

# KM2

- 3 DYNAMIC COLOUR LED DISPLAY
- HEATER BREAK DOWN ALARM (HB)
- ANALOGUE CONTROL OUTPUT
- 8 SEGMENTS PROGRAMMER
- INDEPENDENT TIMER

## FEATURES

*evolution*



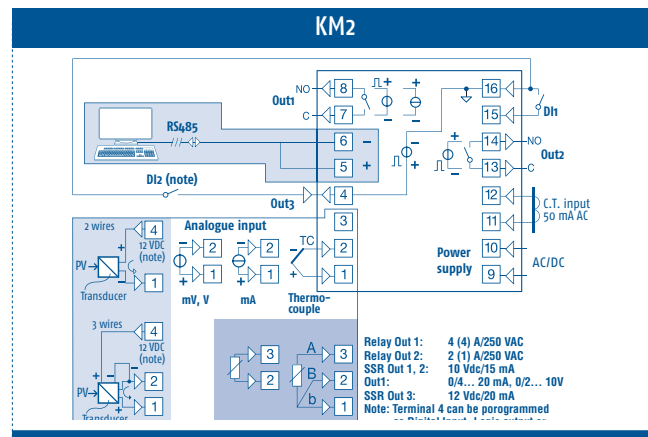
| DISPLAY                         | KM2                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dual LED                        | Main display: 4 digit h 15.5 mm. 3 colours: red, green and amber<br>Secondary display: 4 green digit, h 7 mm                                                                                                                                                                                                                                                                                         |
| INPUTS                          |                                                                                                                                                                                                                                                                                                                                                                                                      |
| Universal                       | 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)<br>Infrared sensors: J or K<br>Thermoresistances: 3 wires Pt 100 and 2 wires Pt 1000 (-200... 850°C/-328... 1562°F)<br>Linear signals: 0/12... 60mV, 0/4... 20mA, 0/1... 5V, 0/2... 10V                                                        |
| Accuracy                        | 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)<br>Infrared sensors: J or K<br>Thermistors: PTC KTY81-121 (-55... +150°C/-67... 302°F), NTC 103 AT2 (-50... +110°C/-58... 230°F)<br>Linear signals: 0/12... 60mV, 0/4... 20mA, 0/1... 5V, 0/2... 10V                                           |
| Current transformer input (HB)  | ± 0.5% span ±1 digit, (±1% span ±1 digit for T/C S type)                                                                                                                                                                                                                                                                                                                                             |
| Digital inputs                  | Available with CTs with a ratio of 25/0.05 and 100/0.05<br>1 or 2 according to instrument's part number<br>(the 2nd digital input is alternative to OUT 3)                                                                                                                                                                                                                                           |
| OUTPUTS                         |                                                                                                                                                                                                                                                                                                                                                                                                      |
| Up to 3                         | OUT 1: Relay SPST-NO 4A/240 Vac or voltage to drive SSR 13V max. @ 1mA, 10.5V min. @ 15mA ±10%<br>or analogue galvanically isolated 0/4... 20 mA, 0/2... 10V (optional)<br>OUT 2: Relay SPST-NO 2A/240 Vac or voltage to drive SSR 13V max. @ 1mA, 10.5V min. @ 15mA ±10%<br>OUT 3: voltage output to drive SSR 13V max. @ 1mA, 10.5V min. @ 22mA ±10%<br>or transmitter supply or 2nd digital input |
| FUNCTIONAL                      |                                                                                                                                                                                                                                                                                                                                                                                                      |
| Control                         | PID single or double action, ON/OFF, ON/OFF with Neutral Zone<br>Autotuning and Selftuning algorithms, Overshoot control                                                                                                                                                                                                                                                                             |
| Alarms                          | 3 alarms programmable as absolute, deviation, band                                                                                                                                                                                                                                                                                                                                                   |
| Set Point                       | 4 programmable Set Points                                                                                                                                                                                                                                                                                                                                                                            |
| Signal retransmission           | Measuring or Set Point retransmission                                                                                                                                                                                                                                                                                                                                                                |
| Serial communication            | TTL (standard) + RS485 (optional), ModBus RTU protocol                                                                                                                                                                                                                                                                                                                                               |
| Baud rate                       | 1200... 38400 baud                                                                                                                                                                                                                                                                                                                                                                                   |
| Working hours counters          | A cumulative non-erasable counter and a second one resettable with alarm                                                                                                                                                                                                                                                                                                                             |
| Wattmeter function              | Instantaneous power, time consumption                                                                                                                                                                                                                                                                                                                                                                |
| EVOogreen                       | Stand-by mode of display, selectable                                                                                                                                                                                                                                                                                                                                                                 |
| Programmer (optional)           | Up to 8 segments with guaranteed soak                                                                                                                                                                                                                                                                                                                                                                |
| Timer (optional)                | Independent with 5 function modes                                                                                                                                                                                                                                                                                                                                                                    |
| GENERAL                         |                                                                                                                                                                                                                                                                                                                                                                                                      |
| Power supply                    | 24... 240 Vac/Vdc -15%/+ 10% (50/60 Hz)                                                                                                                                                                                                                                                                                                                                                              |
| Power consumption               | 5 VA max                                                                                                                                                                                                                                                                                                                                                                                             |
| Dimensions / Weight             | 48 x 48 mm (1/16 DIN) - depth 63 mm / 125 g                                                                                                                                                                                                                                                                                                                                                          |
| Mounting                        | Flush in panel in 45 x 45 mm hole                                                                                                                                                                                                                                                                                                                                                                    |
| Connections                     | 16 screw terminals 2.5 mm <sup>2</sup> (AWG22.... AWG14) fix, plug-in or clamp type                                                                                                                                                                                                                                                                                                                  |
| Front protection degree         | IP 65, mounted on panel with gasket                                                                                                                                                                                                                                                                                                                                                                  |
| Operating / storage temperature | 0... 50°C (32... 122°F)/-20... +70°C (-4... 158°F)                                                                                                                                                                                                                                                                                                                                                   |
| Operating humidity              | 20... 95 RH% without condensation                                                                                                                                                                                                                                                                                                                                                                    |
| Conformity                      | EN 61010-1, EN 61326                                                                                                                                                                                                                                                                                                                                                                                 |

## HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

| KM2                                                                         | CODE |
|-----------------------------------------------------------------------------|------|
| <b>VERSION</b>                                                              |      |
| Controller                                                                  | -    |
| Controller + Timer                                                          | T    |
| Controller + Timer + Programmer                                             | P    |
| <b>POWER SUPPLY</b>                                                         |      |
| 24... 240 Vac                                                               | U    |
| <b>INPUT</b>                                                                |      |
| TC, RTD, mA, V, mV + digital input 1                                        | C    |
| TC, NTC, PTC, mA, V, mV + digital input 1                                   | E    |
| <b>OUT 1</b>                                                                |      |
| Relay SPST 4A                                                               | R    |
| Vdc for SSR driving                                                         | O    |
| 0/4... 20 mA, 0/2... 10V galvanically isolated (control and retransmission) | I    |
| <b>OUT 2</b>                                                                |      |
| Relay SPST 2A                                                               | R    |
| Vdc for SSR driving                                                         | O    |
| Not available                                                               | -    |
| <b>OUT 3</b>                                                                |      |
| Digital input 2 or digital output or transmitter supply                     | D    |
| <b>CURRENT TRANSFORMER INPUT (HB)</b>                                       |      |
| Heater Break Down Alarm                                                     | H    |
| <b>SERIAL COMMUNICATION</b>                                                 |      |
| RS485 + TTL Modbus                                                          | S    |
| TTL Modbus                                                                  | -    |
| <b>CONNECTION</b>                                                           |      |
| Plug-in screw type                                                          | E    |
| Plug-in screw type, fix part only                                           | N    |
| Clamp type                                                                  | M    |
| Fix screw type (standard)                                                   | -    |

## CONNECTIONS



## DIMENSIONS

