

### Description

The PR130 Ex i controller is designed for use in hazardous areas. The unit can be configured to operate as a fixed set point, ratio or override controller. The programming functions are organized at three levels, namely the configuration, parameter and operation data level. Each level can be locked via a code number.

The actual value input can be adapted to all common standard signals and for direct connection of a PT 100 sensor. In addition, the controller has an intrinsically safe supply output for connection of two-wire transducers, thus permitting practically any physical value to be adapted to the controller input. The active, intrinsically safe analogue output with separate feeding terminal can be used for direct control of intrinsically safe actuators.

When operated as two or three point PWM- controller, this unit in combination with the VI156 supply and interface modules can be used to operate actuators (e.g heating systems) with max 250 VAC/ 6A in hazardous areas.

Each standard unit has four free programmable digital input and outputs. The PR130 can now serve two actuators (split range control) as an option.

Using the modbus interface option the controller can communicate with a high level control system (i.e. DCS). The control system gets the process variables and can manipulate the control loop with steering commands.

### ENTRÉES LOGIQUES :

- Selection of the internal / external setpoint
- Selection of the internal setpoint 1 or 2
- Selection of control parameters
- Switching on / off / resetting the setpoint program
- Auto / manual inversion
- Switching to the safety instruction

### ANALOG OUTPUT :

- SI regulation signal

### LOGIC OUTPUTS (4 configurable outputs)

- High and / or low alarms for:
- Process variable x
- Setpoint w
- Xd deviation control
- Manipulated variable of
- Logic outputs of the Discrete regulator



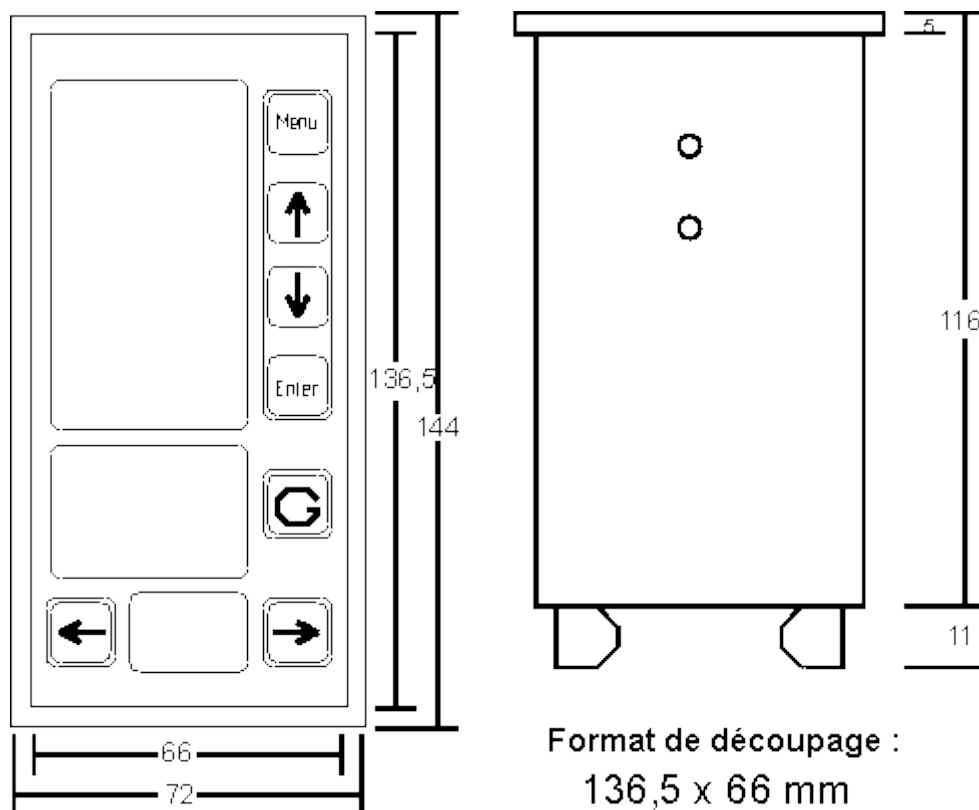
### Specifications :

Screen	LCD with bar graph and symbols; 10 mm height display
Keyboard	Touch membrane of 7 keys
Supply	<p>Intrinsically safe</p> <p>-Bornier 3,4: Power supply for passive two-wire transmitter (intrinsically safe 24 V external power supply)</p> <p>* Safety limit values: <math>U_0 \leq 65</math> V; <math>I_K \leq 160</math> mA</p> <p>* Operational values: 9 to 65 V</p> <p>* Supply current <math>\geq 20</math> mA if the analog output is not used (logic controller). Current <math>\geq 40</math> mA otherwise.</p> <p>Terminal block 2,4: Power supply for two-wire transmitter active (sensor self-supply)</p> <p>* Safety limit values: <math>U_0 \leq 65</math> V <math>I_K \leq 110</math> mA</p> <p>* Operational values: 17 to 65 V</p> <p>* Supply current <math>\geq 40</math> mA if the analog output is not used. Current <math>\geq 60</math> mA otherwise.</p>
Analog input 1	Process variable X1 - 0 / 4-20 mA, 0 / 1-5 V, Pt 100
Analog input 2	X2 process variable, disturbance variable Z - 0 / 4-20 mA or 0 / 1-5 V, Pt 100
Analog input 3	Xrem external setpoint - 0 / 4-20 mA or 0 / 1-5 V
Logic inputs from E1 to E4	<p>Signal 0 &lt;1,5 V</p> <p>Signal 1 &gt; 4,0 V</p>
Analog outputs	<p>0 / 4-20 mA impedance max. 350 Ohms</p> <p>0 / 1-5 V mini impedance 500 Ohms, 12 bit resolution (4096)</p>
Logic outputs	<p>residual voltage in the closed state 1 to 2 volts, galvanically isolated outputs up to a maximum voltage of 90 V.</p> <p>Control by intrinsically safe circuits with <math>U_0 \leq 30</math> V, <math>I_K \leq 50</math> mA, <math>P_{max} \leq 850</math> mW</p>
Classification	EEx ib IIC T6/T4
Installation	Zone with danger of explosion
Housing	Standard DIN 43700
Dimensions	H = 144 mm ; l = 72 mm ; P = 127 mm
Backup battery	Shelf life 6 years minimum for ambient temperature <40 ° C (the battery is used to save the configuration and operation parameters, the program itself is in ROM)
Protection	IP 70 front panel with IP65 bonded membrane
Ambient temperature	<p>-10 à +40°C pour classe T6</p> <p>-10à +65°C pour classe T4</p>

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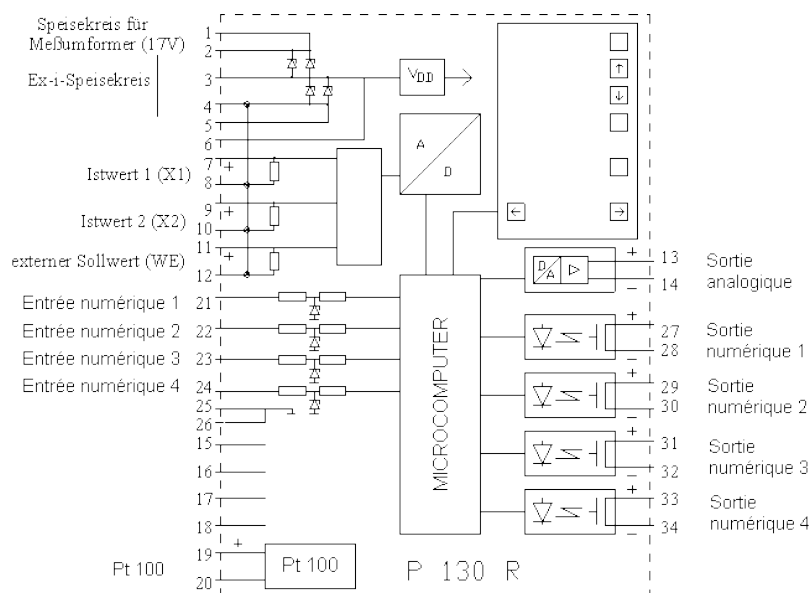


### Dimensions :



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### Block diagram :



### Order code

P 130.R	.[]	.0	.[]
PID controller, 1 channel, 1 power input, 3 analog inputs (setpoint, process variable), 1 analog output, 4 digital inputs, External dimensions on panel: 72 × 144		.0	
Analog inputs 0 / 4-20 ma	.0		
Analog inputs 0 / 1-5 V	.4		
Process input Pt 100 Other analog inputs 0 / 4-20 mA	.8		
Specific analog process variables (eg variable inputs 0 / 4-20 mA, set point 0-10 V)	.9		
Analog output version 0 / 4-20 mA		.4	.6
Analog output version 0 / 1-5 V			

### Accessories

- Front door with lock, IP 55 protection

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