KR3T (UK) PID PROCESS CONTROLLER
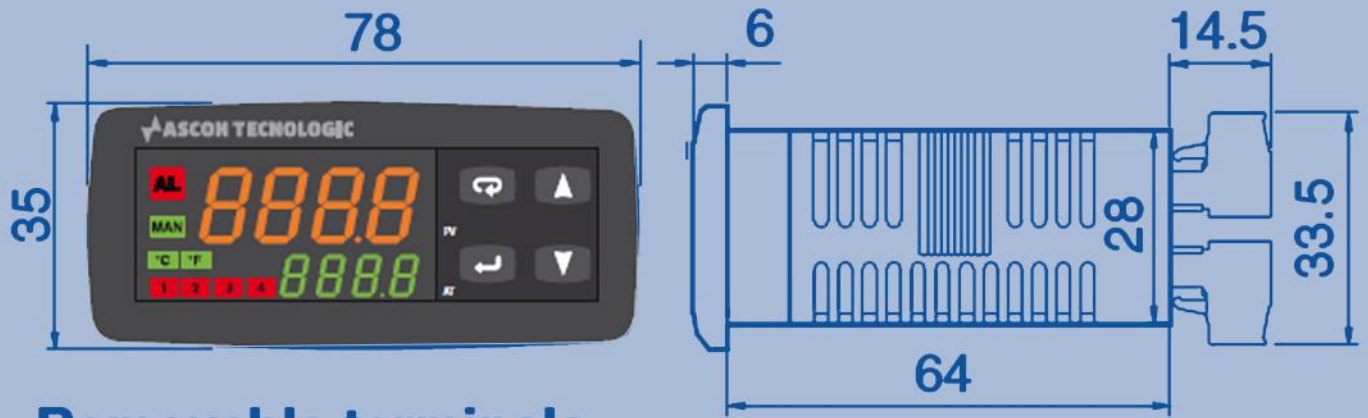

FEATURES

PID CONTROL WITH AUTOTUNE (HEAT/COOL)

UNIVERSAL SENSOR AND ANALOGUE INPUTS

UP TO FOUR OUTPUTS, RELAY, SSR AND ANALOGUE

CONFIGURABLE FOUR SEGEMENT TEMPERATURE PROFILING

INDEPENDANT CONFIGURABLE TIMER

3 COLOUR DYNAMIC DISPLAY
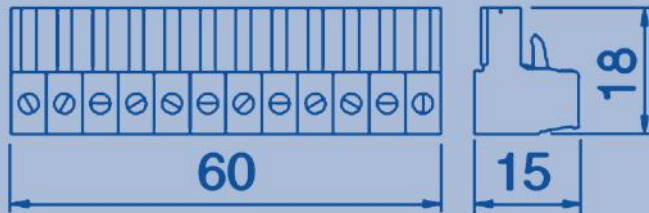
PC KEY MEMORY PROGRAMMING

IP65 FACIA

RS485 MODBUS

SPECIFICATIONS

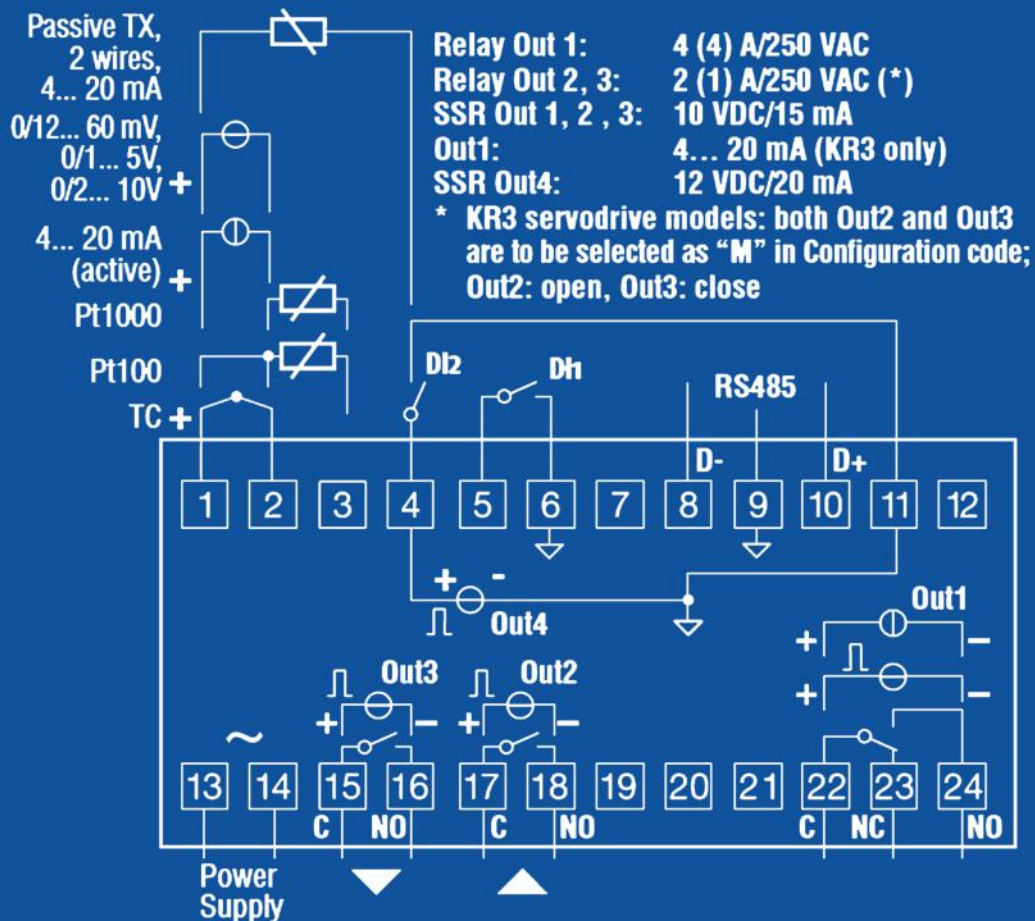| Display	
Dual LED	**Main Display:** 4-digit h 10.9mm (KR)
	Dynamic three colours red, green and amber or 1 fixed selectable colour
	Secondary Display: 4-digit h 6mm (KR)
Inputs	
Universal Input	**Thermocouples:** J (-50... +1000°C/-58... +1832°F), K (-50... +1370°C/-58... +2498°F), S/R (-50... +1760°C/-58... +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 ± digit, (±1 digit for T/c type S)
Digital Inputs	2 Digital inputs
Outputs	
Up to Four	**OUT1:** Relay SPOT-NO 4A/240 Vac or voltage output for driving SSR, 10.5V min @ 15mA ±10% or analogue 4... 20Ma / 0/2-10Vdc galvanically isolated (option)
	OUT2 and OUT3: Relay SPST-NO 2A/240Vac or voltage output for driving SSR, 10.5 V min. @ 15Ma ±10%
	OUT4 Programmable: Voltage output for driving SSR, 10.5 V min. @ 22Ma ±10% or transmitter power supply or 2nd Digital Input
Functional	
Control	PID single or double action, On/Off with Neutral Zone. Autotune, Selftune, and Evotune. Overshoots control
Alarms	3 alarms configurable as absolute, deviation, band
Set Point	4 set points selectable
Serial Communications	TTL (standard) + RS485 (optional), protocol: MODBUS RTU
Communication Speed	1200... 3400 baud selectable (8 bit + 1 stop bit, no parity)
Work hours/day counter	With two simultaneous functions: cumulative non-erasable and resettable with alarm (option)
Power Calculation	Instant power, hourly consumption during program running (option)
Evogreen	Time based display switch-off, selectable
Programmer (Optional)	Up to 4 segments with "guaranteed soak"
Timer (Optional)	Independent with 5 operation modes
General	
Power Supply	24 Vac/dc ±10%, 100... 240 Vac/dc (-15... +10%), 50/60 Hz, power consumption 7 VA max
Temperature	Operating Temperature: 0... 50°C (32... 122°F)
	Storage Temperature: -20... 700°C (-4... +158°F)
Relative Humidity	20... 95 RH% with no condensation
Conformity	EN 61010-1, EN 61326

MEASUREMENTS

Removable terminals

ELECTRICAL CONNECTIONS
UNIVERSAL SCHEMATIC COVERS ALL MODELS

Relay Out 1:   4 (4) A/250 VAC
Relay Out 2, 3:   2 (1) A/250 VAC (*)
SSR Out 1, 2 , 3:   10 VDC/15 mA
Out1:   4… 20 mA (KR3 only)
SSR Out4:   12 VDC/20 mA
* KR3 servodrive models: both Out2 and Out3
  are to be selected as "M" in Configuration code;
  Out2: open, Out3: close

Passive TX,
2 wires,
4... 20 mA
0/12... 60 mV,
0/1... 5V,
0/2... 10V +
4... 20 mA
(active) +
Pt1000
Pt100
TC +

HOW TO ORDER

USE THIS GUIDE TO
FIND THE PART
NUMBER OF
THE PRODUCT YOU
WANT

1 - MODEL

KR3T - Controller + Timer + 4 Segment Programmer
KR3P - Controller + Timer + 8 Segment Programmer
        + Event Programmer

2 - POWER SUPPLY

H = 100...240 VAC
L = 24 VAC/DC

3 - INPUT

C = J, K, R, ST, T, PT100, PT100 (2 wiees), mA, mV, V
E = J, K, R, S, T, NTC, PTC, mA, mV, V

2x Digital Inputs Included

4 - OUTPUT 1

I = mA/VDC
R = Relay SPDT 4A (resistive load)
O = VDC for SSR

5 - OUTPUT 2

- = Not Available
R = Relay SPST 2A (resistive load)
O = VDC for SSR
M = Relay SPST 2A (servomotor drive KR3 only)

6 - OUTPUT 3

- = Not Available
R = Relay SPST 2A (resistive load)
O = VDC for SSR
M = Relay SPST 2A (servomotor drive KR3 only)

7 - INPUT/OUTPUT 4

D = Output 4 (VDC for SSR)/Power transmitter/Dig. Input DI2

This is included as standard

8 - SERIAL COMMUNICATION

- = TTL Modbus
S = RS485 Modbus + TTL Modbus

9 - CONNECTION TYPE

- = Standard (non-removable screw terminal block)
E = With removable screw terminal block
M = With removable spring terminal block
N = With removable terminal block (fixed part only)