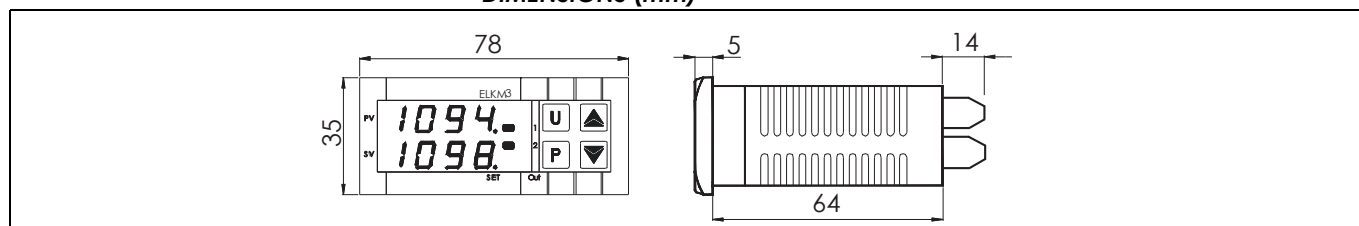


ELKM3 SERIE MICROPROCESSOR BASED REGULATORS



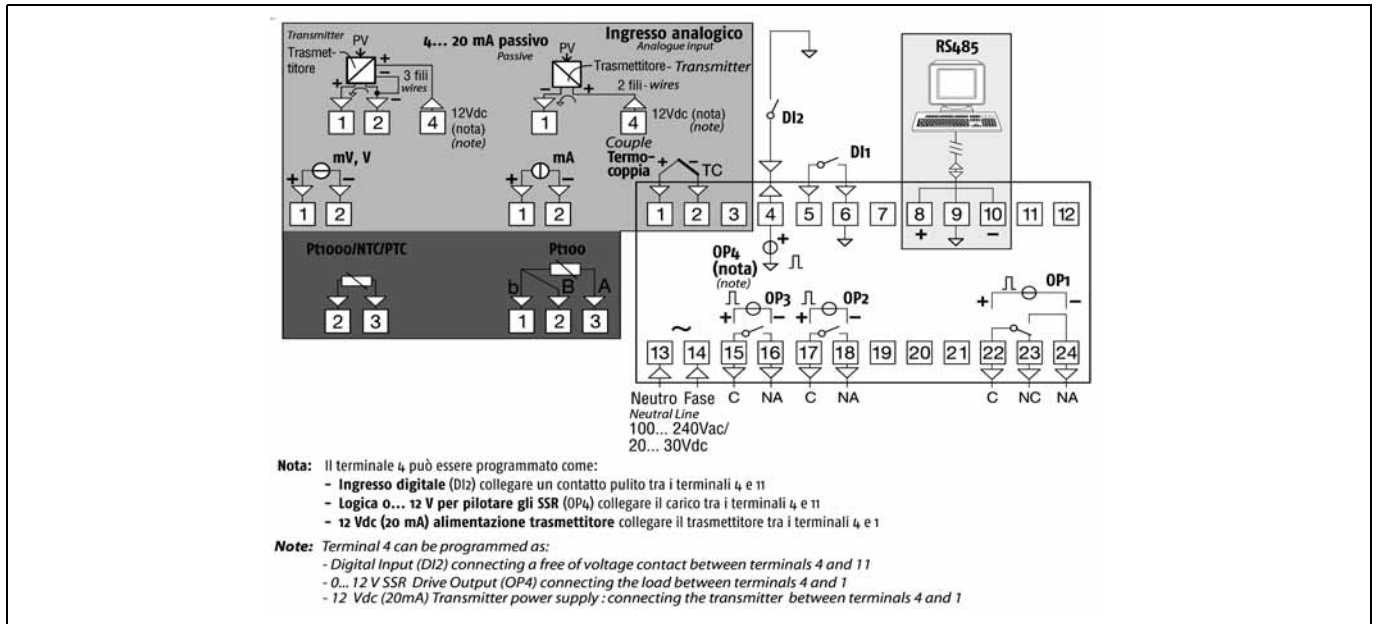
TECHNICAL DATA	
DISPLAY	ELKM3
Dual LED	4 digit h 10.9 mm dynamic three colours red, green and amber or 1 fixed selectable colour Secondary display: 4 digit h 6 mm green colour Bargraph: Bargraph a 21 segment
INPUTS	
Universal Input	Thermocouples: J (-50... +1000°C/-58... +1832°F), K (-50... +1370°C/-58... +2498°F), S/R (-50... +1760°C/- 58... +3200°F), T (-70... +400°C/-94... +752°F) Infrared sensors: J or K RTC: Pt100 3 wires and Pt1000 2 wires (-200... +850°C/-328... +1562°F) Thermistors: PTC KTY81-121 (-50... +150°C/-58... +302°F), NTC 103-AT2 (-50... +110°C/-58... +230°F) Linear signals: 0/12... 60mV, 0/4... 20mA, 0/1... 5V, 0/2... 10V
Measurement accuracy	±0.5% span ±1 digit, (±1% span ±1 digit for T/c type S)
Digital inputs	1 contact input + 1 (available when I/O 4 = DI2) programmable as voltage (24 VDC) or contact input
OUTPUTS	
Up to 4	OUT1: Relay SPDT 4A/240 VAC or voltage output for driving SSR 13V max. @ 1mA, 10.5 V min. @ 15 mA ±10% OUT2 and OUT3: Relay SPST-NO 2A/240 VAC or voltage output for driving SSR 13V max. @ 1mA, 10.5 V min. @ 15 mA ±10% OUT4 programmable: Voltage output for driving SSR 13V max. @ 1mA, 10.5 V min. @ 22 mA ±10% or transmitter power supply or 2nd Digital Input

TECHNICAL DATA	
FUNCTIONAL	
Control	PID single or double action, On/Off, On/Off with Neutral Zone. Autotune, Selftune and evoTune. Overshoot control.
Alarms	3 alarms configurable as absolute, deviation, band
Set Point	4 set Points selectable
Serial communications	TTL (standard) + RS485 (opzionale), protocol: MODBUS RTU
Communications speed	1200... 38400 baud selectable (8 bit + 1 stop bit, no parity)
Work hours/days counter	With 2 simultaneous functions: cumulative non-erasable and resettable with alarm
Power calculation	Instant power, hourly consumption, total consumption during program running
Evogreen	Time based Display switch-off, selectable
Timer (optional)	Independent with 5 operation modes
GENERAL	
Power supply	24 VAC/DC $\pm 10\%$, 100... 240 VAC (-15... +10%), 50/60 Hz, power consumption 7 VA
max. Temperature	Operating: 0... 50°C (32... 122°F); Storage: -20... +70°C (-4... +158°F);
Relative humidity	20... 95 RH% with no condensation
Conformity	EN 61010-1, EN 61326
MECHANICAL CHARACTERISTICS	
PARAMETER	
Housing	Self-extinguishing plastic UL 94 v0
Mounting	Front panel
Dimensions	78 x 35 x 78 mm (w x H x P)
Panel cut-ou	71 x 29 (-0... +0.6 mm)
Weight	140 g circa
Terminals	24 terminals for cables from 2.5 mm ² (AWG22.... AWG14):s
Protection degree	IP 65 mounted on the panel on the panel with gasket (IP20 for screw terminals) In conformity with En 60070-1 (only internal use)

DIMENSIONS (mm)




WIRING DIAGRAM



CODING

ELKM3	Controller	33 x 75 mm
ELKM3T	Controller + Timer	
Description	Code	Codes description
Power supply	24	24 V AC/DC
	240	100...240 V AC
Analog input + digital input DI1 (standard)	C	J, K, R, S, T, PT100, PT1000 (2 fili / 2 wires), mA, mV, V
	E	J,K, R, S, T, NTC, PTC, mA, mV, V
Main output OUT 1	R	Relay SPDT (resistive load)
	S	V DC for SSR (13 V DC max @ 1 mA, 10,5 V DC min @15 mA +/- 10%)
Second output OUT 2	2R	Relay SPST-NO (resistive load)
	2S	V DC for SSR (13 V DC max @ 1 mA, 10,5 V DC min @15 mA +/- 10%)
	-	None
Third output OUT 3	3R	Relay SPST-NO 2 A (resistive load)
	3S	V DC for SSR (13 V DC max @ 1 mA, 10,5 V DC min @15 mA +/- 10%)
	-	None
Input - Fourth output OUT 4	4D	V DC for SSR / Power transmitter / Digital input DI2
Serial Communication	S	RS485 MODBUS + TTL MODBUS
	-	TTL MODBUS

ACCESSORIES
 SEE ACCESSORIES FOR TEMPERATURE CONTROLLERS

EXAMPLES OF CODES' COMPOSITION

