 0.15% - zero 0.1%

Repeatability : 0.1% - Thermal drift 100ppm/°C

Default value > 21mA or 10,5V

### REFERENCE

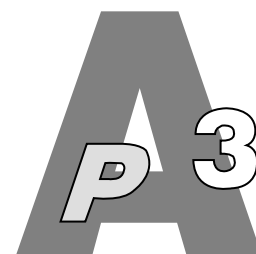
ID3-VUP-SA□-AWP

SA2 0-10V analog output

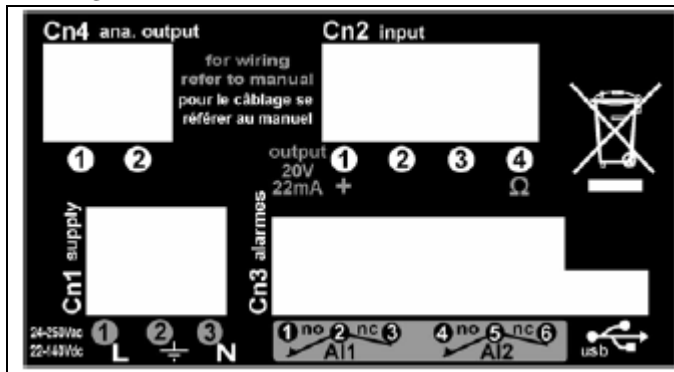
SA3 4-20mA analog output

SA4 4-20mA passive analog output

BOUCLE 4-20mA



WIRING



**Alarm wiring**  
Alarm switches are available on terminal Cn3

**Power supply wiring**  
Primary supply is connected on terminal Cn1

**CE** The equipment bears the CE mark, in accordance with directives 89-336/CEE. This system meets the following standards: EN50081-2 and EN 50082-2. Complementary tests have been carried out as per other standards. Please call our technical team for more information.

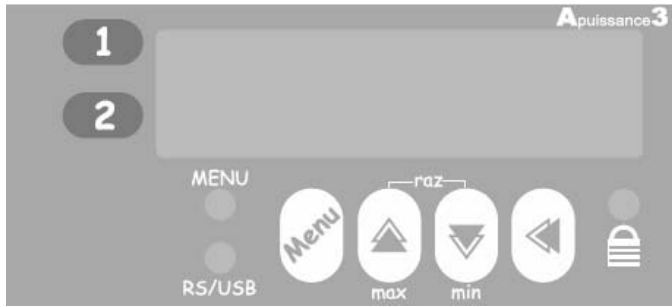
Input terminal wiring Cn2

Supplying a 4-20mA transmitter		PT100 3-wire	
4-20mA or 0-20mA loop receiver		PT100 2-wire	
Voltage 100mV, 1V or 10V		Difference between 2 PT100	
Potentiometer		Thermocouple with external compensation	
		Thermocouple with compensated terminal ADAPTC-VUP	

Analogue isolated output terminal wiring Cn4

Output SA2 0-10V	Output SA3 4-20mA active	Output SA4 4-20mA passive

## DISPLAY CONFIGURATION AND PROGRAMMING



While programming [MENU] LED is light. If programming is proceeding through USB terminal [RS/USB] LED blinks.  
If the device is locked [ ] LED is light.  
To go into programming phase press the [MENU] key  
Moving forward or back: press [ ] or [ ] keys, press [ ] key to valid the choice.

**1. Input configuration**

Go into programming phase and using moving keys reach « cFG » function, valid.  
Possible choices : « cour » (current) « tEnS » (voltage) « Pt » « Tc » « Pot » choice the desired input and valid  
Reach « Ent » function, valid.  
Depending on previous choice possible ranges are visible using the moving keys.  
Possible choices :  
Current : « 4-20 » - « 0-20 »  
Voltage : « 0-10 » - « 0-1.0 » - « 0-0.1 »  
Pt100 : « 2FiL » (2-wire) - « 3FiL » (« 6wire » - « diFF » (difference)  
Thermocouple : J. K. T. E. R. S. B. N. W5  
Valid the choice

**2. Display configuration**

While in programming phase reach « PEAf » function and valid.  
The value desired for the full scale of display is displayed. Use the moving keys to increase or decrease the value. Valid.  
Reach « 0-AF » function. The bottom scale value is displayed.  
Use the moving keys to increase or decrease the value. Valid.

**3. Decimal point configuration**

In programming phase reach « PdEc » function  
Use the moving keys to change the decimal point position. When it is correct, valid.

**4. Analog output configuration**

Reach « PESA » function, use the moving keys to adjust the output full scale. Valid.  
Reach « 0-SA » function, adjust the output bottom value using moving keys. Valid.  
Reach « dEc » function, choice « oui » if a zero offset is needed (4-20mA output case). Valid  
« t SA » function drives an output variation independently from measurement for testing.

**5. Alarm 1 configuration – Idem for alarm 2**

Reach « ALr1 » function  
Use moving keys to increase or decrease the value. Valid. Same way for all the alarm functions.  
« HYS1 » - hysteresis value in display counts  
« dEL1 » - delay value in seconds max 25.5s  
« rEL1 » - relay status NO or NF (NC)  
« LEd1 » - separation LED led status versus relay refer chart below

Alarm – LED and relay status		
relay/LED	Measurement < alarm	Measurement > alarm
rEL = NO LEd = OFF	nc ○ no ●	nc ○ no ☀
rEL = NF LEd = OFF	nc ○ no ☀	nc ○ no ●
rEL = NO LEd = ON	nc ○ no ☀	nc ○ no ●
rEL = NF LEd = ON	nc ○ no ●	nc ○ no ☀

**6. Measurement filter programming**

The filter allows smoothing the measurement value. It is programmable from 0 to 60 seconds  
In programming phase reach « FiLt » function.  
Use the moving keys to increase or decrease the value. Valid

**7. Display modulo programming**

Display modulo is programmable on 1, 2, 5 or 10 (0)  
In programming phase reach « Mod » function.  
Use the moving keys to select the desired choice. Valid

**8. Linearization validation**

Choices « oui » or « non » using moving keys. Linearization is programmable through USB terminal. Valid.

**9. Lock and unlock keyboard**

Menu lock : Get on the device pressing [1] key – alarms are still programmable  
Complete lock : get on the device pressing [2] key  
Unlock : get on the device pressing [1] and [2] keys  
Keyboard can be locked using USB programming.

**10. Alarm values display**

Pressing [1] or [2] keys, the device displays the considered alarm value.  
When alarm value is crossed LED inside the adequate key light on or off according programming.

**11. Peak value display**

Press [ ] : Maximum peak value display  
Press [ ] : Minimum peak value display  
Press [ ] and [ ] : reset the peak values in memory

**12. Overflow**

Measurement overflow : display « dEP »  
Display capacitance overflow > 19 999 counts : the 4 up segments of each digit are lighted  
Display capacitance overflow < -19 999 counts : the 4 down segments of each digit are lighted  
Analog output takes an upper default value 21mA or 10,5V.

**For programming through USB terminal at the rear of the device: download on the website [www.ap3.fr](http://www.ap3.fr) the configuration program (IDCFG), and then connect the device to your computer USB terminal.**

**All the functions described above are programmable using USB programming plus capability to save a configuration, to restore a previous stored configuration, to lock the keyboard of the device. The necessary cord is a USB-miniB cord. It is not delivered with the device but can be supplied as an accessory.**

This equipment has a 1-year warranty including parts and labour for all materials returned in our factory.

