# RS PRO
Every part matters

Instruction Manual
RS Pro 35 x 77mm ON/OFF Thermostat, NTC, Two Outputs
Stock Number: 124-1055, 124-1056

⚠ Please read this document carefully before using this product. The guarantee will be invalidated if the device is damaged by not following instructions detailed in the manual. The company shall not be responsible for any damage or losses however caused, which may be experienced as a result of the installation or use of this product.

- 35x77mm size.
- On-Off control.
- Relay output for cooling or heating control.
- Alarm Relay
- Single NTC probe input
- Range -60 to 150°C
- Ideal for industrial or commercial applications
- Probe failure setting, output status can be set to ON, OFF or pulse.
- Sensor input offset setting.
- Selectable heating or cooling control
- Selectable independent, deviation and band alarm types.
- 0000 or 000.0 units display.
- Temperature units °C or °F.
- CE marked.
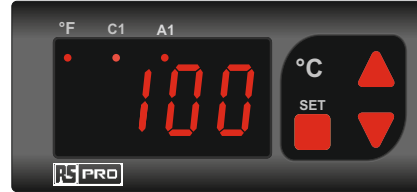
CE R⊗HS Compliant

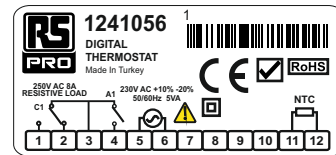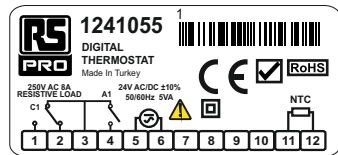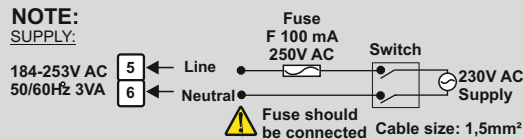| Part Code	Supply Voltage	Number Outputs
124-1055	24V ac/dc	2
124-1056	230V ac	2

CONNECTION DIAGRAM

⚠ **1241055 & 1241056** is intended for installation within control panels. Make sure that the device is used only for intended purpose. The shielding must be grounded on the instrument side. During an installation, all of the cables that are connected to the device must be free of electrical power. The device must be protected against inadmissible humidity, vibrations, severe soiling. Make sure that the operation temperature is not exceeded.

All input and output lines that are not connected to the supply network must be laid out as shielded and twisted cables. These cables should not be close to the power cables or components. The installation and electrical connections must be carried out by a qualified staff and must be according to the relevant locally applicable regulations.

1241055 DIGITAL THERMOSTAT Made In Turkey
250V AC 8A RESISTIVE LOAD C1 A1 24V AC/DC ±10% 50/60Hz 5VA NTC
1 2 3 4 5 6 7 8 9 10 11 12

1241056 DIGITAL THERMOSTAT Made In Turkey
250V AC 8A RESISTIVE LOAD C1 A1 230V AC +10% -20% 50/60Hz 5VA NTC
1 2 3 4 5 6 7 8 9 10 11 12

▢ **Equipment is protected throughout by DOUBLE INSULATION**

Holding screw 0.4-0.5Nm.

NOTE:
SUPPLY:
184-253V AC 50/60Hz 3VA [5] Line [6] Neutral

Fuse F 100 mA 250V AC
⚠ Fuse should be connected Cable size: 1,5mm²
Switch 230V AC Supply

Note:
1) Mains supply cords shall meet the requirements of IEC 60227 or IEC 60245.
2) In accordance with the safety regulations, the power supply switch shall bring the identification of the relevant instrument and it should be easily accessible by the operator.

TECHNICAL SPECIFICATIONS

INPUT

Input Type		Scale Range	Accuracy
NTC Sensor Resistance	EN 60751	-60.0...150.0 °C -76.0...302.0°F	± 1% (for full scale) ± 1 Digit

ENVIRONMENTAL CONDITIONS

Ambient/Storage temperature	0 ... +50 / °C -25... +70°C(without icing)
Relative Humidity	Max. humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C.
Protection Class	According to EN60529; Front panel: IP65 Rear panel : IP20
Height	Max. 2000m

⚠ Do not use the device in locations subject to corrosive and flammable gasses.

ELECTRICAL CHARACTERISTICS

Supply	230V AC +%10 -%20, 50/60Hz or 24V AC/DC ±%10
Power Consumption	Max. 5VA
Wiring	Power connector : 2.5mm² screw-terminal, Signal connector : 1,5mm² screw-terminal conenction.
Line Resistance	Max. 100ohm
Data Retention	EEPROM (Min. 10 years)
EMC	EN 61326-1: 2013 (Performance criterion B is satisfied for EN 61000-4-3)
Safety Requirements	EN 61010-1: 2010 (Pollution degree 2, overvoltage category II)
Indicator	4 digits, 12.5mm, 7 segment red LED

OUTPUT

C1 Output	250V AC, 8A (for resistive load), NO and NC control output.
A1 Output	250V AC, 8A (for resistive load), NO control output.
Life Expectancy for Relay	30.000.000 Switching for no-load operation; 300.000 switching for 8A resistive load at 250VAC.

CONTROL

Control Type	Single-setpoint and alarm control.
Control Algorithm	On-Off Control.
A/D Converter	12 bit resolution, 100ms sampling time.
Hysteresis	Adjustable between 0.1 and 20.0°C/F.

HOUSING

Housing Type	Suitable for flush-panel mounting according to DIN 43 700.
Dimensions	H35xW77xD61mm
Weight	Approx. 215g (After packing)
Enclosure Materials	Self extinguishing plastics

⚠ While cleaning the device, solvents (thinner, gasoline, acid etc.) or corrosive materials must not be used.

Dimensions

77mm
35mm

For removing mounting clamps:
- Push the flush-mounting clamp in direction **1** as shown in the figure below.Then,pull out the clamp in direction **2** .

Connection Cable
Flush mounting clamp
Panel
Rubber Packing

Depth 61mm   5mm
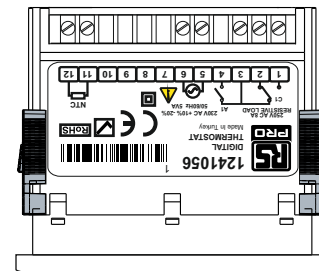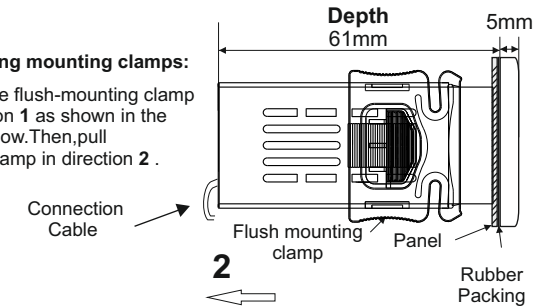
Flush mounting clamp

Panel cut-out 71,5mm
29,5mm

Note:1) Panel thickness should be maximum 7mm.
2) If there is not 60mm free space at the back side of the device,it would be difficult to remove it from the panel.

FOR MORE INFORMATION VISIT THIS SITE
http://www.rs-components.com/index.html

1241055/56-E-01-161006

Running Mode

Measured temperature

105

SET

C $1.5E.$

Default value 100 **C1 Set value** 100 → 101 → 102 → 101

If no key is pressed within 3 seconds, Running Mode is entered.

SET

A $1.5E.$ 110 **A1 Set value** 110 → 111 → 112 → 111

If no key is pressed within 3 seconds, Running Mode is entered.

When this button is pressed $C.5EE$ message is appeared and temperature setpoint adjustment mode is entered.

SET

If ▲ key is pressed while holding down SET key, then Programming Menu is entered.

Temperature setpoint value is adjusted with ▲ ▼ buttons then, when one of these buttons are pressed for the first time, blinking setpoint value appears.

Entering Running Mode in Programming Mode :

In Programmin Mode, if no keys are pressed for 20 seconds information is saved automatically and Running Mode is entered. Alternatively, if ▲ and ▼ keys are pressed together, Programming Menu is entered. In the Programming Menu, if ▲ key is pressed while holding down SET key, then Running Mode is entered.

SET ▲

Programming Menu

C $1.Cn.$ SET A $1.Cn.$ SET $ConF.$ SET $5ECu.$ SET

Default Value
-60 C $1.L.L.$ = **Control set point lower limit for C1 output.** It can be adjusted between -60.0 and C $1.H.L.$ parameter value.

150 C $1.H.L.$ = **Control set point upper limit for C1 output.** It can be adjusted between 150.0 and C $1.L.L.$ parameter value.

2 C $1.H.Y$ = **Output hysteresis value.** It can be adjusted between 0.1 and 20.0 °C.
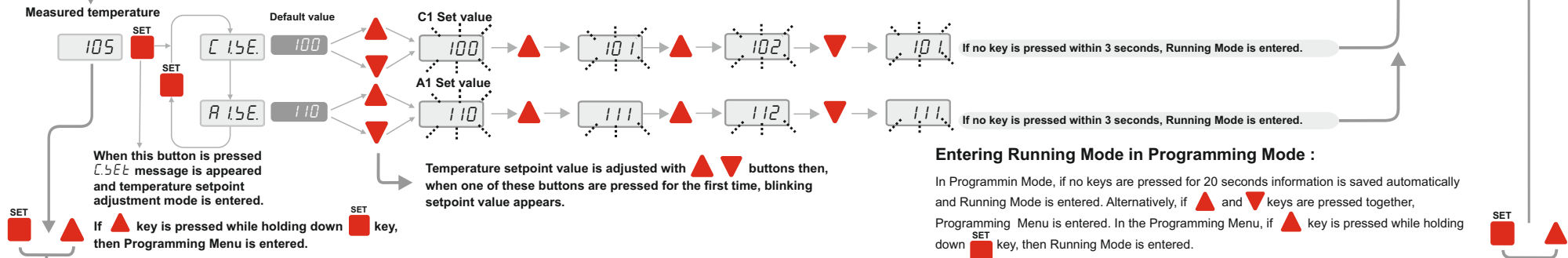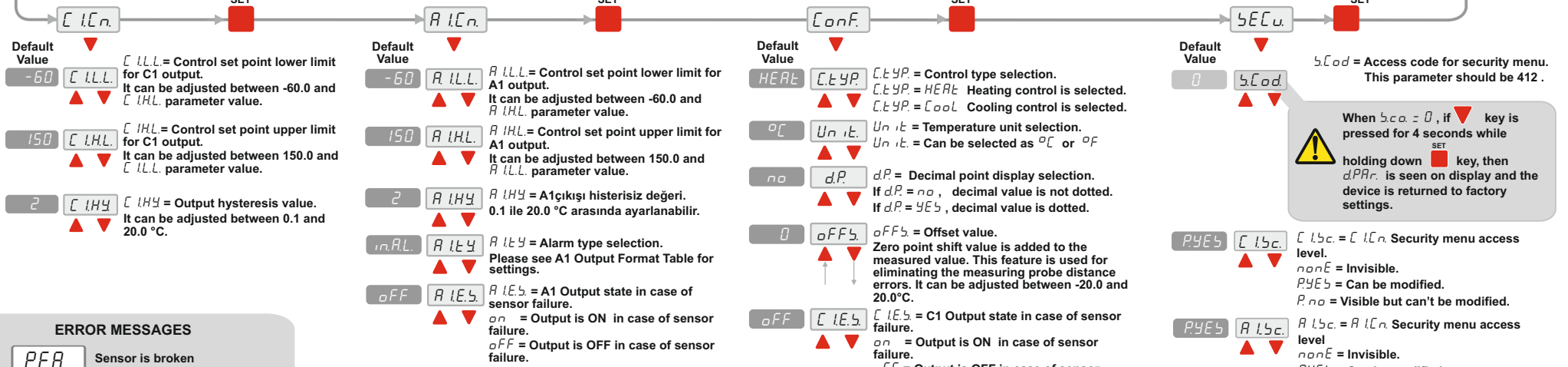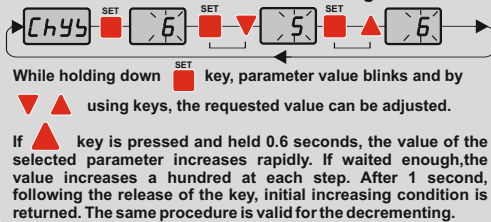
Default Value
-60 A $1.L.L.$ = **Control set point lower limit for A1 output.** It can be adjusted between -60.0 and A $1.H.L.$ parameter value.

150 A $1.H.L.$ = **Control set point upper limit for A1 output.** It can be adjusted between 150.0 and A $1.L.L.$ parameter value.

2 A $1.H.Y$ = A1çıkışı histerisiz değeri. 0.1 ile 20.0 °C arasında ayarlanabilir.

$in.A.L.$ A $1.EY$ = **Alarm type selection.** Please see A1 Output Format Table for settings.

oFF A $1.E.5.$ = **A1 Output state in case of sensor failure.** on = Output is ON in case of sensor failure. oFF = Output is OFF in case of sensor failure.

Default Value
$HEAE$ $C.EYP.$ = **Control type selection.** $C.EYP.$ = $HEAE$ Heating control is selected. $C.EYP.$ = $CooL$ Cooling control is selected.

$°C$ Un $iE.$ = **Temperature unit selection.** Un $iE.$ = Can be selected as $°C$ or $°F$

no $d.P.$ = **Decimal point display selection.** If $d.P.$ = no , decimal value is not dotted. If $d.P.$ = $YE5$, decimal value is dotted.

0 $oFF5.$ = **Offset value.** Zero point shift value is added to the measured value. This feature is used for eliminating the measuring probe distance errors. It can be adjusted between -20.0 and 20.0°C.

oFF C $1.E.5.$ = **C1 Output state in case of sensor failure.** on = Output is ON in case of sensor failure. oFF = Output is OFF in case of sensor failure.

Default Value
0 $5.Cod.$ = **Access code for security menu.** This parameter should be 412 .

⚠️ When $5.co.$ = 0 , if ▲ key is pressed for 4 seconds while holding down SET key, then $d.PAr.$ is seen on display and the device is returned to factory settings.

$P.YE5$ C $1.5c.$ = C $1.Cn.$ Security menu access level. $nonE$ = Invisible. $P.YE5$ = Can be modified. $P.no$ = Visible but can't be modified.

$P.YE5$ A $1.5c.$ = A $1.Cn.$ Security menu access level. $nonE$ = Invisible. $P.YE5$ = Can be modified. $P.no$ = Visible but can't be modified.

$P.YE5$ $Co.5c.$ = $ConF.$ Configuration menu access level. $nonE$ = Invisible. $P.YE5$ = Can be modified. $P.no$ = Visible but can't be modified.

$P.YE5$ $C.5.5c.$ = C1 set value security access level. $P.YE5$ = Can be modified. $P.no$ = Visible but can't be modified.

$P.YE5$ $A.5.5c.$ = Alarm set value security access level. $P.YE5$ = Can be modified. $P.no$ = Visible but can't be modified.
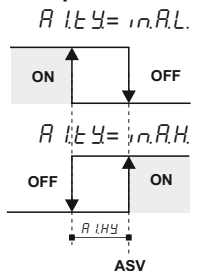
ERROR MESSAGES

PFA Sensor is broken

$----$ Temperature value is higher than the scale

$----$ Temperature value is lower than the scale
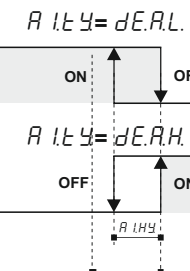
Modification Of Parameter Diagram

$ChY5$ SET 6 SET ▼ 5 SET ▲ 6

While holding down SET key, parameter value blinks and by using ▼ ▲ keys, the requested value can be adjusted.

If ▲ key is pressed and held 0.6 seconds, the value of the selected parameter increases rapidly. If waited enough,the value increases a hundred at each step. After 1 second, following the release of the key, initial increasing condition is returned. The same procedure is valid for the decrementing.

A1 OUTPUT FORMATS

Independent Alarm
A $1.EY$= $in.A.L.$

ON | OFF

A $1.EY$= $in.A.H.$

OFF | ON

A $1.HY$ ASV

(ASV Min. = Beginning of Scale ASV Max. = End of Scale)

SV = C1 output setpoint

Deviation Alarm
A $1.EY$= $dE.A.L.$

ON | OFF

A $1.EY$= $dE.A.H.$

OFF | ON

A $1.HY$

-300   SV   SV+ASV   +300

(ASV Min. =-300, ASV Max. = +300)

ASV = A1 output setpoint

Band Alarm
A $1.EY$= b $i.A.L.$

OFF | ON

A $1.EY$= b $i.A.H.$

ON | OFF

A $1.HY$ A $1.HY$

300   SV-ASV   SV   SV+ASV   300

SV =C1 output setpoint   ASV = A1 output setpoint
(ASV Min. = 0, ASV Max. = +300)

FOR MORE INFORMATION VISIT THIS SITE