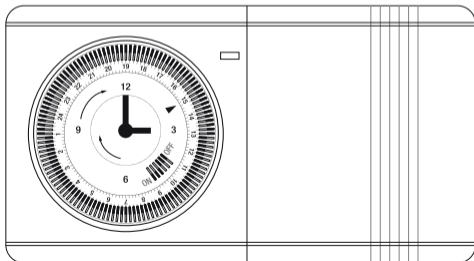


## TOWERCHRON QM1 and QM2

EN

Installation and user instructions

2



---

## Table of Contents

Safety Instructions .....	3
What is a programmer? .....	4
General installation instructions .....	5
Specifications .....	5
<b>“TOWERCHRON QM1” .....</b>	<b>6</b>
Applications (QM1) .....	6
Programming your “TOWERCHRON QM1” .....	7
Internal wiring diagram (QM1) .....	8
Wiring installation instruction (QM1).....	9
<b>“TOWERCHRON QM2” .....</b>	<b>13</b>
Applications (QM2) .....	13
Programming your “TOWERCHRON QM2” .....	14
Internal wiring diagram (QM2) .....	15
Wiring installation instruction (QM2).....	16



## Safety Instructions



### WARNING

#### Danger! Risk of electric shock!

- ▷ Connection and mounting must be performed by a professional electrician!

- Installation must be carried out by a qualified electrician and conformed to current IEE Regulations!
- Mains supply must be suitably fused (usually 3 amps) and provision made for Class A circuit disconnection.
- Control is suitable for fixed wiring only.
- If the unit is to be surface wired:
  - Remove backplate by slackening fixing screw and separating plate and timeswitch.
  - Remove the knock out from the backplate and the timeswitch.
  - Screw backplate to wall with counter sunk number 8. (Wood screws using fixing holes provided.)
- For switch mounting:
  - Use the centre two holes and fix backplate to box using machine screws.
  - To ensure clearance for the down flap, ensure that there is a minimum of 4 cm clearance under the unit when mounted.



## What is a programmer?

Programmers allow you to set 'On' and 'Off' time periods. Some models switch the central heating and domestic hot water on and off at the same time, while others allow the domestic hot water and heating to come on and go off at different times.

Set the 'On' and 'Off' time periods to suit your own lifestyle. On some programmers you must also set whether you want the heating and hot water to run continuously, run under the chosen 'On' and 'Off' heating periods, or be permanently off.

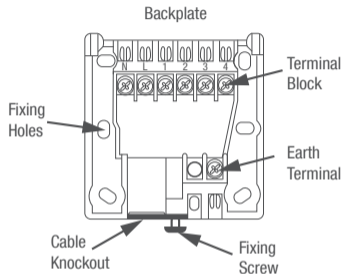
The time on the programmer must be correct. Some types have to be adjusted in spring and autumn at the changes between Greenwich Mean Time and British Summer Time.

You may be able to temporarily adjust the heating programme, for example, 'Override', 'Advance' or 'Boost'. These are explained in the manufacturer's instructions.

The heating will not work if the room thermostat has switched the heating off. And, if you have a hot water cylinder, the water heating will not work if the cylinder thermostat detects that the hot water has reached the correct temperature.



## General installation instructions



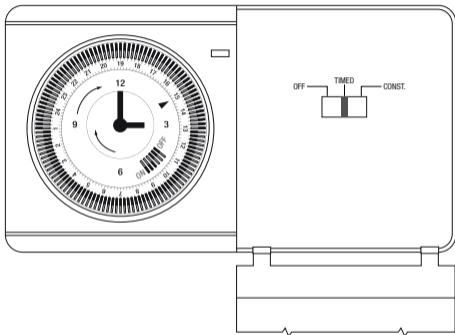
The TOWERCHRON QM1 and QM2 are both double insulated so earth protection is not required. However in the backplate a terminal for earth continuity is provided which should be used if earth conductors are present in your cable. Make sure that the earth conductors are sleeved to prevent accidental contact with live parts.

## Specifications

Installation	double insulated
Rating	5 amps (2 amps) at 240 volts 50 hertz
Fitting	surface mounted or to a single gang plaster depth socket outlet
Dimensions	156 x 85 x 42
Maximum ambient temperature	50° centigrade
Type 1 action	Type 1B
Micro disconnection	
Pollution protection	Normal pollution situation



## “TOWERCHRON QM1”



### Applications (QM1)

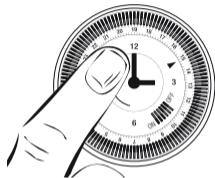
- Any simple time switching application up to the stated rating.
- Domestic heating system where both heating and hot water services are required to switch ON and OFF at the same time.
- Controlling a “combi” or “combination boiler”.



## Programming your “TOWERCHRON QM1”

### Setting time of day

Rotate the minute hand of the clock until the arrowhead in clock face aligns with the correct time on the outer dial, i.e. 8 = 8.00 a.m., 14 = 2.00 p.m.



### Setting ON/OFF times

Move all tappets between ON and OFF times required to outer position. The minimum switching time is 15 minutes. Set any other ON/OFF periods in a similar manner

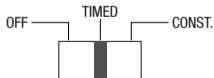


### Slide switches (under drop down cover)

Pull top edge of drop down cover to gain access to slide switch.

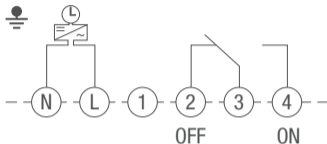
The slide switch provide following functions:

- OFF service off completely
- TIMED service comes on between ON and OFF periods as set on tappets on clock face
- CONST. service is on continuously





## Internal wiring diagram (QM1)



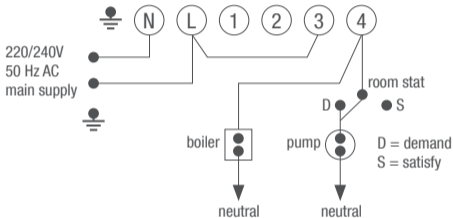
- Carry out wiring installation using appropriate diagram as shown.
- When the TOWERCHRON QM1 timeswitch is to be used with a combination boiler, always refer to the boiler manufacturers instructions concerning electrical wiring before using the information contained in this leaflet. In some cases the boilers manufacturers instructions will contain information regarding removal of certain link wires and will always indicate the fuse rating for the mains electrical supply.
- Plug in unit and secure to the base by tightening fixing screw.





## Wiring installation instruction (QM1)

Simple circuit for for domestic central heating boiler with gravity fed hot water supply



This diagram is correct for mains operated systems. The link wire L-3 must be fitted by the installer.

## Room stat conversation chart

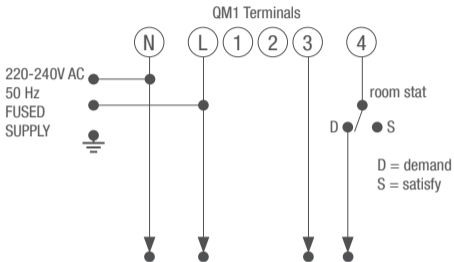
	E	N	C O M	D E M	S A T
TOWER SS	E	4	1	2	
TOWER SSTRS	E	4	1	3	
ACL TS 142	E	4	1	2	
DRAYTON RTE	E	4	1	2	3
HONEYWELL T 6160B		2	1	3	4
LANDIS&GYR RAD 5		4	6	2	
SWITCHMASTER SRT2	5		1	3	2
SUNVIC TLX2259	E	4	3	1	

TOWERCHRON QM1 is ideally suited for controlling combination boilers. The following basic circuit diagrams apply for the range indicated.



## Important note:

It is important that you always refer to the Boiler Manufacturers Instructions concerning electrical wiring before using the information contained in this leaflet. In some cases the Boiler Manufacturers Instructions will contain information regarding removal of certain link wires and will always indicate the fuse rating for the main electrical supply.



### Combination Boiler Model

Chaffoteux Celtix 2.20 OFF	N	PH	7	6
FIM Leblanc GVM 420	see special circuit			
Glowworm Fuelsaver	N	L	8	7
Ravenheat	N	L	C	D
Saunier Duval SD 620 F	N	L	2	3
Saunier Duval SD 123C	N	L	2	1
Saunier Duval SD 235C	N	L	2	1
Saunier Duval SD 135C	N	L	2	1



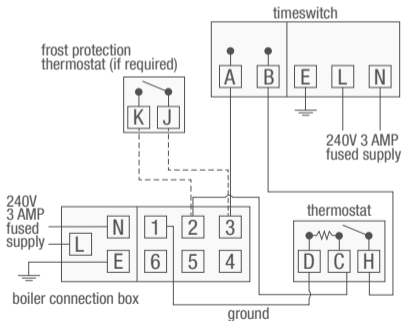
Saunier Duval SD 625M	see special circuit			
Vaillant VCW 20/1 T3W	1MP	2R	3	4
Vaillant VCW 25/1 T3W	1MP	2R	3	4
Vaillant VCW Sine 18 T3W	1MP	2R	3	4
	N	L		
Vaillant VCW GB 182 EH	1	2	3	4
Vaillant VCW GB 242 EH	1	2	3	4
Vokera 18/72 MCF	N	L	4	5
Vokera 21/84 MCF	N	L	4	5
Vokera 21/84 TURBO	N	L	4	5
Vokera 18/72 DMCF	N	L	3	4
Vokera 21/84 DMCF	N	L	3	4
Vokera 21/84 DC TURBO	N	L	3	4
Vokera 20/80 RS TURBO	N	L	3	4
Worcester Heatslave Senior 12	N	L	2	4
Worcester Heatslave Senior 20430	N	L	2	4
Worcester Heatslave Senior 6	N	L	2	6
Worcester Heatslave 9-24 RSF	N	L	1	2
Worcester Heatslave 9-24 BF	N	L	1	2
Worcester Heatslave 9-24 OF	N	L	1	2
Worcester Heatslave High Flow BF	N	L	2	2
Worcester Heatslave High Flow OF	N	L	2	3



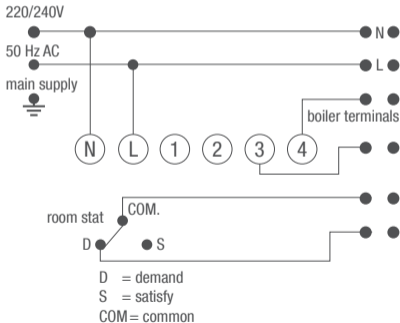
## Saunier Duval SD625M

Always use special 24V thermostat supplied with this boiler, and wire as indicated in boiler instructions substituting time switch terminals A and B for terminals 3 and 4 respectively on QM1.

### Boiler with timeswitch and room thermostat

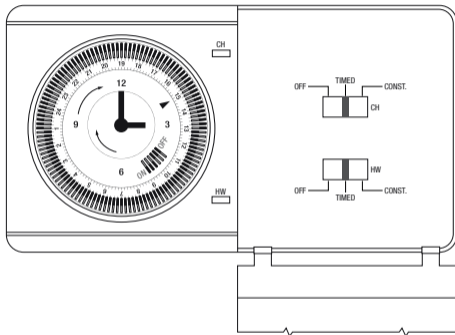


### Elm Leblanc GVM 420





## “TOWERCHRON QM2”



### Applications (QM2)

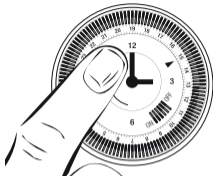
- Fully pumped central heating systems using mid position valves, spring return valves or “power open”, “power closed” valves.
- Gravity hot water, pumped heating systems with or without motorised valves fitted into the domestic hot water primary circuit.
- Unit, as supplied is suitable for gravity hot water systems. For use on pumped primary systems, separate the backplate from the unit by slackening the securing screw and remove the red pin in the back of the programmers chassis.



## Programming your “TOWERCHRON QM2”

### Setting time of day

Rotate the minute hand of the clock until the arrowhead in clock face aligns with the correct time on the outer dial, i.e. 8 = 8.00 a.m., 14 = 2.00 p.m.



### Setting ON/OFF times

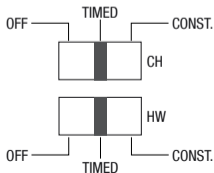
Move all tappets between ON and OFF times required to outer position. The minimum switching time is 15 minutes. Set any other ON/OFF periods in a similar manner



### Slide switches (under drop down cover)

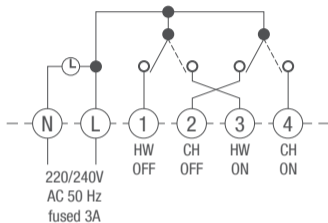
Pull top edge of drop down cover to gain access to slide switches. Two switches are provided, one for heating, the other for hot water. Depending on system installed, each switch provides following functions:

- OFF service off completely
- TIMED service comes on between ON and OFF periods as set on tappets on clock face
- CONST. service is on continuously





## Internal wiring diagram (QM2)

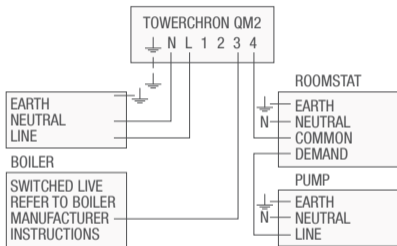


- Carry out wiring installation using appropriate diagram as shown.
- Plug in unit and secure to the base by tightening fixing screw.



## Wiring installation instruction (QM2)

### Gravity Hot Water / Pumped Heating - System with Room Stat to Control Pump



- With the above system, the following combination can not be selected on the slide switches:
  - Heating TIMED, hot water off
  - Heating CONST, hot water off
  - Heating CONST, hot water timed
- Fully pumped systems
  - Remove red pin (see applications TOWERCHRON QM2)

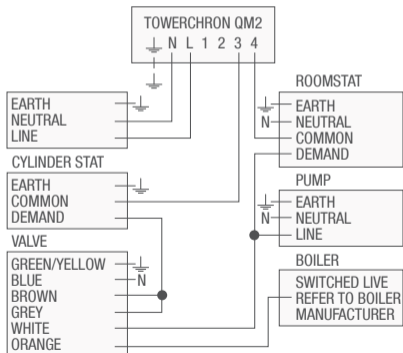
The following wiring diagrams are schematic only (for clarity the earth and neutral connections are omitted). We suggest when wiring systems a suitable wiring centre is used (the Tower Controls wiring centre is purpose made and gives full information for wiring this programmer into systems using compatible equipment).





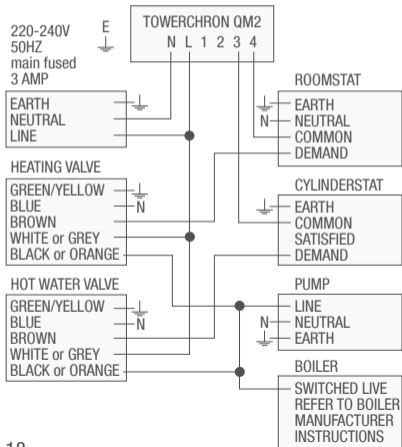
## Gravity Hot Water / Pumped Heating System - Two Port Valve in D.H.W. with Room and Cylinder Stats

Note: Only valves with “change over” end switches are suitable.

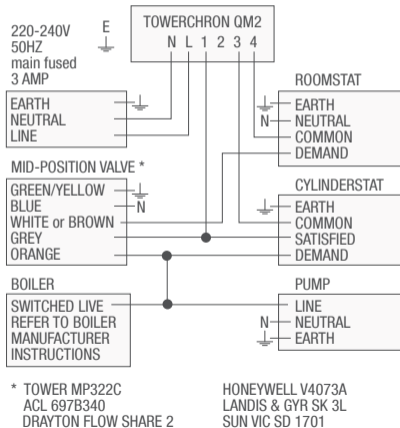




## Fully Pumped System using 2 Port Spring Return



## Fully Pumped System using 3 Port Mid-Position Valve





## Conversion Chart for different Room / Cylinder Thermostats

### Cylinder Stats

	E	C O M	D E M	S A T
TOWER CS1		RED	BLK	YEL
ACL HTS 2				
DRAYTON CS1	E	1	2	3
HONEYWELL L641 A		C	1	2
LANDIS&GYR RAM 21		1	2	3
SWITCHMASTER SCT		1	2	3
SUNVIC SA 2451	E	3	1	2

### Room Stats

	E	N	C O M	D E M	S A T
TOWER SS	E	4	1	2	
TOWER RS	E	4	1	3	
ACL TS 142	E	4	1	2	
DRAYTON RTE	E	4	1	2	3
HONEYWELL T 6160B		2	1	3	4
LANDIS&GYR RAD 5		4	6	2	2
SWITCHMASTER SRT2	5		1	3	
SUNVIC TLX2259	E	4	3	1	

80.10.0791.7/07/11/03 - 11/0036

## Grässlin GmbH

Bundesstraße 36  
D-78112 St. Georgen  
Germany

Phone: +49 (0) 7724 / 933-0

Fax: +49 (0) 7724 / 933-240

[www.graesslin.de](http://www.graesslin.de)

[info@graesslin.de](mailto:info@graesslin.de)