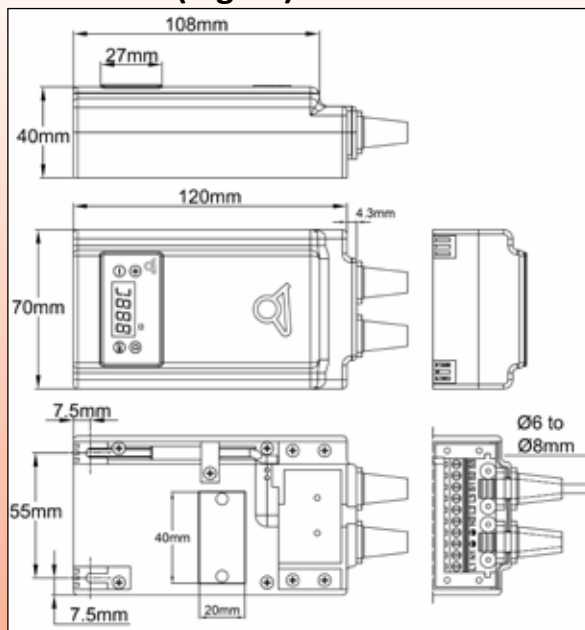## Ambient temperature measurement (digital)

This control box has the smallest footprint and the lowest price of the Y range with waterproof enclosure. It has a modern and aesthetic design, and the same professional concept than other products of this range.

Because of their small size (120 x 70 x 53 mm), these controls can be wall mounted with 2 screws 55 mm distance, hand held or just simply laid on the working table.

Enclosure: PC-ABS, black color, small footprint , can be hand held of wall mounted

Ingress protection rating: IP54 (IEC 60529)

Mechanical impact resistance: IK05 (EN 62262) Digital display not included.

Flammability: UL94-V0

Electrical connection: on a closed screw terminal connection block cavity located backside, for wire gauges up to 2.5 mm². Cables are secured by a saddle retainer, and grommets. Ground, neutral and phase can be connected in input and output.

Power inlet and outlet: through grommets for cables dia. 6 to 8 mm. Over-molded cables on request (MOQ apply)

Adjustment: by up, down and set keys

Display: selectable in °C or °F (4 digits)

Power supply: 90-250VAC, 50 or 60Hz

Temperature sensor: Pt100 RTD, located backside, in a vented and protected cavity

Temperature control action: ON-OFF or PID with auto-tune function

Differential: adjustable when on-Off action is selected

Mounting: Wall mounting, for screws dia. 4 to 6 mm, 55 mm distance

Identification: Location backside for 20 x 40 mm identification label, adhesive or riveted

Electrical contact: SPST, 16A 250V. Open on rise or close on rise action can be selected

Wiring diagram

L1	N1	⏚	⏚	N2	L2	L3	S1	S2	S3

Main references without cords*

Référence	Y5FQ9AA0000NUDF2

* Reference with Male Euro 1m H05-VVF-3G1 cord+ no connector euro1m H05-VVF-3G1 cord: replace 0000 by EJHJ
Reference with 2 euro cords 1m H05-VVF-3G1 without connector or plug: replace 0000 by HJHJ
Reference with UL SJT 3 x AWG16, 1m Male cord + SJT 3 x AWG16, 1m Female cords: replace 0000 by UJVJ
Reference with Male UL SJT 3 x AWG16, 1m cord + no connector UL SJT 3 x AWG16, 1m cord: replace 0000 by UJSJ
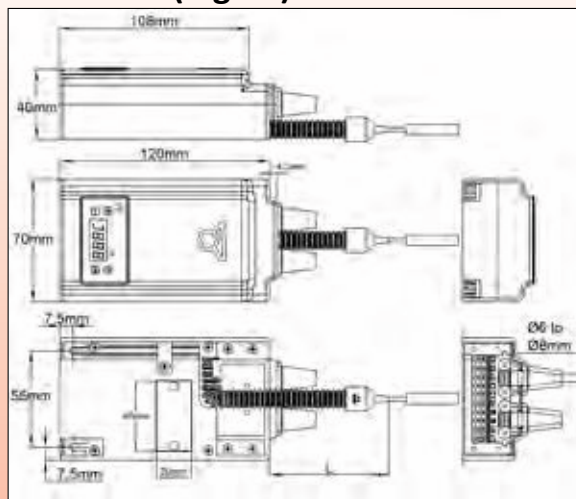Reference with 2 UL SJT 3 x AWG16 1m cords without connector or plug: replace 0000 by SJSJ

Distance temperature measurement (digital)

This control box has the smallest footprint and the lowest price of the Y range with waterproof enclosure. It has a modern and aesthetic design, and the same professional concept than other products of this range.

Because of their small size (120 x 70 x 40 mm), these controls can be wall mounted with 2 screws 55 mm distance, hand held or just simply laid on the working table.

Enclosure: PC-ABS, black color, small footprint, can be hand held of wall mounted
Ingress protection rating: IP54 (IEC 60529)
Mechanical impact resistance: IK05 (EN 62262) Digital display not included.
Flammability: UL94-V0
Electrical connection: on a closed screw terminal connection block cavity located backside, for wire gauges up to 2.5 mm². Cables are secured by a saddle retainer, and grommets. Ground, neutral and phase can be connected in input and output.
Power inlet and outlet: through grommets for cables dia. 6 to 8 mm. Over-molded cables on request (MOQ apply)
Adjustment: by up, down and set keys
Display: selectable in °C or °F (4 digits)
Power supply: 90-250VAC, 50 or 60Hz
Temperature control action: ON-OFF or PID with auto-tune function
Differential: adjustable when on-Off action is selected
Mounting: Wall mounting, for screws dia. 4 to 6 mm, 55 mm distance
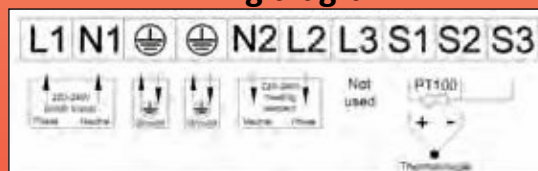**Identification:** Location backside for 20 x 40 mm identification label, adhesive or riveted
Electrical contact: Relay output, 10A 250V AC res (15 A120V AC). Open on rise or close on rise action can be selected
Temperature sensor: This control can be supplied with or without sensor. The cable can be protected by a plastic flexible corrugated tube.
This controller is multi sensor type, user settable with the following input choice:

Parameters	Sensor	Temperature range (°C)
t	Type T Thermocouple	-200~400
J	Type J Thermocouple	-200~700
E	Type E Thermocouple	-200~900
K	Type K Thermocouple	-200~1300
r	Type R Thermocouple	-50~1600
S	Type S Thermocouple	-50~1600
b	Type B Thermocouple	350~1800
W	Type WRE Thermocouple	0~2300
Cu50	Cu50	-50.0~150.0
Pt100	P100	-199~600
Pt10.0	P10	-199.9~600.0

Wiring diagram

Main references without cords*

Main features	Reference
Without temperature sensor	Y5F090A0000NUDF2
With PT100 RTD, 5 x 30 mm SS probe, 2 m protected cable	Y5FR9BA0000NUDF2
With PT100 RTD, 5 x 30 mm SS probe, 2 m un- protected cable	Y5FR9CA0000NUDF2
With K thermocouple, 5 x 30 mm SS probe, 2 m protected cable	Y5FK9BA0000NUDF2
With K thermocouple, 5 x 30 mm SS probe, 2 m un-protected cable	Y5FK9CA0000NUDF2

* Reference with Male Euro 1m H05-VVF-3G1 cord+ no connector euro1m H05-VVF-3G1 cord: replace 0000 by EJHJ
Reference with 2 euro cords 1m H05-VVF-3G1 without connector or plug: replace 0000 by HJHJ
Reference with UL SJT 3 x AWG16, 1m Male cord + SJT 3 x AWG16, 1m Female cords: replace 0000 by UJVJ
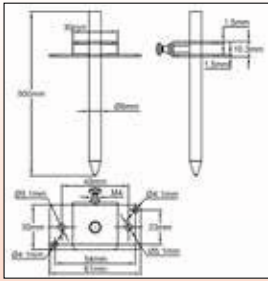Reference with Male UL SJT 3 x AWG16, 1m cord + no connector UL SJT 3 x AWG16, 1m cord: replace 0000 by UJSJ
Reference with 2 UL SJT 3 x AWG16 1m cords without connector or plug: replace 0000 by SJSJ
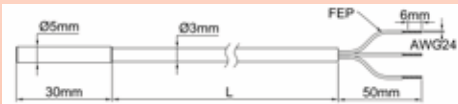
Stopper pocket for liquid temperature measurement inside bottles, carboys and other containers. Dia. 8 mm, length adjustable from 100 to 500 mm.

Reference	66DI08500FL

Standard temperature sensors
PT100

Reference	Class	Cable length	Applications
TSR50030I2000AK6	A	2000 mm	Remote sensing
TSR50030I2000BK6	B	2000 mm	Remote sensing
TSR50030I0070AK6	A	70 mm	Room temperature sensing
TSR50030I0070BK6	B	70 mm	Room temperature sensing
TSR50030I0150AK6	A	150 mm	Room temperature sensing
TSR50030I0150BK6	B	150 mm	Room temperature sensing

Temperature range: -50 to 550°C (-60 to 1020°F) on the ceramic substrate, but temperature in use limited to 200 ° C due to the FEP connecting cable
Temperature curve: EN 60751 (100 ohms @ 0°C, 138.5 Ohms @ 100°C)
Accuracy and tolerances: (according to EN 60751)
Class A, ±0.15°C @ 0°C; (±0.06 Ω @ 0°C)
Class B, ±0.3°C @ 0°C. (±0.12 Ω @ 0°C).
Protection pocket: Stainless Steel 304, dia. 5mm x 30 mm
Temperature range: -50C, +200°C
Connection cable:
• 3 wires, 0.35 mm², FEP insulation + silver-plated copper braid + FEP, temperature resistance 200°C, external diameter 2.7 mm (0.127").
• Ends: stripped
Polarity: The two red wires are connected together at their welded junction to one of the chips ceramic substrate terminal and the white wire is connected to the other terminal.

K Thermocouple

Type 1	Type 2	Type 3

Temperature curve: according to EN 60584-1 and IEC 584-1
Accuracy and tolerances: Class 2 according to EN 60584-1 and 2, ±2.5°C within -40 °C and 333 °C
Polarity (according to DIN 43714): red = positive, blue= negative

Reference	Probe type	Probe temperature range	Cable	Type
TPR00060W10002F4	bare	-50+200°C	2 x 0.35mm², 200°C FEP insulated L= 1m	1
TPR00060W20002F4	bare	-50+200°C	2 x 0.35mm², 200°C FEP insulated L= 2m	1
TPR60050I10002E4	SS 304 dia. 6mm x 50 mm	-50C, +200°C	2 x 0.35mm2, O.D 2.7 mm nickel plated braid L = 1 m	2
TPR60050I20002E4	SS 304 dia. 6mm x 50 mm	-50C +200°C	2 x 0.35mm2, O.D 2.7 mm nickel plated braid L = 2 m	2
TPR20200R20002E4	Refractory SS, dia. 2 mm L1= 200 mm sheathed probe	-40+800°C	2 x 0.35mm2, O.D 2.7 mm nickel plated braid L2 = 2 m	3
TPR20400I20002E4	Refractory SS, dia. 2 mm L1= 200 mm sheathed probe	-40+800°C	2 x 0.35mm2, O.D 2.7 mm nickel plated braid L2 = 2 m	3

Options

Standard version: grommet cable output for cables from 4 to 8.6 mm OD

SJT 3 x AWG16 cord, length 1m, with 15A UL receptacle

SJT 3 x AWG16 cord , length 1m, with 15A UL plug

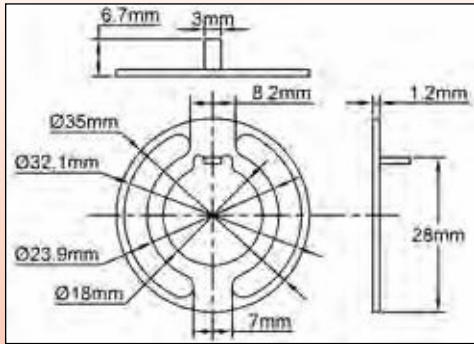SJT 3 x AWG16 cord, length 1m, without plug

H05VV-F 3G1.5 cord, length 1m, with Euro plug
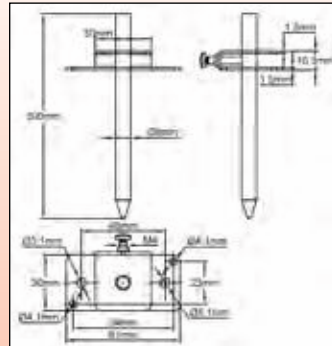

H05VV-F 3G1.5, length 1m, cord without plug

E-Mail: info@ultimheat.com Web: www.ultimheat.com

Accessories and options

Accessories

Knob high/ low limit stop setting.
Can be used on mechanical thermostat or electronic thermostat types

Reference	6YBUR001

Stopper pocket for liquids temperature measurement inside bottles, carboys and other containers. Dia 8 mm, length adjustable from 100 to 500 mm. Not usable on room temperature measurement types.

Reference	66DI08500FL

Options

Standard version: grommet cable output for cables from 4 to 8.6 mm OD

SJT 3 x AWG16 cord, length 1m, with 15A UL receptacle

SJT 3 x AWG16 cord , length 1m, with 15A UL plug

SJT 3 x AWG16 cord, length 1m, without plug

H05VV-F 3G1.5 cord, length 1m, with Euro plug

H05VV-F 3G1.5, length 1m, cord without plug

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