LUXOR®

5 / ELECTRICAL AND ELECTRONIC ACCESSORIES

THERMOELECTRIC HEADS

TECHNICAL DATA

Thermoelectric heads function by exploiting the expansion of a thermosensitive element, which is heated up through an electrical resistor when the valve needs to be opened.

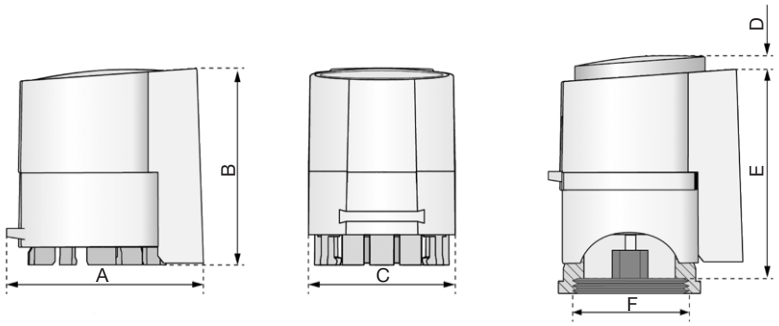
This allows for a slow open/close cycle and protects the system against water hammer.

Thermoelectric heads can only be connected to on/off thermostats or chronothermostats. Do not use 3-point or modulating thermostats or chronothermostats. TE thermoelectric heads are of the normally closed type, so they only open when an opening input (voltage) comes from the control sensor (ex. thermostat).

This allow the head to work only when there is a need for hot or cold water to flow through the heating body, and to remain idle for the rest of the time.

The new thermoelectric heads can be installed in any position, even upside down, since they are secured against leakage from the thermostatic screws.

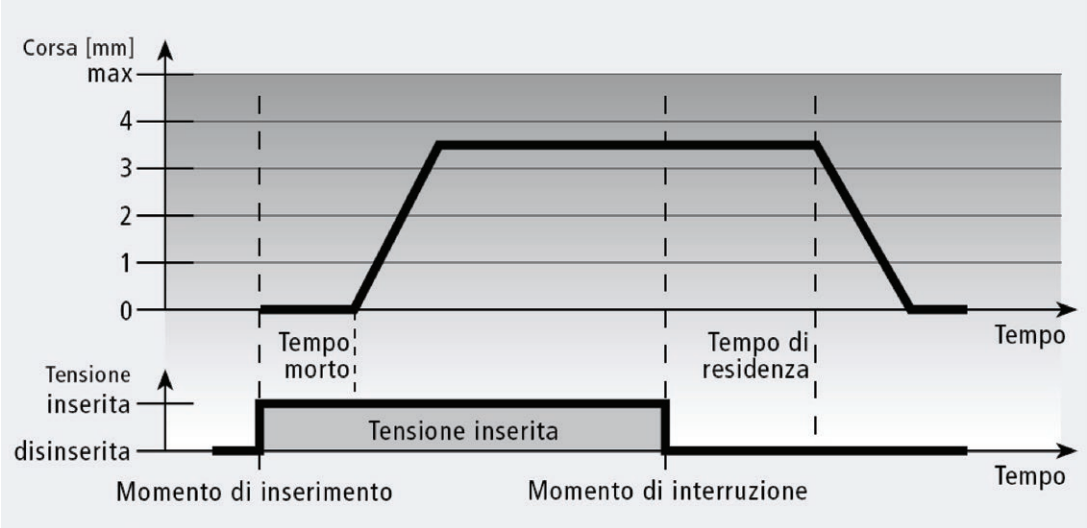
	TE 3010	TE 3011	TE 3012	TE 3013
supply voltage	230 V AC, +10%...-10%, 50/60 Hz	24 V AC/DC, +20%...-10%	230 V AC, +10%...-10%, 50/60 Hz	24 V AC/DC, +20%...-10%
max input current	<550 mA per max 100 ms	<300 mA per max 2 min	<550 mA per max 100 ms	<300 mA per max 2 min
operating power	1 W	1 W	1 W	1 W
stroke	3.5 mm	3.5 mm	3.5 mm	3.5 mm
actuating force	90 N +10%	90 N +10%	90 N +10%	90 N +10%
micro-switch voltage	-	-	230 V AC: resistive load, 5 A, inductive load 1 A	24 V AC: resistive load 3 A, inductive load 1 A
micro-switch trigger point	-	-	Ca. 2 mm	Ca. 2 mm
liquid temperature	0÷100 °C	0÷100 °C	0÷100 °C	0÷100 °C
storage temperature	-25÷60 °C	-25÷60 °C	-25÷60 °C	-25÷60 °C
room temperature	0÷60 °C	0÷60 °C	0÷60 °C	0÷60 °C
protection degree	IP 54	IP 54	IP 54	IP 54
protection class	II	III	II	III
CE conformity	EN 60730	EN 60730	EN 60730	EN 60730
housing material	Polyamide			
housing colour	Light grey RAL 7035			
connecting cable	2x0.75 mm² PVC	2x0.75 mm² PVC	4x0.75 mm² PVC	4x0.75 mm² PVC
cable colour	Light grey RAL 7035			
cable lenght	1 m	1 m	1 m	1 m
weight	100 g	100 g	Ca. 150 g	Ca. 150 g
overvoltage resistance according to EN 60730-1	2.5 kV	1 kV	2.5 kV	1 kV



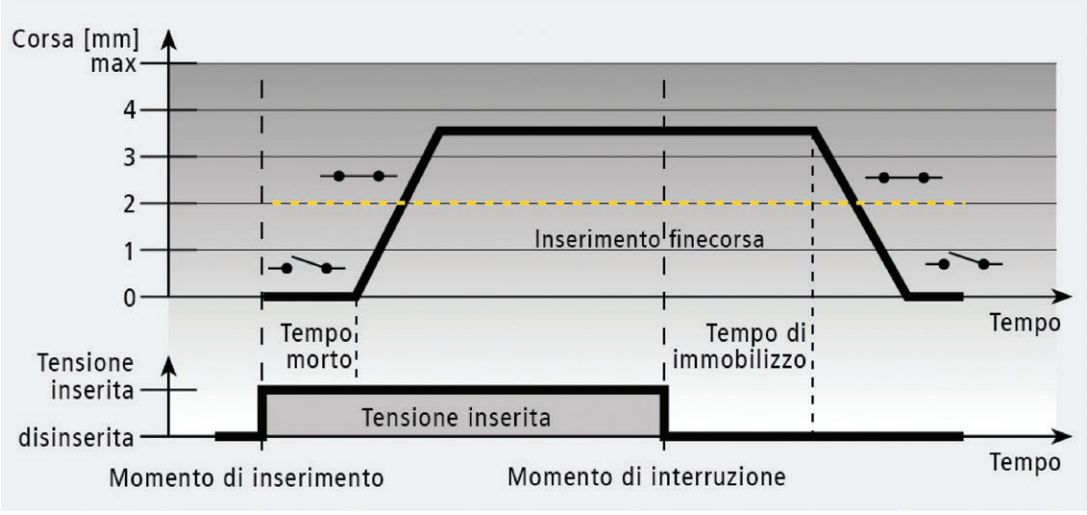
CODE	SIZE	A	B	C	D	E	F	G	H	L
69011051	M30x1,5	49	47,5	36	7	51	M30x1,5	-	-	-
69011052		49	47,5	36	7	51		-	-	-
69011056		59	50	36	7	53,5		-	-	-
69011057		59	50	36	7	53,5		-	-	-

CHARACTERISTIC CURVES

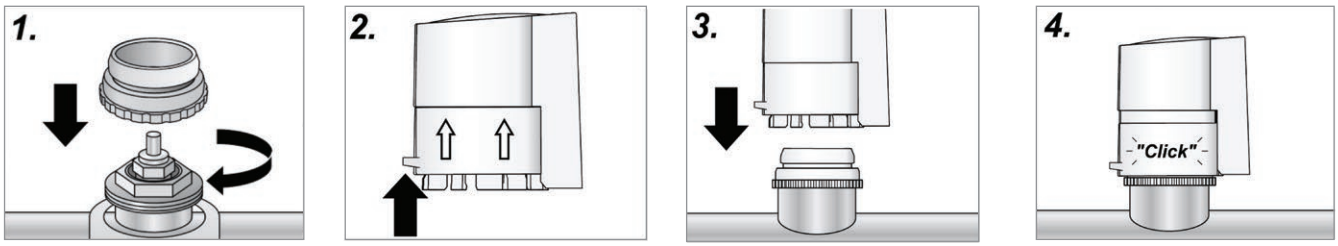
TE 3010 - TE 3011



TE 3012 - TE 3013

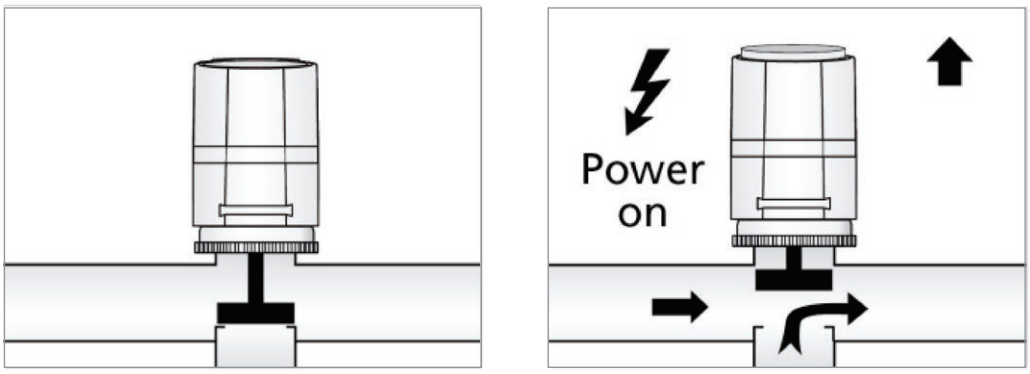


INSTALLATION INSTRUCTIONS: ASSEMBLY WITH VALVE ADAPTER



INSTALLATION INSTRUCTIONS FOR THERMOELECTRIC HEADS

- Screw the plastic adapter to the thermostatic screw (fig. 1);
- Push upwards the stop ring of the thermoelectric head (fig. 2);
- Place the head perpendicular to the valve (fig. 3);
- With a slight hand pressure, plug the head to the adapter: simply push until you hear a “click” (fig. 4).

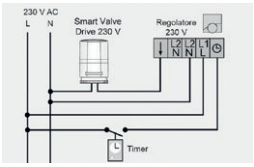


FUNCTION INDICATOR

The function indicator (round light bluee diskette) allows to easily see (or feel, if in the dark) if the valve is open or closed. The indicator pops up when the valve opens.

START-UP OF THERMOELECTRIC HEADS

All thermoelectric heads are supplied in a locked, partially opened position (ca. 1/4). In order to unlock and start up, the head must be fed power for at least 6 minutes (for example from the thermostat in heating position). During this time, the head opens completely and breaks the block. After that, the head is ready to function.

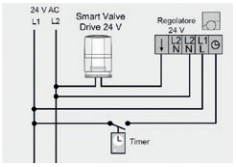


THERMOELECTRIC HEAD ART. TE 3010 COD. 69011051

Thermoelectric head 230V, normally closed, without limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral

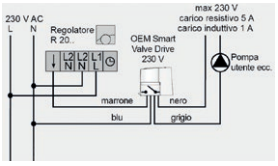


THERMOELECTRIC HEAD ART. TE 3011 COD. 69011052

Thermoelectric head 24V, normally closed, without limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral

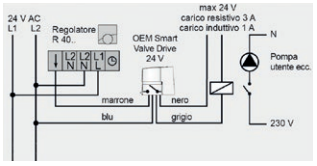


THERMOELECTRIC HEAD ART. TE 3012 COD. 69011056

Thermoelectric head 230V, normally closed, with limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral
black and grey	limit switch exit cable

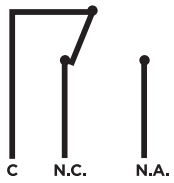


THERMOELECTRIC HEAD ART. TE 3013 COD. 69011057

Thermoelectric head 24V, normally closed, with limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral
black and grey	limit switch exit cable



CONNECTIONS

The thermostat and/or chrono-thermostat output to which the thermoelectric heads must be connected are generally as shown in the following wiring diagrams:

Where:

C: Connection to power supply

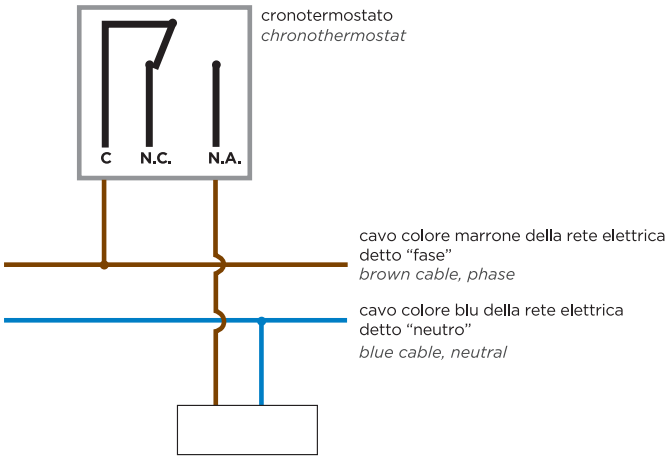
N.C.: output normally closed for cable from the thermoelectric head (do not use since our thermoelectric head is normally closed).

N.A.: output normally open for the connection cable coming from the thermoelectric head (the brown electric cable coming from the thermostatic head must be connected to this type of ouput).

APPLICATION EXAMPLE WITH CONNECTIONS:

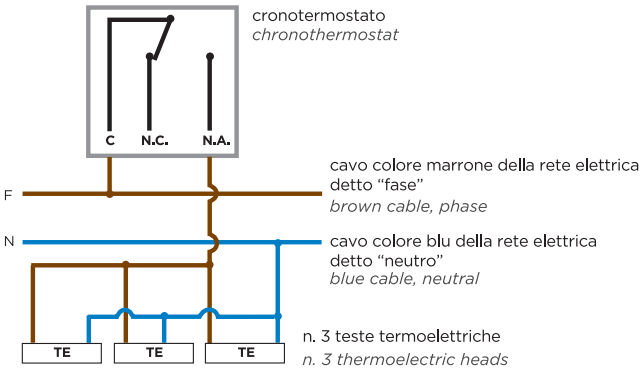
- 1 chronothermostat
- 1 thermoelectric head

Each thermostat or chronothermostat can normally fit up to 10 thermoelectric heads in parallel. To know exactly the number of heads which can be connected, divide the thermostat output contact value N.A. by the head starting power.



APPLICATION EXAMPLE WITH CONNECTIONS:

- 1 chronothermostat
- 3 thermoelectric heads with parallel connection



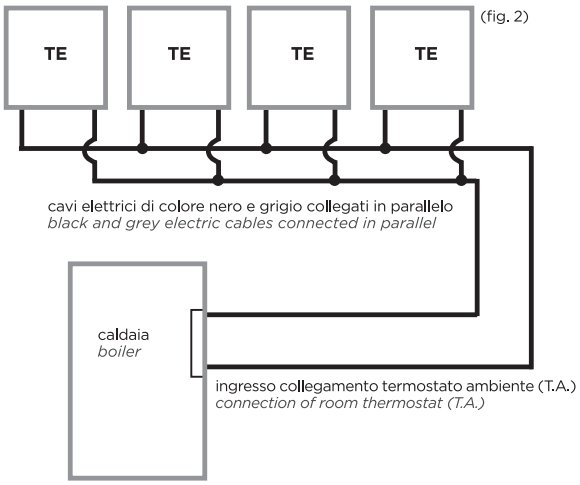
(fig. 1)

THERMOELECTRIC HEADS WITH AUXILIARY OR LIMIT SWITCH CONTACT

The limit switch contact is used to start the heating system pump when there is at least one thermoelectric head functioning, hence the pump cannot function when all the thermostatic valves are closed.

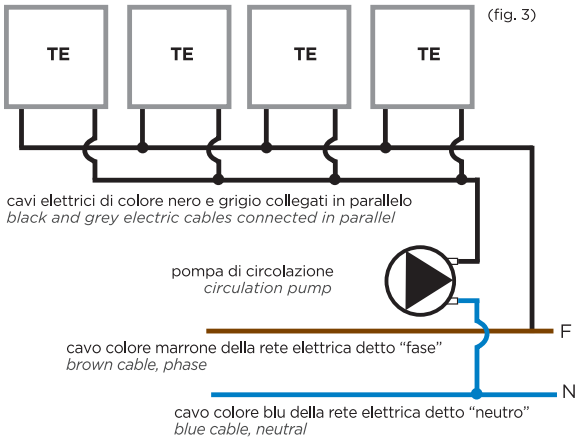
This device, stopping the pump when the system is not working, reduces wear on the pump and noise caused by the cavitation.

Teste termoelettriche con contatto di fine corsa art. TE 3012
Thermostatic head with limit switch art. TE 3012



(fig. 2)

Teste termoelettriche con contatto di fine corsa art. TE 3012
Thermostatic head with limit switch art. TE 3012



(fig. 3)

THERMOELECTRIC HEADS

TE 3010

Thermoelectric head 230 V (normally closed, opens with voltage)
- supply voltage 230 VAC
- supply cable 2 wires x 0,75 mm2.

Length 1000 mm.

CODE	SIZE			
69011051	M30x1,5	100	1	100

TE 3011

Thermoelectric head 24 V (normally closed, opens with voltage)
- supply voltage 24 VAC
- supply cable 2 wires x 0,75 mm2.

Length 1000 mm.

CODE	SIZE			
69011052	M30x1,5	100	1	100

TE 3012

Thermoelectric head 230 V with limit switch (normally closed-opens with voltage)
- supply voltage 230 VAC
- supply cable 4 wires x 0,75 mm2.

Length 1000 mm.

CODE	SIZE			
69011056	M30x1,5	150	1	100

TE 3013

Thermoelectric head 24 V with limit switch (normally closed-opens with voltage)
- supply voltage 24 VAC
- supply cable 4 wires x 0,75 mm2.

Length 1000 mm.

CODE	SIZE			
69011057	M30x1,5	150	1	100

VA 3090S

Replacement adapter for thermoelectric heads TE series.

CODE	SIZE			
69015024	M30x1,5	8	-	-

THERMOELECTRIC HEADS

TECHNICAL DATA

Thermoelectric heads function by exploiting the expansion of a thermosensitive element, which is heated up through an electrical resistor when the valve needs to be opened.

This allows for a slow open/close cycle and protects the system against water hammer.

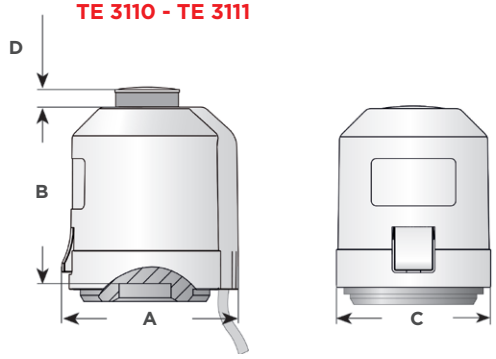
Thermoelectric heads can only be connected to on/off thermostats or chronothermostats. Do not use 3-point or modulating thermostats or chronothermostats. TE thermoelectric heads are of the normally closed type, so they only open when an opening input (voltage) comes from the control sensor (ex. thermostat).

This allow the head to work only when there is a need for hot or cold water to flow through the heating body, and to remain idle for the rest of the time.

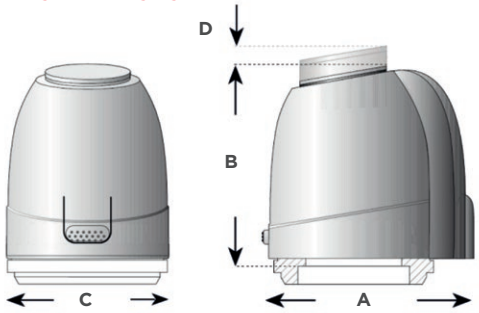
The new thermoelectric heads can be installed in any position, even upside down, since they are secured against leakage from the thermostatic screws.

	TE 3110	TE 3111	TE 3112	TE 3113
supply voltage	230 V AC, +10%...-10%, 50/60 Hz	24 V AC/DC -10%...+20%, 0-60 Hz	230 V AC, +10%...-10%, 50/60 Hz	24 V AC/DC, +20%...-10%, 50/60 Hz
max input current	300 mA per max 200 ms	250 mA per max 2 min	300 mA per max 200 ms	250 mA per max 2 min
operating power	2 W	2 W	1,8 W	1,8 W
stroke	4 mm	4 mm	4 mm	4 mm
actuating force	100 N +10%	100 N +10%	90 N ±5%	90 N ±5%
micro-switch voltage	-	-	230 V AC: resistive load, 5 A, inductive load 1 A	24 V AC: ohmic load 3 A, inductive load 1 A
micro-switch trigger point	-	-	Ca. 3 mm	Ca. 3 mm
liquid temperature	0÷100 °C	0÷100 °C	0÷100 °C	0÷100 °C
storage temperature	-25÷60 °C	-25÷60 °C	-25÷60 °C	-25÷60 °C
room temperature	0÷60 °C	0÷60 °C	0÷60 °C	0÷60 °C
protection degree	IP 54	IP 54	IP 54	IP 54
protection class	II	III	II	III
CE conformity	EN 60730	EN 60730	EN 60730	EN 60730
housing material	Polyamide			
housing colour	Grey			
connecting cable	2x0.75 mm² PVC	2x0.75 mm² PVC	4x0.75 mm² PVC	4x0.75 mm² PVC
cable colour	Grey			
cable lenght	1 m	1 m	1 m	1 m
weight	100 g	100 g	Ca. 155 g	Ca. 155 g
overvoltage resistance according to EN 60730-1	2.5 kV	1 kV	2.5 kV	1 kV

TE 3110 - TE 3111



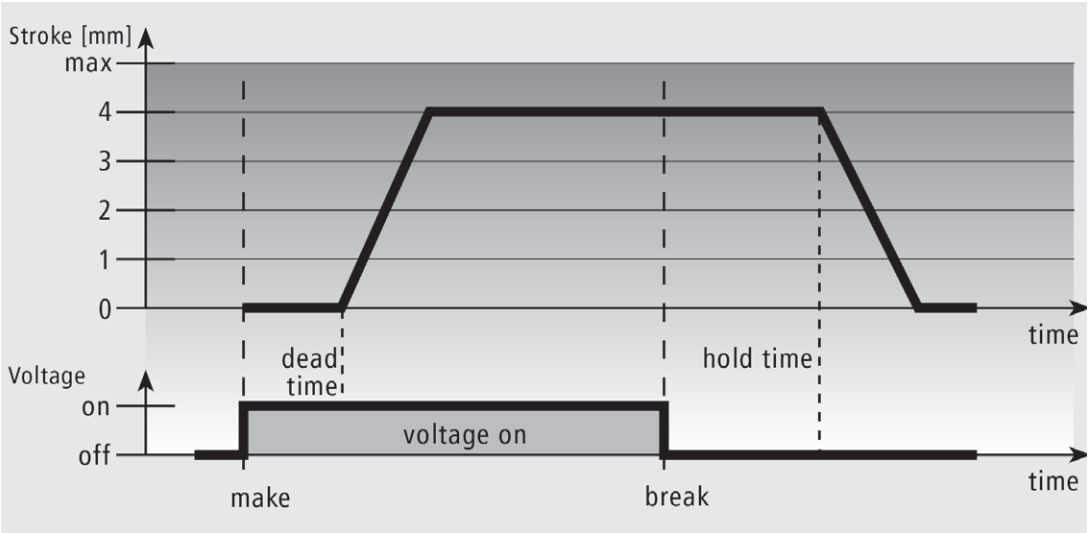
TE 3112 - TE 3113



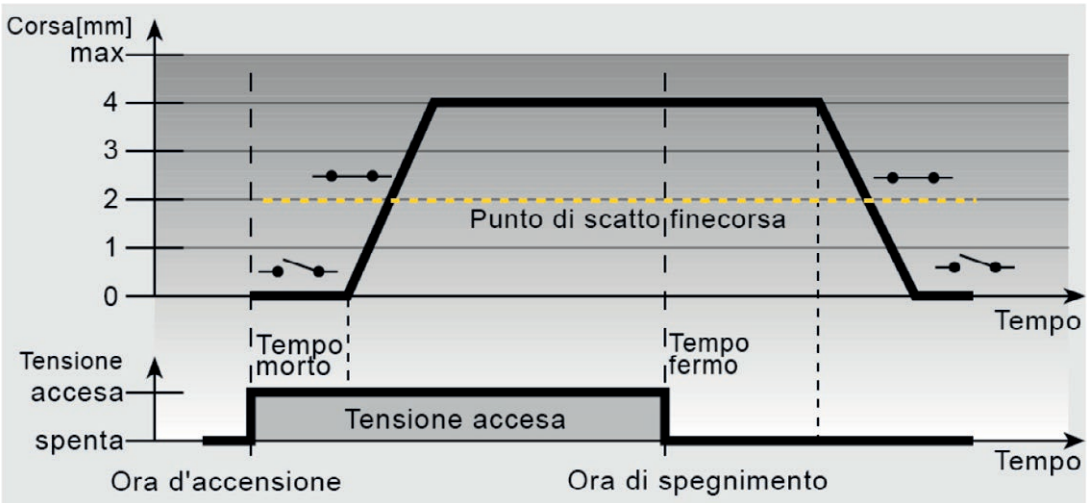
CODE	ARTICLE	SIZE	A	B	C	D	E	F	G	H
69011021	TE 3110	M30x1,5	50	54	44	5,5	-	M30x1,5	-	-
69011022	TE 3111		50	54	44	5,5	-		-	-
69011026	TE 3112		56	54	44	4	-		-	-
69011027	TE 3113		56	54	44	4	-		-	-

CHARACTERISTIC CURVES

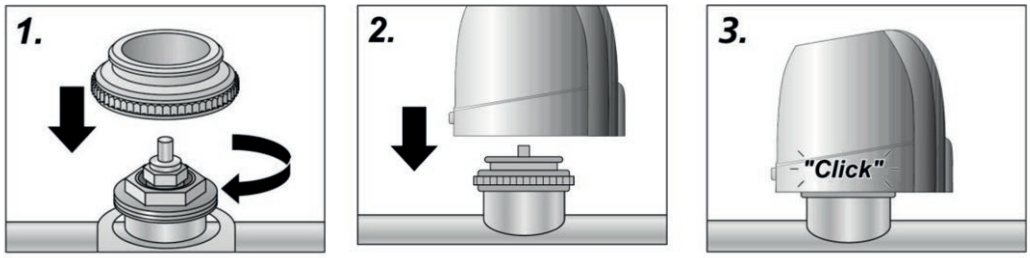
TE 3110 - TE 3111



TE 3112 - TE 3113

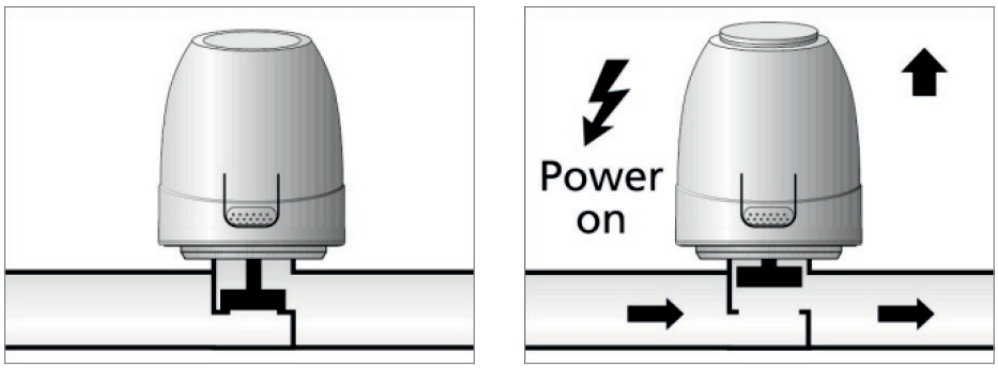


INSTALLATION INSTRUCTIONS: ASSEMBLY WITH VALVE ADAPTER



INSTALLATION INSTRUCTIONS FOR THERMOELECTRIC HEADS

- Screw the valve adapter manually onto the valve. (fig. 1);
- Position the actuator manually in vertical position to the valve adapter. (fig. 2);
- Simply latch the actuator to the valve adapter manually by applying vertical pressure; a clicking sound can be heard. (fig. 3).

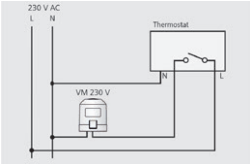


FUNCTION INDICATOR

The function indicator (round light blue or red diskette) allows to easily see (or feel, if in the dark) if the valve is open or closed. The indicator pops up when the valve opens.

START-UP OF THERMOELECTRIC HEADS

All thermoelectric heads are supplied in a locked, partially opened position (ca. 1/4). In order to unlock and start up, the head must be fed power for at least 6 minutes (for example from the thermostat in heating position). During this time, the head opens completely and breaks the block. After that, the head is ready to function.

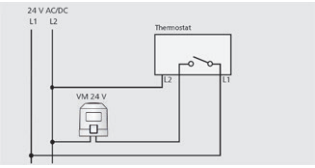


THERMOELECTRIC HEAD ART. TE 3110 COD. 69011021

Thermoelectric head 230V, normally closed, without limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral

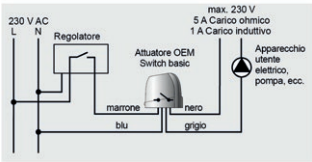


THERMOELECTRIC HEAD ART. TE 3111 COD. 69011022

Thermoelectric head 24V, normally closed, without limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral

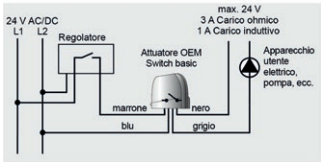


THERMOELECTRIC HEAD ART. TE 3112 COD. 69011026

Thermoelectric head 230V, normally closed, with limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral
black and grey	limit switch exit cable

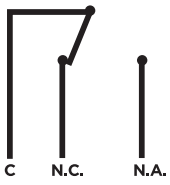


THERMOELECTRIC HEAD ART. TE 3113 COD. 69011027

Thermoelectric head 24V, normally closed, with limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral
black and grey	limit switch exit cable



CONNECTIONS

The thermostat and/or chrono-thermostat output to which the thermoelectric heads must be connected are generally as shown in the following wiring diagrams:

Where:

C: Connection to power supply

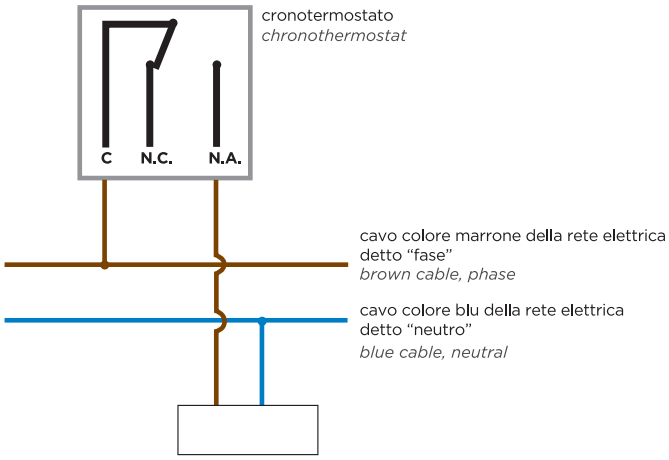
N.C.: output normally closed for cable from the thermoelectric head (do not use since our thermoelectric head is normally closed).

N.A.: output normally open for the connection cable coming from the thermoelectric head (the brown electric cable coming from the thermostatic head must be connected to this type of ouput).

APPLICATION EXAMPLE WITH CONNECTIONS:

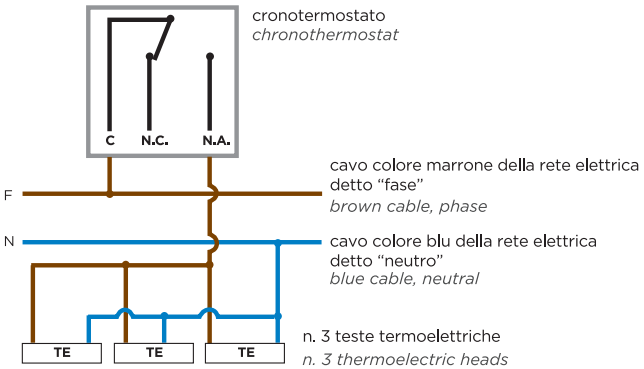
- 1 chronothermostat
- 1 thermoelectric head

Each thermostat or chronothermostat can normally fit up to 10 thermoelectric heads in parallel. To know exactly the number of heads which can be connected, divide the thermostat output contact value N.A. by the head starting power.



APPLICATION EXAMPLE WITH CONNECTIONS:

- 1 chronothermostat
- 3 thermoelectric heads with parallel connection



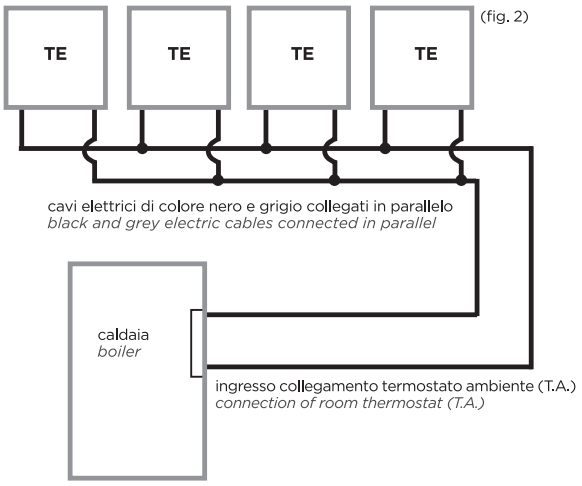
(fig. 1)

THERMOELECTRIC HEADS WITH AUXILIARY OR LIMIT SWITCH CONTACT

The limit switch contact is used to start the heating system pump when there is at least one thermoelectric head functioning, hence the pump cannot function when all the thermostatic valves are closed.

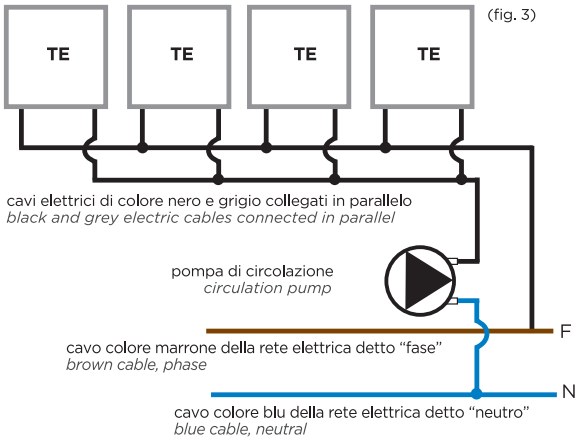
This device, stopping the pump when the system is not working, reduces wear on the pump and noise caused by the cavitation.

Teste termoelettriche con contatto di fine corsa art. TE 3112
Thermostatic head with limit switch art. TE 3112



(fig. 2)

Teste termoelettriche con contatto di fine corsa art. TE 3112
Thermostatic head with limit switch art. TE 3112



(fig. 3)

THERMOELECTRIC HEADS

TE 3110

Thermoelectric head 230 V (normally closed, opens with voltage)
- supply voltage 230 VAC
- supply cable 2 wires x 0,75 mm2.

Length 1000 mm.

CODE	SIZE	g		
69011021	M30x1,5	112	1	100

TE 3111

Thermoelectric head 24 V (normally closed, opens with voltage)
- supply voltage 24 VAC
- supply cable 2 wires x 0,75 mm2.

Length 1000 mm.

CODE	SIZE	g		
69011022	M30x1,5	114	1	100

TE 3112

Thermoelectric head 230 V with limit switch (normally closed-opens with voltage)
- supply voltage 230 VAC
- supply cable 4 wires x 0,75 mm2.

Length 1000 mm.

CODE	SIZE	g		
69011026	M30x1,5	170	1	100

TE 3113

Thermoelectric head 24 V with limit switch (normally closed-opens with voltage)
- supply voltage 24 VAC
- supply cable 4 wires x 0,75 mm2.

Length 1000 mm.

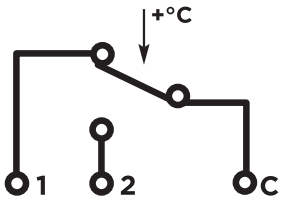
CODE	SIZE	g		
69011027	M30x1,5	174	1	100

VA 3090

Replacement adapter for thermoelectric heads TE series.

CODE	SIZE	g		
69015023	M30x1,5	8	-	-

CONTACT OR IMMERSION SAFETY THERMOSTATS



Collegamento elettrico
Electrical connection

TECHNICAL DATA

Contact Thermostat

Temperature regulation range: 0°C ÷ 90°C
Temperature gradient: 1°C/min
Minimum temperature tolerance ±4 °C
Maximum temperature tolerance ±6 °C
Differential temperature: 8 ±12 °C
Nominal voltage on contacts:
- 16 (4)A 250 V~
- 6 (1)A 400 V~

Nominal impulsive voltage 4kV
Temperature limit of the control head: 85 °C
Protection grade: IP 40
Insulation class: I

Immersion thermostat

Temperature regulation range: 10°C ÷ 90°C
Temperature gradient: 1°C/min
Differential temperature: 6 ± 1°C
Nominal voltage on contacts:
- 15 (6)A / 250 V~

Temperature limit of the control head: 85 °C
Protection grade: IP 40
Insulation class: I

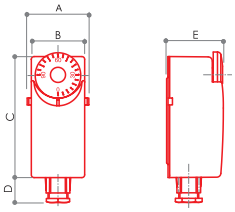
CONSTRUCTIVE FEATURES

The purpose of safety thermostats is to maintain the water temperature in heating systems within set limits, and especially well under the critical point. Safety thermostats TS 3030, TS 3035, TS 3032, TS 3037 and TS 3050 are either contact or immersion thermostats.

These thermostats may function both as normally open and normally closed. The type of functioning is to be chosen during the electrical connection phase.

Electrical connection:
- Terminal C: phase
- Terminal 1: opens the circuit when the temperature increases
- Terminal 2: closes the circuit when the temperature increases

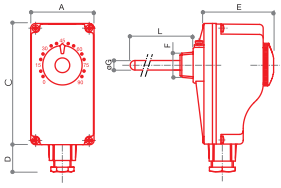
Generally, in heating systems the electric appliance is connected to terminals C and 1 of the thermostat.



TS 3030

Contact safety thermostat, to be set as normally closed or open during installation.

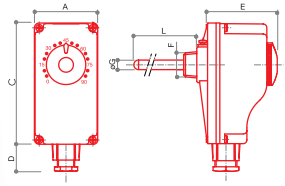
CODE	SIZE	A	B	C	D	E	F	G	H	L	g		
69011230	-	45	38	88	18	42	-	-	-	-	132	1	10



TS 3037

Safety thermostat with immersion probe, to be set as normally closed or open during installation.

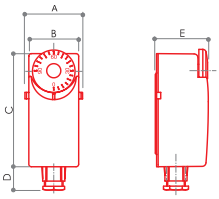
CODE	SIZE	A	B	C	D	E	F	G	H	L	g		
69011237	-	40	-	70	10	43	16	6,5	-	105	128	1	8



TS 3035

Safety thermostat with immersion probe, to be set as normally closed or open during installation.

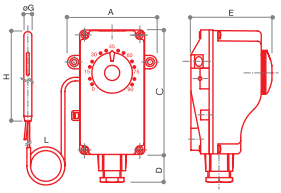
CODE	SIZE	A	B	C	D	E	F	G	H	L	g		
69011235	G 1/2	40	-	70	10	43	16	6,5	-	105	128	1	8



TS 3032

Contact safety thermostat pre-wired, normally closed.

CODE	SIZE	A	B	C	D	E	F	G	H	L	g		
69011232	-	45	38	88	18	42	-	-	-	-	250	1	8



TS 3050

Safety thermostat with immersion probe, to be set as normally closed or open during installation.

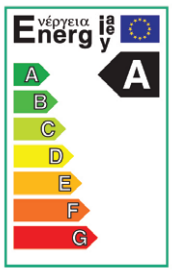
CODE	SIZE	A	B	C	D	E	F	G	H	L	g		
69011250	-	40	-	70	10	43	-	6,5	73	1000	132	1	8

PS 541

Yellow housing for probe TS 3050 and TS 3037.

CODE	SIZE	A	B	C	D	E	F	G	H	L	g		
9446952	G 1/2	100	10	22	-	-	7	12	-	108	84	20	160

CIRCULATION PUMP

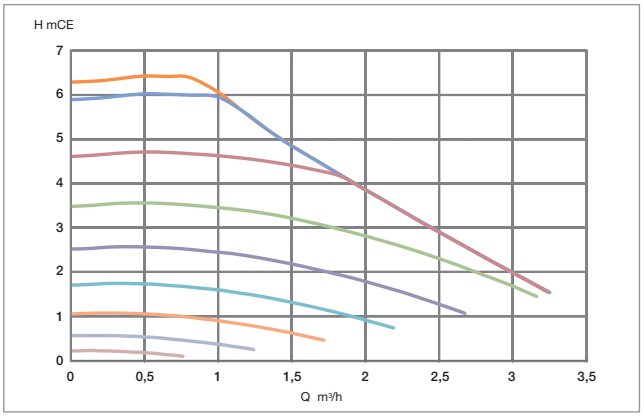


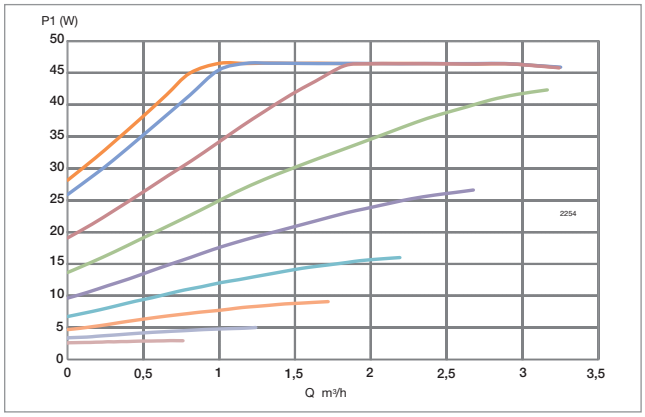
TECHNICAL DATA

	PCE 755	PCE 756	PCE 757
energy class	A	A	A
EEI	< 0,23	< 0,23	< 0,23
liquid temperature	2 ÷ 95 °C	-10 ÷ 95 °C	-10 ÷ 90 °C
room temperature	0 ÷ 40 °C	0 ÷ 40 °C	0 ÷ 40 °C
max pressure	6 bar	6 bar	6 bar
max glycol quantity	20 %	20 %	20 %
connection threading	ISO 228 G 1"1/2	ISO 228 G 1"1/2	ISO 228 G 1"1/2
voltage supply	230 V (-15%; 10%)	230 V (-15%; 10%)	230 V (-15%; 10%)
frequency	50/60 HZ	50/60 HZ	50/60 HZ
protection	IP X4OD	IP 44	IP 44
insulation class	F	H	H

CHARACTERISTIC CURVES

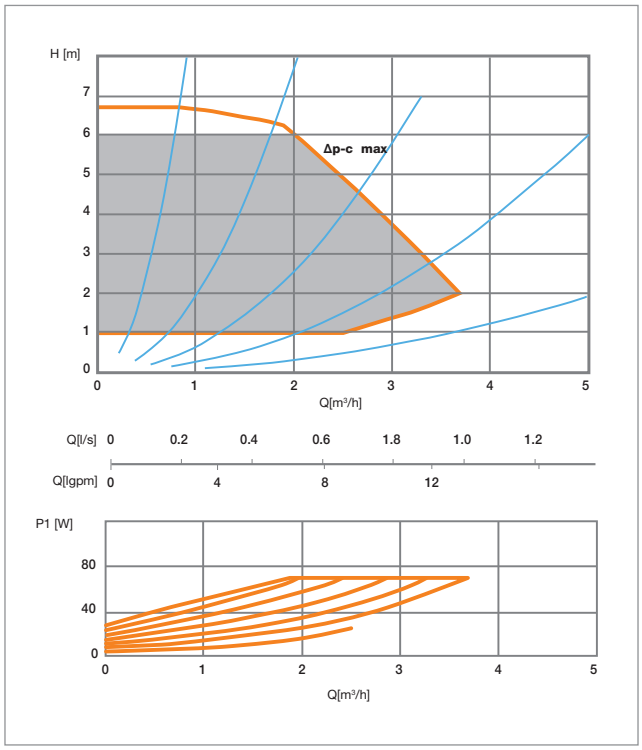
PCE 755



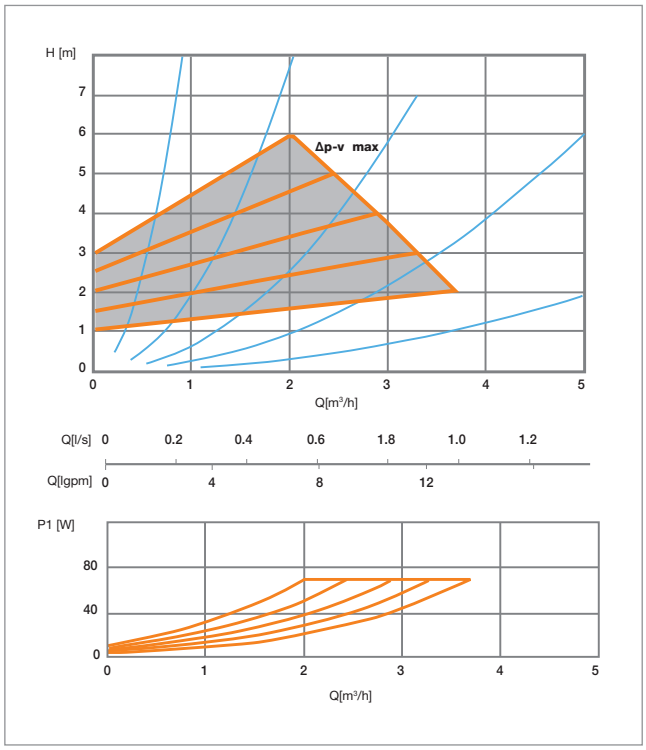


PCE 756

ΔP constant

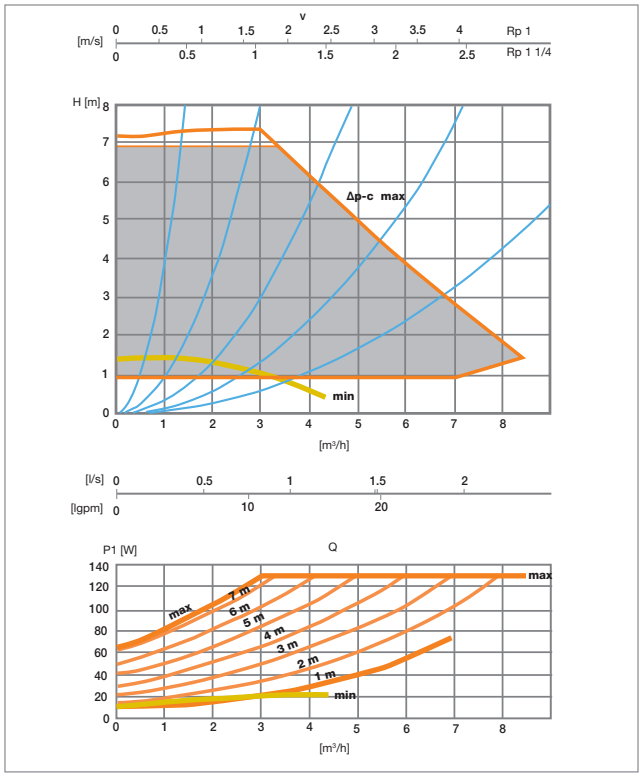


ΔP variable

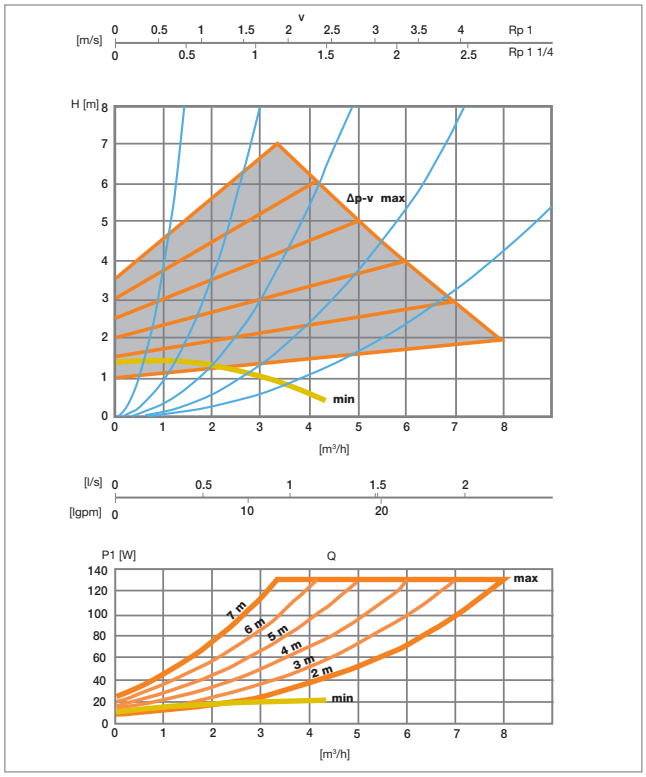


PCE 757

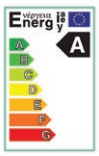
ΔP constant



ΔP variable



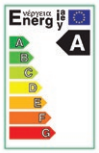
CIRCULATION PUMP



PCE 755

Electronic circulation pump with synchronous motor 25/60, interaxis 130 mm.

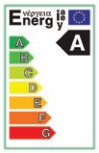
CODE	SIZE			
69011560	25/60-INT. 130 mm	1784	1	-



PCE 756

Electronic circulation pump with synchronous motor 25/70, interaxis 130 mm.

CODE	SIZE			
69011562	25/70-INT. 130 mm	2036	1	-



PCE 757

Electronic circulation pump with synchronous motor 25/80, interaxis 180 mm.

CODE	SIZE			
69011564	25/80-INT. 180 mm	3718	1	-

VP 5012

Ball valve for pumps with female connection G 1" and swivel nut G 1"1/2.

CODE	SIZE			
68559752	G 1"1/2 x G 1"	314	10	80

TZ 800

Galvanized nozzle for system testing, interaxis 130 mm.

CODE	SIZE			
7116601	G 1"1/2	676	3	24

ELECTRONIC CLIMATIC CONTROL UNITS

CE 1300

Winter/summer climatic control unit with external probe, inlet probe and remote control probe.
ARTICLE DISCONTINUED.

CODE	SIZE	g		
69011425	-	596	1	-

CE 1305

Software on cd for the collection and recording of data with serial adaptor RS 232.
ARTICLE DISCONTINUED.

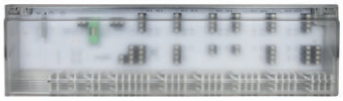
CODE	SIZE	g		
69011427	-	120	1	-

CE 1310

Thermostat/humidistat for temperature adjustment in all rooms, with winter/summer switch and max humidity level 60%.
ARTICLE DISCONTINUED.

CODE	SIZE	g		
69011432	230 V	130	1	-

24 V



230 V

CE 1320

Connection base for thermostats and thermoelectric heads control, fit to connect up to 6 thermostats and 24 thermostatic heads.

CODE	SIZE	g		
69015001	24 V	410	1	-
69011441	230 V	410	1	-

SERVOMOTORS

Modernly designed servomotors for Luxor valves with switching output signal, in combination with individual room control systems. 150 N drive force Long service life thanks to stepper motor technology, high functional safety and long expected service life. Low-energy servomotors with valve adaptation system. Simple plug-in installation. Hermetically sealed case: IP54 for 360° installation position and therefore 100% protection in case of spillage. Low-noise, maintenance-free servomotors. Installation on valves by means of M30x1.5 thread.

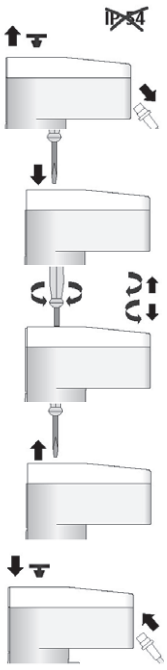
CONSTRUCTION MATERIALS
Housing material / colour:
Polyamide, Light gray RAL 7035.
Housing cover material / colour:
Polycarbonate, Transparent.

TECHNICAL DATA

	SM 1346	SM 1348
supply voltage	230V AC -10...+10% 50...60 Hz	24V AC, -10...+20% 50 - 60 HZ
control voltage	-	0-10 V/PWM
energy consumption	< 20 MA	< 110 MA
standby power consumption	< 5 mA	10 MA
operating power	3.5 VA	2.6 VA / 1.4 W
stroke distance	8.5 mm	
actuating time (4 mm / 5 mm)	15 s/mm	
actuating force	150 N (-20% / +40%)	
fluid temperature	0÷100 °C	
storage temperature	-25÷70 °C	
room temperature	0÷50 °C	
protection degree	IP 54	
protection class	II	III
CE conformity according to	EN 60730	
display LC	-	for the direction of operation, position, control voltage, errors
manual setting	with screwdriver 0.3 x 2 mm	
connecting cable	3x0.75 mm² PVC, white	3x0.22 mm² PVC, white
connection cable length	1 m	

OPERATING INSTRUCTIONS

SETTING THE STROKE MANUALLY



1. Remove the connection cable and the protective cap.

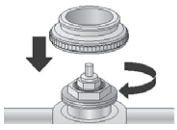
2. Insert the 0.3 x 2 mm screwdriver into the manual stroke adjustment device.

3. Turn right or left to extract or retract.

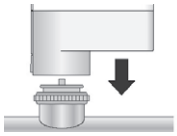
4. Remove the screwdriver after reaching the desired position.

5. Install the protective shield and connect the connection cable.

INSTALLATION WITH ADAPTER

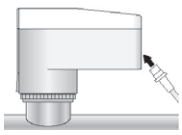


1. Manually screw the valve adapter onto the screw.



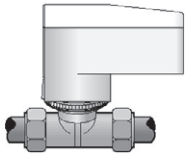
2. Manually position the servomotor vertically on the adapter.

3. Manually attach the servomotor to the valve adapter by applying a vertical pressure until you hear the typical “click”.

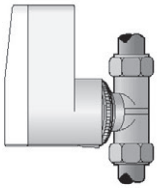


4. Connect the connection cable to the servomotor.

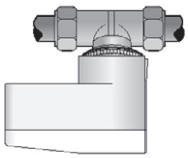
INSTALLATION POSITION



VERTICAL



HORIZONTAL



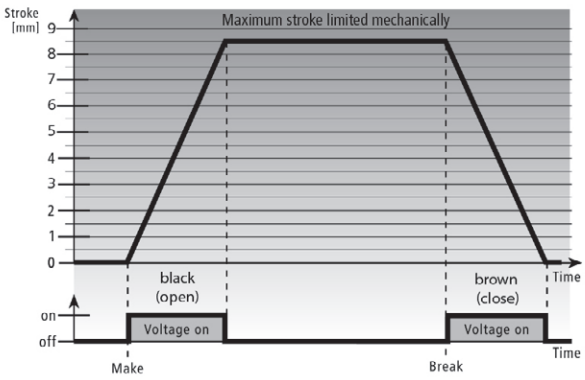
"UPSIDE DOWN"

The servomotor can be used at any installation location.
The preferred installation locations to be used, where possible, are horizontal or vertical.

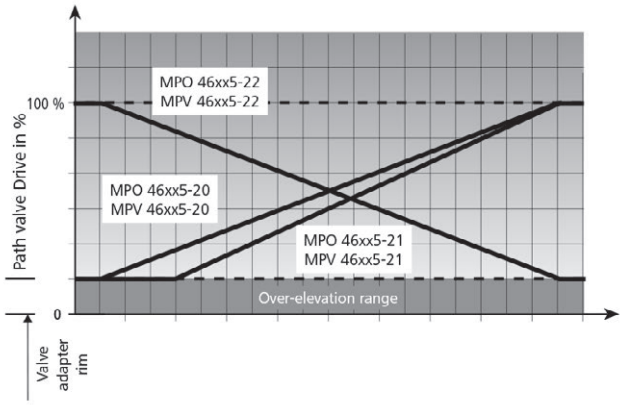
The "upside down" installation, in particular circumstances (e.g. wastewater), can reduce the service life of the servomotor.

OPERATING DIAGRAMS

SM 1346

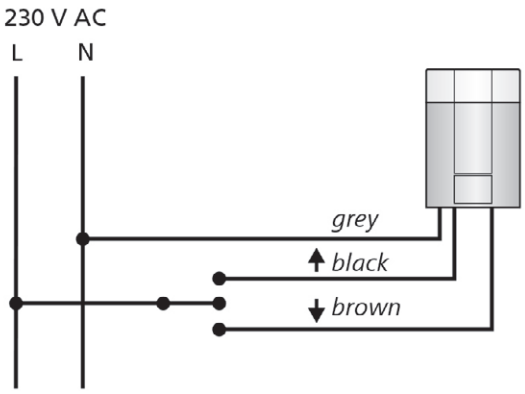


SM 1348

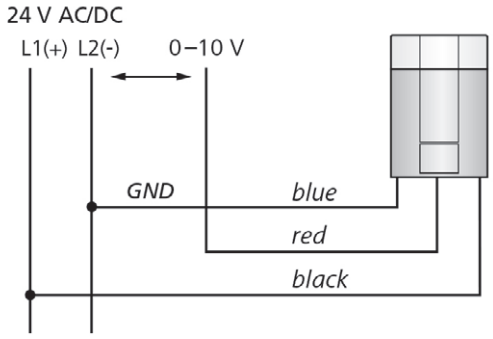


ELECTRICAL CONNECTIONS

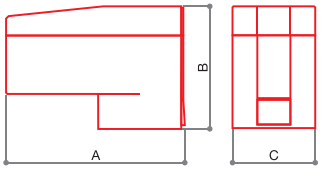
SM 1346



SM 1348



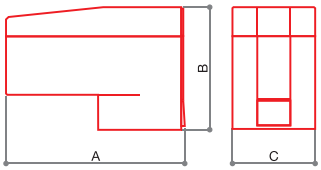
SERVOMOTORS



SM 1346

3-point servomotor, 230 V, connection M30x1,5.

CODE	SIZE	A	B	C	D	E	F	G	H	L	9		
69011717	230 V	90	65	44	-	-	-	-	-	-	208	1	-



SM 1348

Modulating actuator, 24V, connection M30x1,5.

CODE	SIZE	A	B	C	D	E	F	G	H	L	9		
69011719	24 V 0-10V	90	65	44	-	-	-	-	-	-	163	1	-

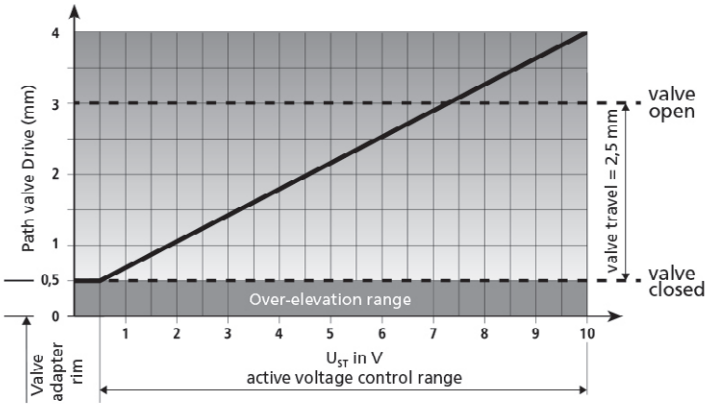
ACTUATOR FOR ROOM TEMPERATURE CONTROL

Those who install heating, ventilation and cooling systems ask for economical but state-of-the-art technologies to guarantee the safety of the systems they develop.
Luxor's actuator TE 3020, with Direct Digital Control for operating voltages from 0 to 10 Volt, offers the following advantageous features:

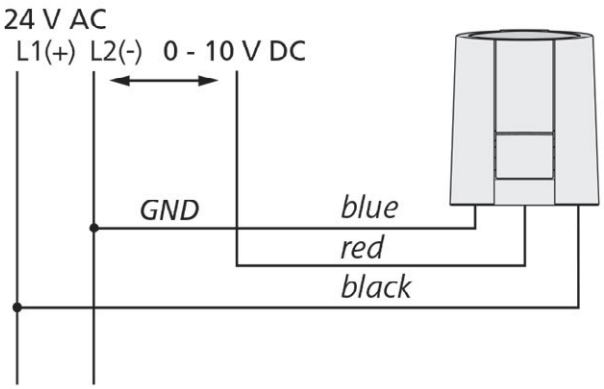
- modulating: continuous and permanent adjustment with 0-10 V actuation;
- automatic calibration: self-regulation with zero-point detection and tolerance compensation;
- easy maintenance: function indicator;
- silent: thermoelectric principle;
- long-life performance: wear-resistant, no need for maintenance, operating safety guaranteed;
- economical: excellent price-performance ratio.

TECHNICAL DATA
Type: normally closed
Supply voltage: 24V AC, -10%...+20%, 50-60 Hz
Max inrush current: <320 mA during 2 min. max.
Operating power: 1 W
Working voltage: 0-10 V DC
Input resistance: 100 kΩ
Work stroke: 4 mm (minus 0.5 mm over-elevation)
Pushing force: 100 N +5%
Liquid temperature: 0÷100 °C
Storage temperature: -25÷60 °C
Room temperature: 0÷60 °C
Degree of protection: IP 54
Protection class: III
CE conformity according to EN 60730: EN 60730
Material: White polyamide
Power cables: 3x0.22 mm2 PVC
Power cable length: 1 m

CHARACTERISTIC CURVES



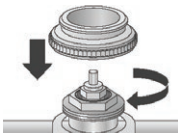
OPERATING INSTRUCTIONS



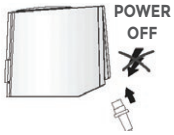
When assembled on control valves, the actuator TE 3020 performs several switch-on and adjustment activities as a modulating (continuous) regulating element. The 0-10 V actuation is proportionally transformed into a 0-4 mm stroke. The electrical heating up of the wax element is controlled by the built-in electronics.

According to the operating voltage applied, the valve silently opens thanks to the lifting of the wax element.
The actuator TE 3020 reaches its maximum stroke with operating voltages above 10 V.

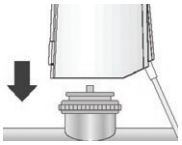
INSTALLATION WITH ADAPTER



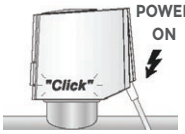
1. Manually screw the valve adapter onto the valve.



2. Connect the power cable to the actuator.



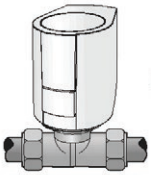
3. Manually position the actuator vertically on the valve adapter.



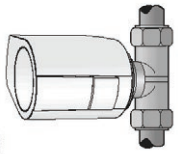
4. Attach the actuator to the valve adapter by manually applying the vertical pressure until you hear a click.

The TE 3020 actuators are equipped with the “first open” operation, that is, the actuator at the time of delivery is in the normally open state. This allows the system to be washed and filled with already assembled heads, even before the electrical wiring. In the following commissioning, the application of operating voltage (for more than 6 minutes) causes the automatic triggering of the "first open" operation and the actuator is thus ready for operation.

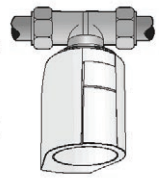
INSTALLATION POSITION



VERTICAL



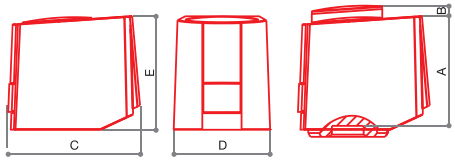
HORIZONTAL



“UPSIDE DOWN”

The actuator can be installed in any position, however the recommended positions are vertical and horizontal.
The “upside down” position in some circumstances, e.g. dripping, could reduce the life of the device.

ACTUATOR FOR ROOM TEMPERATURE CONTROL



TE 3020

Actuator for room temperature control.
Thermoelectric head 0-10 Volt.

CODE	SIZE	A	B	C	D	E	F	G	H	L	g		
69011420	M30x1,5	51.1	7	61.5	44.3	53	-	-	-	-	150	1	-