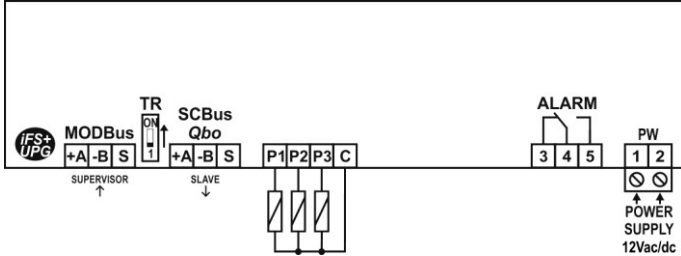# ENGLISH

Thank you for choosing EsseCi

SCMQ10A-x1000

UK Master Qbo with MODBus serial port to command up to *16* serial slave units.
Suitable to manage heating or evaporative cooling or wine making installation.;

WIRING DIAGRAM

WIRING DIAGRAM

POWER SUPPLY	
1 - 2	*SCMQ10A-B1000*: Power supply 12Vac/dc
ALARM OUTPUT	
3 - 4 - 5	Alarm relay 1A 24Vac
PROBES	
C – P1	(**C**) Common of sensor, (**P1**) global temperature sensor 1.
C – P2	(**C**) Common of sensor, (**P2**) global temperature sensor 2.
C – P3	(**C**) Common of sensor, (**P3**) outside temperature sensor.
SCBus Qbo SERIAL CONNECTION	
+A, -B, S	SLAVE : SCBus RS 485 serial connection to the slave modules
MODBus SERIAL CONNECTION	
+A, -B, S SUPERVISOR	SUPERVISOR : RS485 MODBus network connection to a SCADA or supervisor.
SWITCHES	
TR	End of line resistor

SCMQ10A-F1000 = SCMQ10A-B1000 + SCAPW30W-110 built inside the box

POWER SUPPLY INPUT : J1A: power supply input 120 / 230Vac +/-10%
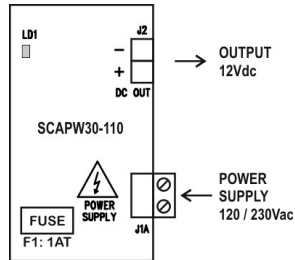*POWER OUT : J2* 12Vdc output. Connect J2 to the terminals 1 and 2 of the SCMQ10
F1: 5x20mm fuse, value 1AT.
LD1: status led of the SCAPW30.
 - On : SCAPW30 under power supply;
Off : SCAPW30 without power supply.
POWER SUPPLY INPUT : J1A: power supply input 120 / 230Vac +/-10%

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MASTER SCMQ10: INSTALLATION

1.   WARNINGS

⚠ **BEFORE OPERATING ON THE DEVICE, PLEASE CAREFULLY READ THE INSTRUCTIONS IN THIS MANUAL. KEEP THIS MANUAL IN A SAFE PLACE FOR FUTURE REFERENCE**

Use the appliance only for its intended purpose as described in this manual. The Manufacturer declines all responsibility for inappropriate use or incorrect setting of the controls. To ensure safe operation:
• Appliance must be properly installed and maintenance must be performed according to this manual;
• Supply voltage and environmental conditions fall within the values specified on appliance data plate.

⚠ **ELECTRIC CONNECTIONS**
THE DEVICE IS NOT PROTECTED AGAINST CIRCUIT OVERLOADING: EQUIP POWER SUPPLY INPUT AND ALL OUTPUTS WITH NECESSARY SAFETY DEVICES.

• Avoid crossing cables by separating ELV ExtraLowVoltage from load-referred connections.
• Protect the device power supply and probe inputs from electric disturbances.
• Disconnect the appliance from the power supply before carrying out any maintenance;
• Do not EVER open the device plastic enclosure

2.   TECHNICAL FEATURES

Power supply:	SCMQ30A-B1000: 12Vac/dc +/-10%. use only SELV power supply with a 315mA slow-blow fuse on the secondary. Only for SCMQ30A-F1000: 120/230Vac with SCAPW30W-110 device built inside the box.
Insulation guaranteed by the power supply	For 230V: Insulation from very low voltage parts : reinforced. Insulation from relay output : reinforced. For 12Vac-dc: use only a safety isolating transformer (SELV)
Operation field:	-50.0…150°C
PTC 990Ω accuracy:	~2 °C nel range –60T50 °C; ~5 °C nel range +50T160 °C;
Unit consumption:	5W
Housing:	plastic enclosure 180 x 150 x 65mm
Fixing:	on wall
Data storage:	on EEPROM memory
Front protection:	IP44
Employment conditions:	environment temperature 10…40°C storage temperature 0…60°C
Relative environment hum:	30 / 80%, without condensation
Connection:	screw terminal, cables max cross section 2,5mm^2
Display:	LCD display
Inputs:	1 input for PTC 990 Ω @25°C (if enabled)
Outputs:	1 relay ALARM SPDT 1A 24Vac
Insulation guaranteed by the output	Insulation from very low voltage parts : reinforced;
Serial Connections:	2 serial port RS-485: - SLAVE: to SCBus i²NEt. 1.000m max length tolerated for the network; - SUPERVISOR: to MODBus. 1 *iFS* serial interface TTL to the expansion key: • device firmware update; • quick arameter setting (copy/paste);

3.   MAIN FEATURES

SCBUS AND INFRANet, 2-WIRE BUS CONNECTION: A two-pole cable is required to connect the master to the zone slave modules. This simplifies the connection.
The two-way communication runs along a RS-485 serial line made of a 2-wire twisted shielded cable (i.e. Belden 8762 with PVC sheathing 2 twisted terminals + copper sheathing, 20 AWG, 89pF cables nominal capacity, 161pF cable / copper sheathing nominal capacity). 1.000m max length tolerated for the network;
LCD DISPLAY: a large LCD display helps to keep the thermostat always under control at a glance. Scrolling text messages and symbols describe the operations in progress. The display decimal range is: –50,0 and 999.0, out of this range the device switches automatically to integer numbers.

4.   MODBus

MODBus communication enabled in write/read mode only if *H0r= 0*, in this case the icon 📶 is on.
Through this parameter you enable/disable the MODBus connection, BMS, and the possibility to change the parameters of the devices only by MODBus or by SCMQ10 keyboard. Especially if *H0r* is:.

0 = the MODbus is always enabled, change of the parameters of the devices are allowed only by MODBus, you can not change them by SCMQ10, with the exclusion of the parameters *Lrn*, *rSt* or *H0r*;
NOTE: if *H0r = 0* the value of the Modbus register n°141 tells to the SCMQ10 if the BMS is connected or not. The value of the index n°141 is the time, expressed in seconds, after which the connection to the BMS is no longer considered active, the SCMQ10 shows an alarm *A 62* and the *A-M* parameter of all the network devices connected to the terminal SCMQ10 is automatically fixed to *oFF*. When the value of the index n°141 becomes ≠ 0, BMS connected, the BMS must set again the A-M value of all the network devices, if different from *oFF* .
To avoid this alarm write cyclically, before it expires, the value of the BMS time-out on the index 141.
For example: if you want that the BMS connection becomes invalid after 10 minutes, 600 seconds, write 600 on the index 141 at least every 5minutes / 300 seconds

1 = MODBus always disabled. Change of the parameters of the devices are allowed only by SCMQ10, anyway you can read the parameters both by SCMQ10 and MODBus;

For the MODBus parameters of the terminal SCMQ10 see datasheet E1313O.

FIRST START

5.   SCMQ10, FIRST START:
- CLOCK / CALENDAR SETUP;
- ACQUISITION OF THE ZONE MODULES;

⚠ **NOTE: BEFORE POWER ON THE SCMQ10 FOR THE FIRST TIME CHECK:**
- WHEN CONNECTING THE TERMINAL SCMQ10 TO THE SERIAL DEVICES, see "SCBus network connection"; DO NOT SWAP *+A* / *–B* WIRES.
- MAKE A LINEAR NETWORK CONNECTION: NOT STAR, RING OR TREE.
- MAKE SURE THE REMOTE CONTROLS ARE CONNECTED AND SUPPLIED, BEFORE PROCEEDING.
- CONNECT MAX *16 ZONE MODULES* TO THE SCMQ10. ADDRESSES FROM 0 TO 15.

At the SCMQ10 first start up the master device shows for ~5s. the clock, for ex.: 8:10, Monday. (1 = Monday; 2 = Tuesday;…7 = Sunday).

If the clock is not correct set it correctly. To change/set the clock and the calendar see the paragraph n° 5.1 : CLOCK / CALENDAR SETUP.

Should the device lack of a previously acquired network, an acquiring process will automatically after the clock visualization i.e. at the SCMQ10 start up . Now the SCMQ10 shows the Lⁿⁿ label.
At the end, the display shows the list of the acquired devices:

ZONE NUMBER

$00.01...15$ Acquired / acknowledged device

⚠ + o^-nt + *error 32* (ponit n°12) Acquisition failed: too many modules connected to the master.

⚠ + $riont$ + *error 11* (point n°12) Acquisition failed: no modules connected to the master. Error

When the network has been created the SCMQ10 shows the first zone module.

You can scroll the thermal zones by using the keys ⬆ or ⬇.

The master SCMQ10 cyclically shows the different zones, every 15s., only if the parameter *H8*=*YES*.

To repeat the acquisition of the zone modules see the following paragraph: 5.2 ACQUISITION OF THE ZONE MODULES.

5.1 CLOCK / CALENDAR SETUP

To *adjust* the current date and time showed on display, proceed as follows:

- press the ↵ key for ~1s. until the hour digits start to flash;
- press ⬆ or ⬇ to set the current hour;
- press ↵ to confirm it; the minute digits flash;
- press ⬆ or ⬇ to set the current minutes;
- press ↵ to confirm it; the set day flashes;
- press ⬆ or ⬇ to set the current day, ex:

DAY 1	DAY 2	DAY	6	DAY	7
1= Monday	2 = Tuesday	6 = Saturday		7 = Sunday	

- press ↵ to confim it; the year "$YY00$" flashes;
- press ⬆ or ⬇ to set the current year;
- press ↵ to confirm it; the month "$nn01$" flshes;
- press ⬆ or ⬇ to set the current month;
- press ↵ to confirm it; the day of the month "$dn01$" flashes;
- press ⬆ or ⬇ to set the current day of the month;
- press ↵ to confirm it;

- to exit the clock setting and came back to the normal fuctioning of the SCMQ10 press ✖ⓡ or wait *H0d* s. without touching any key.

5.2 ACQUISITON OF THE ZONE MODULES

To start the acquiring process, go to parameter Lrn of the master *SCMQ10*, see point 11.

Set Lrn to YES and press ↵ to start the network acquisition.

MASTER SCMQ10: USE

6. SCMQ10 FRONT PANEL

NOTE: the SCMQ10 automatically reduces the display brightness if you do not act on the keyboard for 10s. (See the parameter Li9 paragraph n°6.3)

Press any key to light it again.

6.1 KEYBOARD

Key	Description
P.on	**ON/OFF** - press it for 1s.: to enter the On / Off (stand-by) function of the zone module displayed on the **ZONE NUMBER** area.
🌡	**SET POINT** - press it for 1s.: to enter the set-point of the zone module displayed on the **ZONE NUMBER** area.
✋	**AUTOMATIC / MANUAL / TIMER PROGRAMS** – press it for 1s.: to enter the automatic / manual function of the zone module displayed on the **ZONE NUMBER** area. To enter the timer programs of the zone module set *AUtO* and press ENTER.
✖ⓡ	**ESC / RESET:** + if ◉🏠home: hold it to enter the reset parameter of the zone module displayed on the **ZONE NUMBER** area (ONLY for heating devices with RESET function). + in setup mode it works as ESC / RETURN.
↵	**ENTER:** it works as ENTER/CONFIRM button. Press it : + to enter the displayed menu/parameters; + to confirm / start the displayed functions.
⬆	**UP:** press it: + if ◉🏠home: it scrolls the available zone modules; + in setup mode to increase the display value; Hold it with the *DOWN* key for ~5s.. to temporary unlock the keyboard if locked;
⬇	**DOWN:** press it: + if ◉🏠home: it scrolls the available zone modules; + in setup mode to decrease the display value; Hold it with the *UP* key for ~5s.. to temporary unlock the keyboard if locked
Fx	**MENÙ:** if ◉🏠home press it to enter the menu list of the zone module displayed on the **ZONE NUMBER** area;

6.2 DISPLAY: ICONS & SYMBOLS

ZONE NUMBER	This area shows the address of the zone module on display. Ex.: 03 =zone module n°3.
MASTER	*Terminal device* SCMQ30
⏻	**On/Off - zone module status:** shows if the zone module on display is enabled or disabled: ◉ Zone module Off mode. it is not a power cut off, it is rather a STAND BY mode. The controller keeps powered in Off mode. The zone module in off mode does not maintain the reduced set-point. The SCMQ30 display shows only the zone number and the *OFF* label. ○ Zone module ON.

Icon	Description
☀ summer	**Summer:** ◉ zone module in summer/cool mode. (direct action).
❄ winter	**Winter:** ◉ zone module in winter/heat mode. (reverse action).
⚠ hot / cold	**Temperature alarm:** ◉ temperature alarm in progress; ○ no temperature alarm.
EA	**Generic alarm:** ◉ EA alarm in progress for the zone module displayed. If the code of the zone module is: - SCQP30: thermal overload alarm; - SCRE55: float alarm; - SCRW12 : door switch alarm; ○ no EA alarm for the zone module displayed.
EA2	**Generic alarm 2:** ◉ AG2 alarm in progress for the zone module displayed. If the code of the zone module is: - SCQP30: gas pressure alarm; - SCRW12 : level alarm; ○ no AG2 alarm for the zone module displayed.
SEA	**External several alarm.** ◉ SEA alarm in progress for the zone module displayed. If the code of the zone module is: - SCRW12: EA or EA2 alarm with stop of the regulation; ○ no SEA alarm for the zone module displayed.
🏠 home	**Home** – home page. ◉ home page of the displayed zone module: the display shows the quantity/temperature of the displayed zone; ○ access to the menus / parameters of the zone module on display.
load	**LOAD** - status of the "water load" of the displayed evaporative cooler. ◉ tank filling, water load in progress; ○ no water load;
dump	**DUMP** – status of the "water dump" of the displayed evaporative cooler. ◉ tank drain, water dump in progress; ○ no water drump;
pump	**PUMP** – status of the "pump" of the displayed evaporative cooler or wine maker.. ◉ pump working: water flowing, pads wetting; ◉ if blinking: free cooling in progress; (only for evaporative cooler) ○ pump off;
max ○— WATER	**Float n°1:** ◉ full tank, load water off, pump enable; ○ tank not full;
WATER min ○—	**Float n°2:** ◉ minimum level of the tank; ○ tank empty, pump off, water load enable;
((•))	**BMS - MODBus connection:** ◉ connection available and operative, H0r = 0, change to the parameters of the devices are allowed only by MODBus. From SCMQ10 you can only read the value of the parameters; ◉ if blinking: connection available and not operative. Change to the parameters of the devices are allowed by SCMQ10. H0r = 1 and modbus index n°141 > 0; ○ MODBus connection not available, H0r = 1 and modbus index n°141 = 0, change to the parameters of the devices are allowed only by SCMQ10;
⊕1	**Global zone 1:** ◉ zone module displayed subjected to the global zone 1;
⊕2	**Global zone 2:** ◉ zone module displayed subjected to the global zone 2;
⚠	**ALARM:** Icon on: alarm in progress for the zone module displayed. Enter to the alarm list to see the code of the alarm in progress.
🔧	**Configuration Setup:** Setting mode, if the configuration icon: - is on when the display shows the parameter/menu label; - blinks when the display shows the parameter value;
DAY 1 2 3 4 5 6 7	**Day of the week:** 1 = Monday,.. , 7 = Sunday .
☀	**Zone module ON.** For zone modules of heating means burner/s on with *SP1C* temperature. For evaporative coolers: refers to timer programs of COOL mode.
☀	**Zone module ON.** For zone modules of heating means burner/s on with *SP1E* temperature. For evaporative coolers: refers to timer programs of FAN mode.
☽	**Zone module in stand-by / OFF.** For zone modules of heating means burner/s off, the burner maintains just the frost protection set-point. If *rt*=0 no frost protection setpoint, burner outputs OFF. For evaporative coolers: means that the evaporative cooler is in stand-by,
✋	**Manual mode:** Icon on: zone module on display in manual mode; Icon off: zone module on display in automatic mode;
✿	According to the type of application of zone module displayed. **FAN**, if the icon is on it means: - for heating: fan output on; . - for evaporative coolers: evaporative cooler is working in fan mode.
🔥	**Burner output** for heating. If the icon is: - on = burner output on or first stage on in the case of a multi-stage burner; - blinking = functioning light of burner ON or 1st level ON;
🔥2nd	**Burner output - 2nd level of flame.** If the icon is: - on = second stage burner output on; - blinking = functioning light of the 2nd level ON;
❄	According to the type of application of zone module displayed **COOL** for evaporative coolers. If the icon is on the evaporative cooler is working in cool mode.
BLK	**Burner in lockout**, for heating. If the icon is on the controller detects a flame failure in the zone.

6.3 MENU / PARAMETERS SETUP

The menus and the parameters of the SCMQ10 terminal and of the zone modules are in folders.

To access to menus and parameters of the displayed zone module:

- make sure you are in the desired module home page, home ⊙;

- press briefly [Fx], when you release the key the symbol home ○ switches off, the symbol 🔧 switches on and the display shows the first menu of the module;

- press [↑] or [↓] to scroll the menu, a short description will be shown at the bottom of the display, i.e.: "tiME - clock menu";

- press [↵] to open the selected menu; the display shows the first parameter and the setup icon "🔧" light is on;

- press [↑] or [↓] to scroll the parameter list. A short description will be shown at the bottom of the display;

- press [↵]: the display shows for 5s the parameter value and the symbol "🔧" blinks. If the 🔧 icon remains on together with the ((•)) icon you will only read the value of the parameters, if you want to change them from the Qbo terminal set the parameter **H0r** = 1;

- press [↑] or [↓] to change the value;

- press [↵] to confirm the value and go back to the parameter list;

- to exit and save changes either press [⊗ᴿ] or wait for 30 seconds until the symbol home switches on, ⊙.

NOTE: **H0d** is the max permanence time into the module setting procedure.
The setup symbol "🔧" keeps lit steady when scrolling the parameter list.
It blinks when displaying the parameter value.

6.4 SCMQ10 KEYPAD LOCK & UNLOCK

To lock the SCMQ10 keypad, set **HL**=YES.

With the keypad locked, the following operations are NOT allowed:
- switching ON/OFF of the zone module;
- access to the set-point of the zone module;
- access to the automatic/manual function of the zone module;
- access to all parameters/menu of the zone module;
- selecting the zone to display.
- resetting burners

When the keypad is locked, the message LOC will be displayed anytime a key is pressed.

To temporarily unlock the keypad hold [↑] and [↓] for at least 3s. until the message UnL is displayed.
The keypad re-locks automatically after 15s. of inactivity.

7. ON / OFF STAND-BY OF THE ZONE MODULE

To switch the displayed zone module ON/OFF hold the [Pon] key until the P-on message is displayed.
Release the pressed key, now the display shows the set value for ~5s..:
- **1** : zone module ON, ○ ⏻.
- **0** : zone module OFF, ⊙ ⏻.
  ATTENTION: the zone module keeps powered even when in off / stand-by mode.
  When the zone module is in OFF mode, the display of the SCMQ10 shows the message OFF.
  No antifrost setpoint is maintained in this mode.

To change the displayed value press [↑] or [↓], then press [↵] to confirm the value and go back to the parameter.
The menu Fnc includes the P-on parameter.

8. SET-POINT OF THE ZONE MODULE

To locate and set the set-point of the zone module displayed hold the [🌡] key until the SP1C or SP message is displayed. Release the pressed key, now the display shows the set value for ~5s..:
To change the displayed value press [↑] or [↓], then press [↵] to confirm the value and go back to the parameter.
The menu SEt includes the SP1C or SP parameter.

9. AUTOMATIC-MANUAL OPERATION MODE OF THE ZONE MODULE
- TIMER PROGRAMS OF THE ZONE MODULE

To locate and set the operation mode of the zone module displayed hold the [✋] key until the A-N message is displayed. Release the pressed key, now the display shows the set value for ~5s...
According to the type of application of the zone module:
+ for heating, radiant panels, warm air generators:
- oFF the zone module is in Manual OFF mode. Burners are off, they just maintain the frost protection setpoint if **rt** > 0;
- AUto the zone module is in Automatic mode. Burners activate according to the set timer programs;
- on-C the zone module is in Manual ON mode. Burners just maintain the COMFORT set-point, **SP1C**.
- on-E the zone module is in Manual ON mode. Burners just maintain the ECONOMY set-point, **SP1E**. (Only if **r0**=2).
+ for evaporative cooling:
- oFF: the zone module is in Manual OFF mode, disabled;
- AUto: the zone module is in Automatic mode. It activates according to the set timer programs;
- CooL: the zone module is in Manual Cooling mode;
- FAn: the zone module is in Manual Fan mode.

To change the displayed value press [↑] or [↓], then press [↵] to confirm the value and go back to the parameter.
NOTE: set AUto to access the timer programs of the zone module.
The menu Fnc includes the A-N parameter.

9.1 TIMER PROGRAMS OF THE ZONE MODULE

A timer program is a command of zone module ON / OFF. The zone module sorts them by day and time and runs them cyclically.

Each zone module for heating and for evaporative cooling has its specific timer programs, up to 28 different programs a zone. The zone module executes them only if A-N = AUto. Timer is overridden:
- by ON / OFF manual function;
- by switching OFF the zone module, ⊙ ⏻;
- by the zone probe key selector, if available.

To **access** to the timer programs set A-N = AUto and press [↵]

- the display shows the first timer program set for the selected zone. The display shows the message – –:– – in case no timer programs are set.
NOTE: if the master terminal has the network timer programs enabled, **PtE** = **YES**, and the network device has a global probe and **t8** = **no** then you enter the network timers of the relative global zone.

To **scroll** the set timer programs or locate the first free place of memory press the [↑] button. The first free place of memory is signalled as – –:– –.

To **set** / **change** the timer program displayed press [↵] for ~5s.. until the digits of hours of the timer program and 🔧 blink;
- press [↑] or [↓] to select the starting hour of the timer program;
- press [↵] to confirm the value; the digits of minutes blink;
- press [↑] or [↓] to select the minutes, they move forward / backward by 10;
- press [↵] to confirm the value; the signal of the day blinks, for example ①;
- press [↑] or [↓] to select the day when the timer program should be active, i.e.:
  ① = Monday   ② = Tuesday   ⑦ = Sunday
- press [↵] to confirm the value. The timer program type will be displayed:
  + for heating zone module:
  o icon ☀ + on-C = it is a timer program of outputs ON with comfort set-point.
    If **H-C**=**HEAt**, reverse action/winter: it is a program of burner ON with SP1C.
    If **H-C**=**CooL**, direct action/summer: it is a program of fan ON (depending on models);
  o icon ☀ + on-E = it is a timer program of outputs ON with economy set-point, only if **r0**=2.
    If **H-C**=**HEAt**, reverse action/winter: it is a program of burner ON with SP1E.
    If **H-C**=**CooL**, direct action/summer: it is a program of fan ON (depending on models);
    NOTE: when you add new timer programs of economy set-point, **r0**=2, and then you set **r0**=1 all SP1E timer programs will be automatically executed as timer programs with SP1C;
  o icon ☾ + oFF = it is a program of output OFF with frost protection set point.
    If **H-C**=**HEAt**, reverse action/winter: it is a program of burner OFF with frost protection set point, only if **rt** ≠ 0.
    If **H-C**=**CooL**, direct action/summer: it is a program of fan OFF. (depending on models)

  + for evaporative cooler zone module with **H-C**=**CooL**:
  o icon ☀ + CooL = **COOL**, it is a timer program of cooling;
  o icon ☀ + FAn = **FAN**, it is a timer program of fan;
  o icon ☾ + oFF = **OFF**, it is a timer program of output off.

To **delete** ONE or ALL selected timer programs go to the timer program menu as described in the previous paragraph;
- To delete ONE program:
  o press [↑] to select the scheduled timer program to be cancelled
  o hold [↓] for 3s until – –:– – will be displayed.
- To delete ALL the saved TIMER programs hold [↓] for 6s until "EALL" will be displayed.

To **exit** the timer program menu wait for 10s.

10. MENU LIST OF THE ZONE MODULE

To access to the menus of the displayed zone module, proceed as follows:

Make sure you are in the thermostat home page, home ⊙;

- To scroll the different heating zones press [↑] or [↓], see the **ZONE NUMBER** area:
- press briefly [Fx], when you release the key the symbol home ○ switches off and the display shows the first menu of the list, i.e.: SEt, set-point menu.

To access/change the parameters of a menu of the displayed zone module proceed as described at the paragraph 6.3.

SEt
03
SET POINT
ZONE NUMBER

The menus of the zone module are: (according to the network module)
- **ALSt: alarms menu.**
  The menu includes the list of the alarms in progress. For more information read the paragraph n°12. This menu appears only if there is an alarm on the network.

- **SEt: set-point menu:**
  Set-point is the temperature or the regulation value of the zone module.
  According to the application of the zone module the menu includes the following parameters:

  Zone modules for heating:
  o **SP1C** = comfort set-point;
  o **SP1E** = economy set-point (only if **r0**=2);

  Zone modules for evaporative cooler:
  o **SP** = temperature set-point;
  o **rU** = humidity set-point. When the environment humidity exceeds the **rU** setpoint, the evaporative cooler pump stops.

- **Fnc: functions menu.**
  According to the application of the zone module the menu includes the following info:
  o **P-on** = zone module on/off. If the value is:
    + **1** : zone module ON, ○ ⏻.

+ **0** : zone module OFF, ◉ ⏻. ATTENTION: the zone module keeps powered even when in off / stand-by mode. No antifrost setpoint is maintained in this mode.

○ **A-M** = automatic / manual, see paragraph n°9;

○ **FAn** = fan speed of the zone module.
  Only for the evaporative coolers zone module, if the parameter value is:

  + **AUto**: auto mode. The fan speed varies according to the measured temperature and the temperature set-point. **NOTE**: auto mode works properly only if a temperature and humidity sensor is connected to the slave module, otherwise the speed switches automatically to **F1**.

  + **F1**: min. fan sped;

  + **F2**: average fan sped;

  + **F3**: max. fan sped. Only for evaporative coolers with inverter: 3th fan gear;

○ **H-C** = summer / winter mode selection:

  + **CooL**: direct action / summer, icon ◉ ☼ summer on.
    The slave module for heating plants in summer mode, are OFF.

  + **HEAt**: reverse action / winter, icon ◉ ❄ winter on.

In case of faulty P1 probe the output of the zone module is:
For zone modules for heating plants: is always OFF.
For zone modules for evaporative cooling plants: is ON.

- **inFo**: info menu.
  According to the application of the zone module the menu includes the following info:

  Zone modules for heating:
  ○ **tA** = ambient temperature measured by probe P1. P1 is the probe connected directly to the slave module or the network probe (according to the zone module version);
  ○ **Et** = outside temperature (according to the zone module version);
  ○ …other voices, according to the zone module version. For further info refer to the zone module datasheet.

  Zone modules for evaporative cooler:
  ○ **tA** = temperature measured by probe **P1**;
  ○ **UA** = humidity measured by probe **P1**.

- **PAr**: parameters menu.
  The parameter list varies according to the slave module model. Please refer to the slave module datasheet.

  To access and change the parameters of the zone module enter the **PAr** menu pressing the key ⏎, now the display shows **PA**, press again ⏎, the standard password value will be displayed, **00**.
  The zone module has 3 parameter lists: "user" / "installer" / "factory". To set up the "user" parameters, password is not required. The password is only required to review / setup the "installer" / "factory" parameters.

11. MENU LIST AND PARAMETERS OF THE SCMQ10 MASTER

Make sure you are in the thermostat home page, 🏠 ◉;
To access to the menus and the parameters of the SCMQ10 press ↑ or ↓ until the display shows the clock.

To _adjust the clock_ and the date hold ⏎ ~1s.

To _access_ the master menu press **Fx** : now the display shows the first menu of the list, **Fnc**, and the symbol 🏠 ○ switches off.

DAY ①□□□□□□
08:10
MASTER   ◉ 🏠

To access/change the parameters of a menu of the SCMQ10 proceed as described at the paragraph 6.3.

The menus of the master SCMQ10 are:

- **ALSt**: alarms menu.
  The menu includes the list of the alarms in progress. For more information read the paragraph n°12. This menu appears only if there is an alarm on the network.

- **inFo**: info menu;
  ○ **tA1**: temperature of serial probe 1;
  ○ **UA1**: humidity of probe 1 (evaporative cooler probes ONLY);
  ○ **tA2**: temperature of serial probe 2;
  ○ **UA2**: humidity of probe 2 (evaporative cooler probes ONLY);
  ○ **Et**: temperature of the outside probe;
  ○ **ntC**: network connection quality : 10=excellent / 7=good / 5=scarse / 0=low, no connection.

  Press ↑ or ↓ to check the connection quality of each slave module, ex : **14 10**: device n.14 has an excellent connection.

  NOTE: Not all the slave modules can work with the serial probe.
  See parameter /P1 and /P2 to set/enable the serial probe 1 and 2.
  In case of serial or outside probe fault, the display shows "**- -**".

- **PAr**: parameters menu;
  To access and change the parameters of the SCMQ10 enter the **PAr** menu pressing the key ⏎, now the display shows **PA**, press again ⏎, the standard password value will be displayed, **00**.
  The SCMQ10 has 3 parameter lists: "user" / "installer" / "factory". To set up the "user" parameters, password is not required. The password is only required to review / setup the "installer" / "factory" parameters.

  Press ↑ or ↓ to set a new password (for different passwords see end of paragraph). The thermostat stays accessible and remembers the password for 4 minutes.

  Press ⏎ the display shows the first parameter of the list enabled by the password.
  To scroll and set the parameters proceed as described in point 6.3.

PARAMETER LIST:

Cod	Parameter	Type	Range	UM	Def
/	**Probe parameters**				
/C1	Calibration of the temperature of the global probe P1, only if /P1=-2	U	-12…12	°C	0.0
/C2	Calibration of the temperature of the global probe P2, only if /P2=-2	U	-12…12	°C	0.0
/CE	Probe PE calibration – external probe, only if /PE=-2.	U	-12…12	°C	0.0
/S	Inputs reading stability	F	0…5	-	2
/P0	Network probes 1, 2 and outside probe managed by terminal SCMQ10 or modbus. 1 = probes managed by terminal SCMQ10, see /P1, /P2 and /PE; 2 = network probes and external probe managed by Modbus protocol. In this case the parameters /P1, /P2 and /PE are irrelevant.	F	1…2	-	1
/P1	Global probe P1: -2 = connected directly to the terminals P1-C of the SCMQ10 terminal; -1 = no global probe; x = global probe, connected to zone x, with x⊆ [0..15].	I	-2…15	-	-1
/P2	Global probe P2: -2 = connected directly to the terminals P2-C of the SCMQ10 terminal; -1 = no global probe; x = global probe, connected to zone x, with x⊆ [0..15].	I	-2…15	-	-1
/PE	Outside probe P3: -2 = connected directly to the terminals P3-C of the SCMQ10 terminal; -1 = no global probe; x = global probe, connected to zone x, with x⊆ [0..15].	I	-2…15	-	-1
PtE	Enable network timer programs zone 1 and 2. no / YES	U	no..YES	-	no
r0	To set if the global timer programs work with 1 or 2 set-points. For heating module: 1=just **SP1C**; 2=**SP1C** and **SP1E**; For evaporative coolers module: 1=just **CooL**; 2=**CooL** and **FAn**;	U	1…2	-	2
A	**Alarm parameters**				
A3	Buzzer alarm delay at power on	I	0..15	Min	1
Ab	Mute alarm warning: 0 = buzzer only; 1 = buzzer and alarm output;	I	0…1	-	0
H	**Other parameters**				
H0d	Parameter setup timeout: max permanence time into the module setting procedure.	U	30…250	S	180
H0H	Number of serial device queries before an alarm is signaled	F	1…3	-	3
H0M	Temperature deviation before a variation is signaled. Ex.: **H0M** = 2 : +/-0,2°C temperature deviation. The temperature displayed will be updated only if it increases/decreases by +/-0,3°C	F	0…5	-	1
H0L	Hour of daily reading of the zone modules databases connected to the master terminal Qbo. -1: function disabled.	F	-1…23	-	1
H0r	Disable the connection to MODBus, priority on parameters change: 0 = never, MODBus always enabled. Change to the parameters of the devices are allowed only by App or Dashboard; 1 = MODBus disabled. Change to the parameters of the devices are allowed only by SCMQ10, from Modbus you can read them;	U	0…1	-	0
H0t	Time of reading parameters read only	F	15…60	s	15
H5	Item version (read only):	U	-	-	-
H8	Display network modules toggling every 15s.. no / YES	U	no..YES	-	no
H9	MODBus serial address	I	1..247	-	1
H9C	Device MODBus compliant: no / YES;	F	no..YES	-	no
HA	Alarm output contact: 0=N.O. contact; 1= N.C. contact;;	I	0…1	-	0
Hdb	Factory restore	I	no..YES	-	no
HE	Functioning in case of alarm: 0 : buzzer and alarm outpud disabled; 1 : only buzzer enabled; 2 : buzzer and relay output enabled;	U	0…2	-	0
HH2	Release firmware, microp. (read only)	U	-	-	-
HH2b	Build of HH2, build firmware. (read only)	U	-	-	-
HH3	Release firmware, display. (read only)	U	-	-	-
HH3b	Build of HH3, build firmware display. (read only)	U	-	-	-
HL	Keyboard lock: no; YES;	U	no..YES	-	no

TYPE OF PARAMETERS AND RELATED PASSWORD:

Type	Description	PA
U	**USER** parameters	any
I	**INSTALLER** parameters. Before changing them, read carefully the instructions.	95
F	**FACTORY** parameters. These parameters are factory set, the default values can be different from the suggested ones. Modifying these parameters can cause a controller malfunction. FACTORY parameters include INSTALLER and USER parameters.	59

⚠ the "factory restore" function restores the device to the factory default settings. All the parameter settings will be canceled. To execute a factory restore of the Qbo set parameter **Hdb** = **YES** and press ⏎.

- **dSP** : language, display backlight;
  • **LAn : LANGUAGE**:
    IT = Italian;
    UK = English;
  • **Li9 : BACKLIGHT FADE-OUT AFTER 10s.**:
    -1 = OFF, the backlight blinks every 15s.;
    0 = always off;
    1 = switched on at the 20%;
    2 = switched on at the 40%;
    3 = switched on at the 60%;
  • **biP**:
    YES = Buzzer ON;
    NO = Buzzer OFF;
  • **SPd: SCROLL SPEED**:
    MEDIUM = medium speed;
    FAST = fast speed;
  • **rtn: NEW PARAGRAPH**:
    NO = new paragraph disabled, scrolling text active;
    YES = new paragraph active; long texts will not scroll, but display in two shots.

- **HH3: display release firmware**;
- **HH3b: build of HH3**;

Hold together ~5s.. the [←] and [↓] buttons to go to the list of the keyboard functions directly.:

- L⌐⌐ : **acquisition of the zone modules;**

  To start the acquiring process, go to parameter L⌐⌐ ;

  Set L⌐⌐ to YES and press [←] to start the network acquisition.

12. ALARMS AND DISPLAY WARNINGS

In case of alarm / failure the display of the Qbo terminal shows the message " ALARM ".

If the display shows the message and the symbol ⚠ it means that the zone module / terminal on display is in alarm.

Press briefly the key [Fx] now the display shows the alarms menu, AL5t, to enter and read the list of pending alarm events proceed as described at point 6.3. I.e.: the image on the right means that the zone n°24 is not connected to the SCMQ10.

To exit either press the [⊗ R] button or wait for *H0d* s..

NOTE: When an alarm occurs, if it is not cleared within 4 minutes, the master unit SCMQ10 activates the alarm relay.

AL5t alarm menu is only available and accessible when an alarm / error event occurs.

The alarm menu collect up to 5 alarm events for every zone module and also 5 alarm events for the Qbo terminal.

ALARM / ERROR CODES

Cod.	Description
A 1	**BLK** : Burner in lockout.
A 10	Eeprom SCMQ30 master broken, switch the thermostat off and on again
	Eeprom SLAVE MODULE broken, switch the thermostat off and on again
A 11	⌐⌐o⌐t Network error. SCMQ30 without network, network not acquired.
A 12	Network error: network device disconnected or not connected.
A 13	Clock error. Check and set the date and time
A 14	Failure in the network probe setting. Check and correct the parameters */P1* and */P2*. NOTE: the error happens also if */P1* = */P2* = 0, 1, 2,...,15.
A 15	Error of Master: network failure. Repeat the network acquisition procedure: it may occur when you replace a network slave module with one having the same serial address.
A 16	**SEA** : Several alarm
A 17	**EA** : Evaporative cooler module: float alarm, error tank filling/draining
A 18	**EA2** : Generic alarm 2
A 19	**EA** : Generic alarm
A 20	Fault of probe 1.
A 21	Fault of probe 2 (If available)
A 22	Fault of probe 3 (If available)
A 23	Fault of probe 4 (If available)
A 24	Fault of probe 5 (If available)
A 25	Fault of probe 6 (If available)
A 28	Fault of outside probe (If available).
A 32	o-⌐t Network acquisition error. Too many modules connected to the master SCMQ30
A 35	Serial error. The serial number of the SCMQ30 in the memory is damaged.
A 38	High humidity alarm
A 39	Low humidity alarm
A 40	⚠ hot / cold - Zone module temperature alarm
A 41	⚠ hot / cold - Zone module high temperature alarm.
	SEA : overheat alarm
A 42	⚠ hot / cold - Zone module low temperature alarm.
A 43	Zone module high fumes temperature alarm – P2
A 45	Zone module high fumes gas temperature alarm - P3
A 50	Zone module door switch
A 51	Zone module limit level
A 52	Error communicatio igniter
A 53	Error communication inverter 1
A 54	Pump alarm. (for wine maker device)
A 55	Chiller alarm. (for wine maker device)
A 62	BMS not connected. If the *A 62* alarm is in progress the *A-M* parameter of all the network devices connected to the terminal SCMQ10 is automatically fixed to *oFF*
A 63	Network device communication error
A 64	Global timer configuration wrong; check the value of the parameters *PtE* of the SCMQ30 or *t8* of the network devices
A 66	Digital input inverter alarm
A 69	**EAP** : Evaporative cooler module: Pressure switch alarm
A 70	**EE/** : Evaporative cooler module: Comunication error between the devices
A 98	Memory of the counters corrupted, erase the values of the counters Cn-1 and Cn-2
A 99	The thermostat resets more than 5 times within 15min.
A100	Time based maintenance.
A199	New lan acquired different from the previous
A240	Volatile burner lockout

13. BURNER RESET

Function only available for the zone modules featuring the reset command.

- Press [↑] / [↓] to select the desired zone module;

- hold the key [⊗ R] pressed until the display shows ⌐5t;

- release the key, now the display shows the value 00;

- press [↑] to set the parameter to 01;

- to execute the burner reset press [←] or wait 3s. without pressing any key;

⚠ Should the alarm menu shows the alarm *A 99,* it means that the reset is locked, If you exceed the 5 attempts within 15min. then the burner command locks. Set *H30 = 1* to unlock the reset command.

14. GUARANTEE

Warranty on materials: 1 year (from production date, excluding consumables). The Company shall only repair or replace products, which are found to be defective after inspection by EsseCI's technical service. The Company shall not be under any liability and gives no warranty in the event of defects due to exceptional conditions of use, misuse or tampering. All warranty claims returned to EsseCI must have prior return authorization. Customer will be responsible for all return shipping charges and fees.

15. DISPOSAL

The device must be disposed of in compliance with local standards regarding the collection of electric and electronic equipment.

16. NOTES

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