UNICONT PMG-400

UNIVERSAL CONTROLLERS

- **Universal input**
- **4 ... 20 mA output**
- **Relay outputs**
- **SSR driver output**
- **ON-OFF and PID control**
- **Auto tuning (AT) operation**
- **Dual display**
- **DIN 48 x 48 mm mounting size**
- **IP 65 protection**

ABOUT THE UNICONT PMG-400

NIVELCO presents the new 1/16 DIN (48 x 48 mm) dimensional PMG-400 universal controller family featuring easy programming and dual LED display.
The universal analogue PID-controller is able to process the signals of Pt 100 thermometers, different thermocouples and transmitters with outputs of 4 … 20 mA and 1 … 5 V DC or 0 … 10 V DC.
The output options Nivelco offers include a power relay, continuous 4 … 20 mA retransmission or an output drive able to operate an SSR.
A high power relay with SPDT contacts can perform various control tasks programmed whereas a lower rated alarm relay is setable over the entire input variable range.
The large bi-coloured display provides easy reading even from far distance. The process parameters are red, the set values appear green.

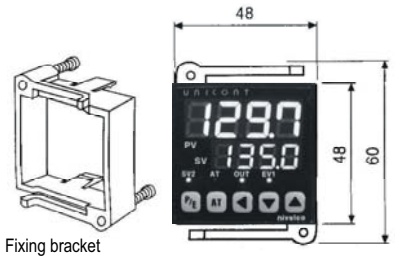
The unit can perform as a temperature controller or a controller of any process variable transmitted through 4 … 20 mA such as level, pressure, etc.
The self-adaptive auto tuning (AT) helps the user to define the PID parameters.
The unit – exclusively – enables to locate the proportional range asymmetrically compared to the set point in order to reduce an overshot. If the input is a Pt 100, the unit has an automatic cable resistance compensator.
If it is a thermocouple, the unit generates an automatic cold junction compensator.
In case of heating control, if the unit or the sensor is faulted, the output will be turned off to prevent any overheating. The measuring range can be set on location.
The programmable internal set point can be operated by an external closing contact.

pmg4s03a0601a

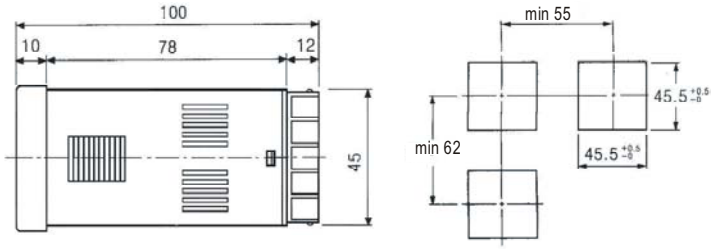
TECHNICAL DATA

TYPE		PMG-411-; -412; -413	
Input	Resistance thermometer (3 cable, aut. cable compensation)	DIN Pt 100 (–199.9 °C...+199.9 °C or 0 °C...+500 °C) R cable: max. 5 ohm	
	Thermocouple (aut. cold junction compensator)	K (-100 °C… +1100 °C); J (0 °C…+800 °C)	
		R (0 °C … +1700 °C); E (0 °C…+800 °C)	
		T (-200 °C…+400 °C); S (0 °C…+1700 °C)	
		N (0 °C…+1300 °C); W (0 °C…+2300 °C)	
	Voltage	1…5 V DC; 0…10 V DC	
	Current	4…20 mA DC / 250 Ohm	
Control output	PID (auto-tuning)	Proportional range (P)	0…100 %
		Integral time (I)	0…3600 s
		Derivative time (D)	0…3600 s
		Control time (C)	1…120 s
	Output	Relay	SPDT 250 V AC, 3 A, AC1
		SSR driver	12 V DC ±3 V, max. 30 mA
		Current	4…20 mA DC (max. load 600 Ohm)
Alarm output		1 pc., 250 V AC, 1 A, AC1 programmable relay with closing switch	
Setting and display accuracy		±0.3 % ±1 digit for the whole input measurement range or ±3 °C	
Display	PV (process variable)	4 digit, 7 segment 11 mm high red LED	
	SV (set value)	4 digit, 7 segment 7 mm high green LED	
Power supply		90 … 264 V AC 50/60 Hz, max. 5 VA	
Protection		Front side: IP 65, back side: IP 20	
Electronic protection		II. strengthened isolation	
Ambient temperature		Operational: -10 °C…+50 °C, Storing: -20 °C…+60 °C	
Ambient humidity		35…85% RH	
Dimensions		48 x 48 x 107 mm (panel cut out: $45.5^{+0.5}$ x $45.5^{+0.5}$ mm)	
Weight		0.15 kg	

DIMENSIONS



MOUNTING



ORDER CODE

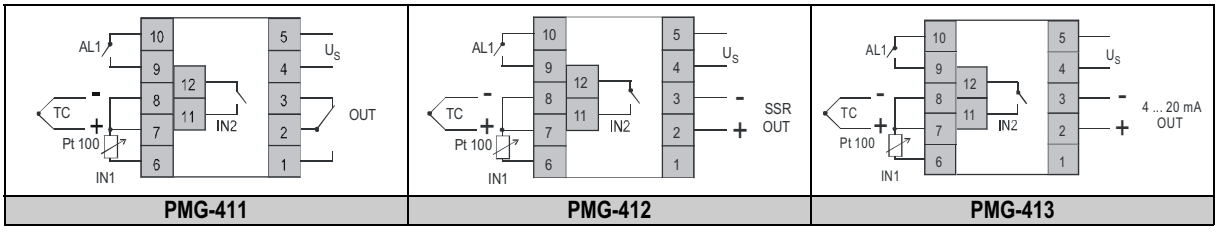
M G – 41 ☐ - 1

OUTPUT	CODE
2 relays	1
SSR driver	2
4…20 mA	3

ALGORYTHM

ON-OFF with setable hysterysis
Proportional control without overshot
PID control with overshot
PID without overshot

WIRING



U_S: Power supply OUT: Control output IN1: Sensor input AL1: Alarm output IN2: Processor input

Technical specification may be changed without notice

NIVELCO PROCESS CONTROL Co.
H - 1043 BUDAPEST, DUGONICS U. 11.
PHONE: (36-1) 369-7575 ♦ FAX:(36-1) 369-8585
e-mail:sales@nivelco.com ♦ www.nivelco.com