



Instrumentação
e Controle

Catálogo



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UNICONT PM

UNIVERSAL CONTROLLERS



UNICONT PMM-300



UNICONT PMG-500

NIVELCO

SIGNAL PROCESSING UNITS

UNICONT PMG-500

The UNICONT PMG-500 series universal controllers are 1/16 DIN (48 × 48 mm [1.9 × 1.9"]) process controllers with relay and analog outputs or a PID algorithm supporting versatile functions. The universal analog PID controllers can be used with popular RTD (*Pt*, *JPt*, *Cu*) resistance thermometers and various thermocouples for temperature measurement, control and processing of signals from transmitters with 0...20 mA, 4...20 mA and 0...10 V DC, 0...5 V DC, 1...5 V DC, 0...100 mV DC output. The controller's output signal can be a relay, a continuous 4...20 mA process current signal, or an SSR driver. An additional alarm relay is provided for limit monitoring. The unit is microprocessor based, has auto-tuning software and its PID controller can find the optimum PID constants. The PMG-500 Series is capable of RS485 communication and has an input to receive the output signal from a current transformer (CT). The large two-color display is easy to read even from a distance.



PMG-500

FEATURES

- Universal input
- 4...20 mA output, relay outputs
- SSR driver output
- RS485 communication
- ON-OFF and PID control
- Auto tuning (AT) feature
- Current transformer (CT) input
- 48 × 48 mm front panel

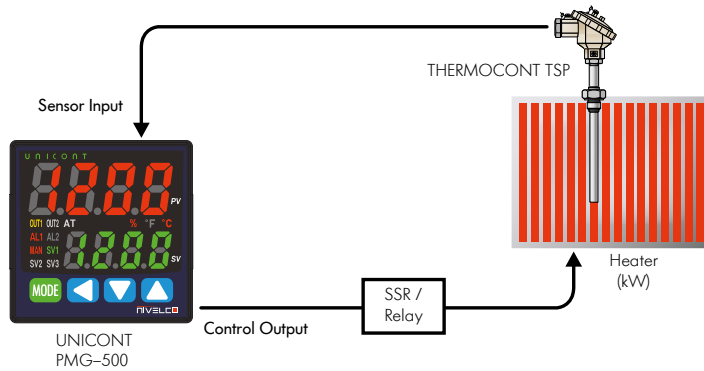
APPLICATIONS

- Temperature display
- Switching, control tasks
- Simultaneous cooling / heating control
- For automated manufacturing processes
- Alarm indication

TECHNICAL DATA

		PMG-51□	
Input	RTDs (3-wire, automatic wire-resistance comp.)	DPt100, DPt50, JPt100 (-199.9...+650 °C), Cu100, Cu50 (-199.9...+200 °C), Ni120 (-80...+200 °C)	
	Thermocouples (automatic cold junction compensation)	K (-200...+1350 °C); J (-200...+800 °C); E (-200...+800 °C)	
		T (-200...+400 °C); B (0...+1800 °C); R (0...+1750 °C)	
		S (0...+1750 °C); N (-200...+1300 °C); C (0...+2300 °C)	
		G (0...+2300 °C); L (-200...+900 °C); U (-200...+400 °C); Platinel II (0...+1390 °C)	
	Voltage	0...10 V DC; 0...5 V DC; 1...5 V DC, 0...100 mV DC	
Current	0...20 mA DC; 4...20 mA DC		
Current transformer (CT)	0.0...50.0 mA (1/1000 CT: 0.0...50.0 A)		
Output	PID	Proportional band (P)	0.1...999.9 °C / °F (%)
		Integral time (I)	0...9999 s
		Derivate time (D)	
		Cycle time(T)	Relay, SSR output: 0.1...120.0 s. Optional current or SSR output: 1.0...120.0 s
	Type of output	Relay	250 V AC 3 A AC1, closing contact
		SSR driver	11 V DC ±2 V, max. 20 mA
		Current	DC 0...20 mA or 4...20 mA (max. load: 500 Ω)
RS485	Modbus RTU		
Alarm output	1× SPST (NO/NC programmable) 250 V AC, 3 A 1a, AC1		
Accuracy of setting & displaying	±0.3% ±1 digit of full range or ±3 °C		
Display	PV (primary value)	Red, 4-digits, 7 segments; digit height: 14 mm	
	SV (secondary value)	Green, 4-digits, 7 segments; digit height: 10 mm	
Supply voltage	100...240 V AC 50/60 Hz, max. 8 VA, operational voltage 90...110%		
Ingress protection	Front: IP54, back: IP20		
Electrical protection	Class II		
Ambient temperature	Operational: -10...+50 °C, storage: -20...+60 °C		
Ambient humidity	35...85% (relative) non-condensing		
Dimensions	48 × 48 × 70.5 mm (front panel cut-out: 45 ^{+0.5} × 45 ^{+0.5} mm)		
Weight	105 g		

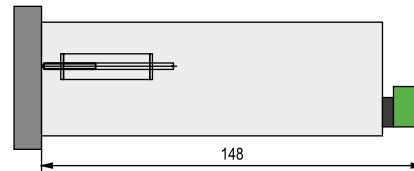
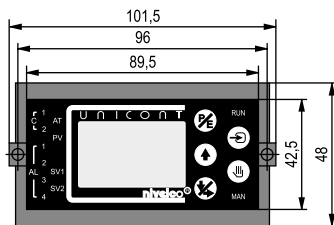
APPLICATION EXAMPLE – HEATING CONTROL



ORDER CODES (NOT ALL COMBINATIONS AVAILABLE)

UNICONT PMM-3

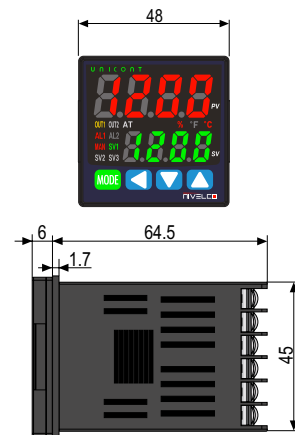
Input	Code	Output	Code	Supply voltage	Code
1 × universal input (IN1)	1	2 × relays (C1, C2), I _{out} 1	1	85...265 V AC, 120...375 V DC	1
2 × universal inputs (IN1, IN2)	2	2 × relays (C1, C2), I _{out} 1, U _{supply} / I _{out} 2	2	24 V AC/DC	2
1 × universal input (IN1) + linearization	3	4 × relays (C1, C2, AL3, AL4), I _{out} 1	3		
2 × universal inputs (IN1, IN2) + linearization	4	4 × relays (C1, C2, AL3, AL4), I _{out} 1, U _{supply} / I _{out} 2, RS485	4		



UNICONT PMG-51

Output	Code	Supply voltage	Code
3 × relays (R1, R2, AL1), I _{out} (input current repeater function)	1	100...240 V AC	1
2 × relays (R1, AL1), 1 × solid-state driver / 4...20 mA (control current output)	2	24 V AC / 24...48 V DC	2
2 × relays (R1, AL1), 1 × solid-state driver / 4...20 mA (control current output), RS485	3		
1 × SSR, 1 × SSR / 4...20 mA (control current output), AL1 relay ⁽¹⁾	4		
2 × SSR / 4...20 mA (control current output), AL1 relay	5		

⁽¹⁾ 24 V version not available



PMG-51□

upm45s23en02b // NIVELCO reserves the right to change technical data without notice!

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