



1" VERSION



2" VERSION

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SAFETY AND PROPER USAGE

To ensure safe and enduring performance of this product, you must comply strictly with the instructions enclosed herein. Non-compliance with instructions or improper handling of the product will void your warranty! Usage of this product in conditions not specified in this manual or in contrary to the instructions hereby provided is considered IMPROPER. The manufacturer will not be held liable for any damages resulting from improper use of the product.

SAFETY & WARNING INSTRUCTIONS

- Observe valid and generally accepted safety rules when planning, installing and using this product.
- Take proper measures to prevent unintentional operation of the product or damage to it.
- Do not attempt to disassemble this product or lines in the system while they are under pressure.
- Always depressurise the compressed air system before working on the system.

It is important that personnel use safe working practices and observe all regulations and legal requirements for safety when operating this product. When handling, operating or carrying out maintenance on this product, personnel must employ safe engineering practices and observe all local health & safety requirements & regulations. International users refer to regulations that prevail within the country of installation. Most accidents, which occur during the operation and maintenance of machinery, are the result of failure to observe basic safety rules or precautions. An accident can often be avoided by recognising a situation that is potentially dangerous. Improper operation or maintenance of this product could be dangerous and result in an accident causing injury or death. The manufacturer cannot anticipate every possible circumstance, which may represent a potential hazard. The WARNINGS in this manual cover the most common potential hazards and are therefore not all-inclusive. If the user employs an operating procedure, an item of equipment or a method of working which is not specifically recommended by the manufacturer he must ensure that the product will not be damaged or made unsafe and that there is no risk to persons or property.

NEVER CHANGE ORIGINAL COMPONENTS WITH ALTERNATIVES

INSTALLATION INSTRUCTIONS

Before installing this product, make sure it complies with your request and that it suits your application!

1. Unpack the product and visually inspect for any transport damage incurred after leaving our factory.
2. Depressurise the system before installation or maintenance is carried out!
3. Locate a suitable point in your compressed air system to connect this product. We advise to install it as close to your compressed air tank as possible.

Installation notes:

- Make sure that no solid matter (e.g. sealing compound residue) gets into the product during the installation.
- Make sure that the pipeline is thoroughly clean.
- Use quality sealing compound only!
- Use proper tools for fixing the valve part to your pipe work! Never use the product as a lever.

4. The motorised ball valve part of this product operates in any mounting position. However we recommend that the product is mounted upright or side-ways.

5. Minimum space required around the unit is 100 mm, to allow for manual operation and programming.

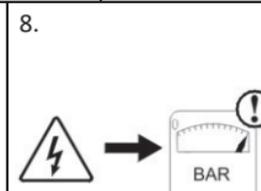
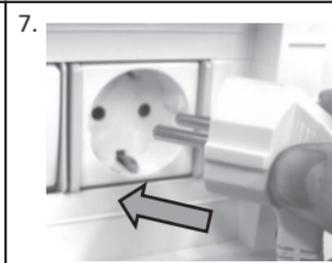
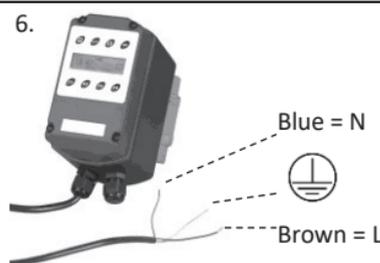
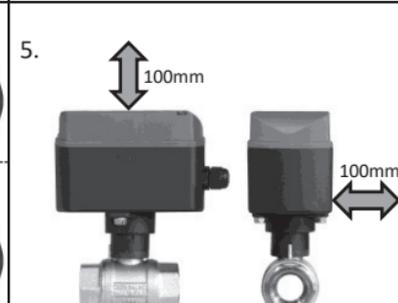
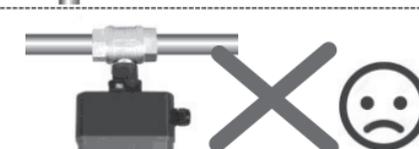
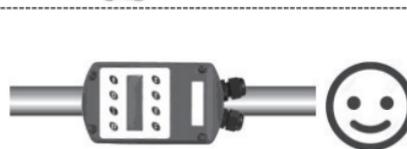
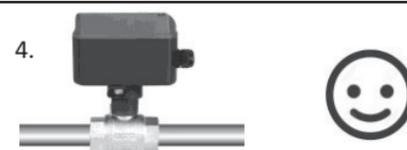
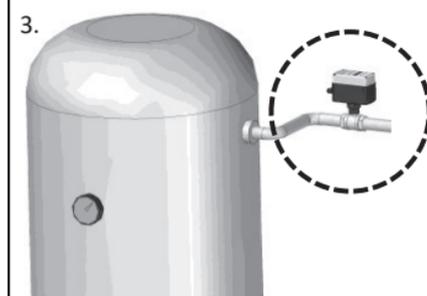
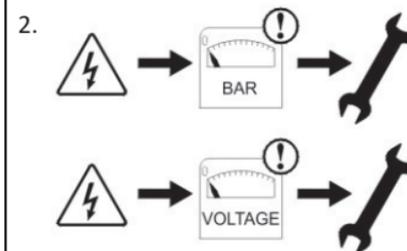
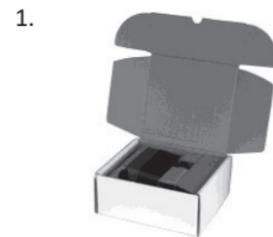
6. Connect the product to your power supply as illustrated.

NOTE: grounding is required.

7. Make sure that your power supply voltage and frequency comply with those stated on the product before you switch it on!

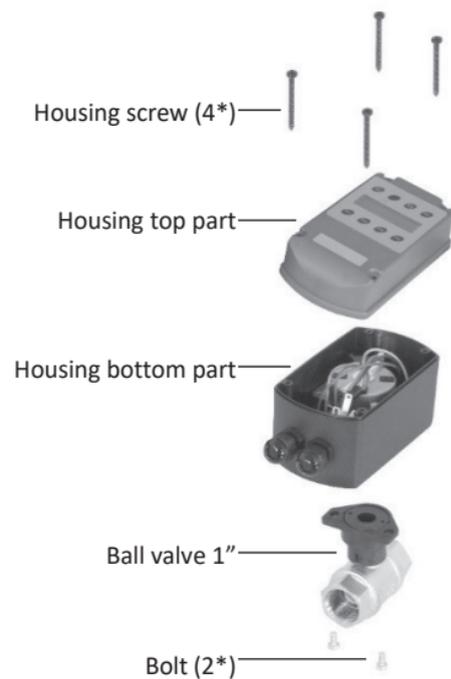
8. Restore system pressure.

9. The product is ready for programming (see pages 8 - 24).

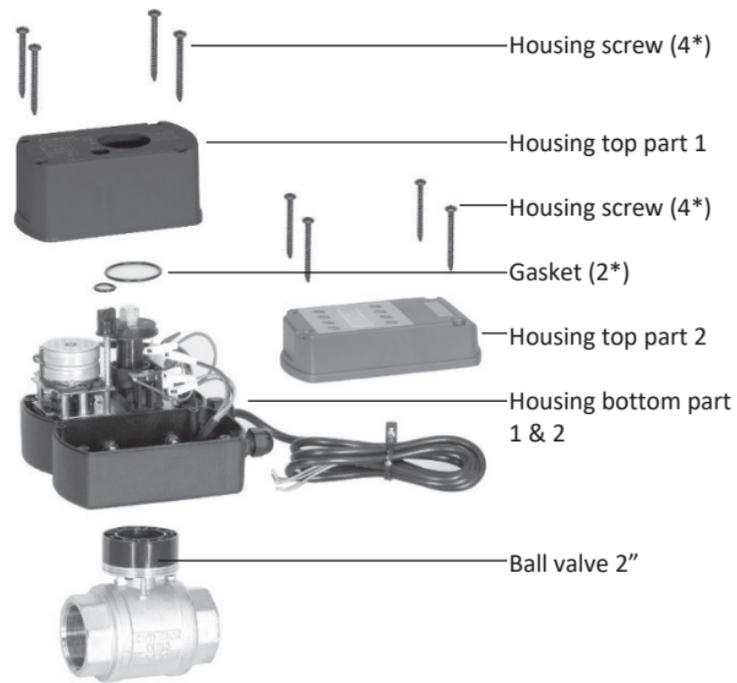


EXPLODED VIEWS

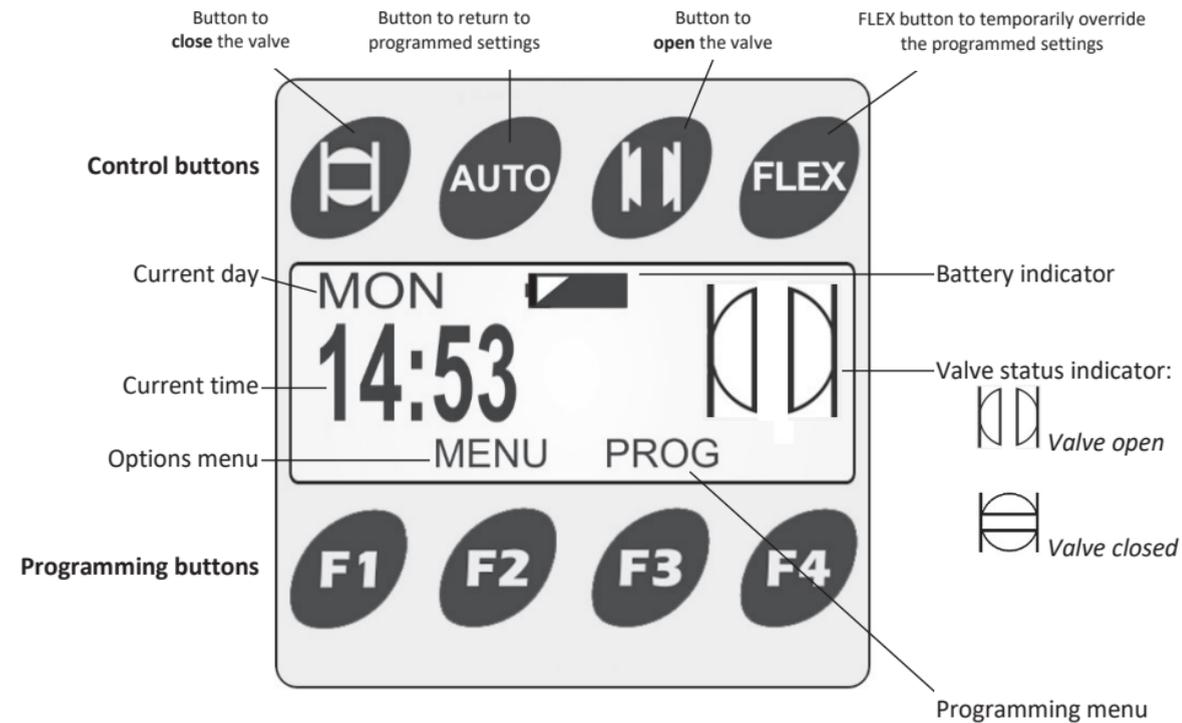
1" VERSION



2" VERSION



DISPLAY Press F1 to activate the display (in battery mode)



See instructions further on for detailed information concerning button functions.

STANDARD FACTORY SETTINGS (PRE-PROGRAMMED)

1. The language of the unit is factory pre-set to English. To change the language, go to page 18.

2. Check if the pre-set Day and Time settings on the display match with your own Day and Time in your geographical location. If not, see page 9 how to adjust the current Day and Time settings.

3. Pre-programmed valve Open and Close times

The unit is pre-programmed to OPEN at 6.00 and CLOSE at 18.00 from Monday to Friday. If these pre-programmed valve open and close days and times are not according to your wishes, you can delete these settings by first performing a 'FACTORY RESET' (page 21). Next you can program the unit starting with 'PROGRAMMING' (pages 11 - 14) to fit your specific application requirements.

CURRENT DAY AND TIME SETTING 1/2

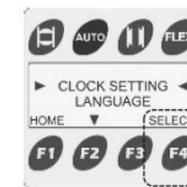
1. Press F1 to activate the display.

Press F2 to select 'MENU'.

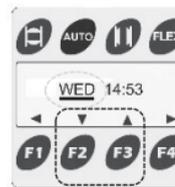


2. Press F4('SELECT') to go to CLOCK SETTING modus.

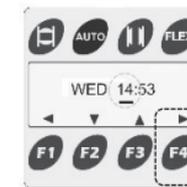
Note: The selected option is indicated by the two side arrows, i.e. ► CLOCK SETTING ◀



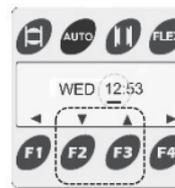
3. Choose the current day by pressing F2(▼) and F3(▲) to scroll down and up.



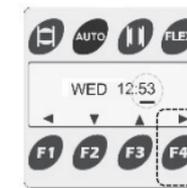
4. Press F4(►) to go to the next setting (hours).



5. Choose the current hour by pressing F2(▼) and F3(▲) to scroll down and up.

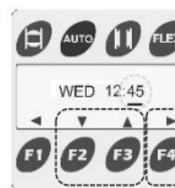


6. Press F4(►) to go to the next setting (minutes).



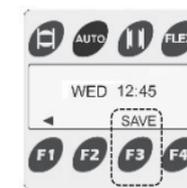
7. Choose the current minutes by pressing F2(▼) and F3(▲) to scroll down and up.

Press F4(►) to go to 'SAVE'.

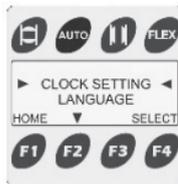


8. Press F3 to 'SAVE' your new settings.

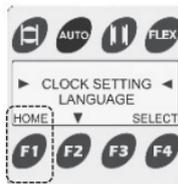
To cancel your new settings, see NOTE! on the next page.



9. You will return to the previous menu.



10. Press F1('HOME') to exit the menu.



11. Your current Day and Time is now set.



NOTE! While setting Day and Time, you can always cancel your new settings by pressing F1 to go to back and then press F1 (BACK) to confirm the cancellation. You will then return to the previous menu. See step 2 to reset the current day and time.



12. a) The units' VALVE OPEN AND CLOSE TIMES are pre-programmed to OPEN THE VALVE at 6.00 and CLOSE THE VALVE at 18.00, from Monday to Friday. If these pre-programmed VALVE OPEN AND CLOSE times suit your application, the unit is now set and ready for use.

b) If the pre-programmed VALVE OPEN AND CLOSE TIMES do **NOT** suit your specific application requirements, you can change these pre-programmed times (see 'CHANGING, DELETING or ADDING VALVE OPEN AND CLOSE SETTINGS', page 15, 16 and 17) **OR** completely delete all pre-programmed times (see 'FACTORY RESET', page 21). You can now set the new VALVE OPEN AND CLOSE TIMES to suit your specific application requirements ('PROGRAMMING VALVE OPEN AND CLOSE DAYS AND TIMES' (pages 11 - 14).

EXAMPLE: In this programming-example the unit will be set to weekly open the valve at 7:15 and close the valve at 18:15, from Monday to Friday (5-day week).

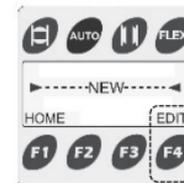
➔ FIRST DELETE ALL PRE-PROGRAMMED SETTINGS USING THE INSTRUCTIONS ON PAGE 21 ('FACTORY RESET')!

1. Press F1 to activate the display.



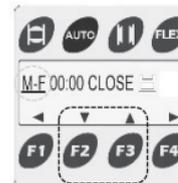
Press F3('PROG') to go to the program setting screen.

2. Press F4('EDIT') to set the first program setting.



Starting with programming the valve OPEN day(s) and times.

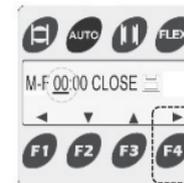
3. Use F2(▼) and F3(▲) to scroll down and up and select **M-F** (option c, for this example).



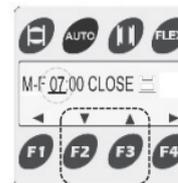
Options:

- Mon, Tue, Wed, Thu, Fri, Sat, Sun (individual day)
- ALL for all days of the week (7-day week)
- M-F for MONDAY to FRIDAY (5-day week)
- S-S for SATURDAY and SUNDAY (weekend)

4. Press F4(▶) to choose the next setting (hours).

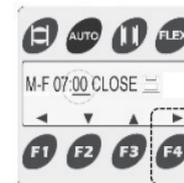


5. Choose the desired setting by pressing F2(▼) and F3(▲) to scroll down and up.



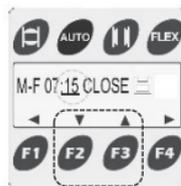
Set the hours to '7'.

6. Press F4(▶) to choose the next setting (minutes).



PROGRAMMING VALVE OPEN AND CLOSE DAYS AND TIMES 2/4

7. Choose the desired setting by pressing F2(▼) and F3(▲) to scroll down and up.



Set the minutes to '15'.

8. Press F4(▶) to choose the next setting.



9. Choose the desired setting (OPEN or CLOSE) by pressing F2(▼) and F3(▲) to scroll down and up.



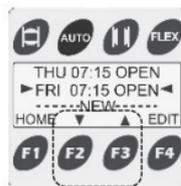
Set to 'OPEN'.

10. Press F4(▶) to choose .

Press F3 to 'SAVE' your new valve OPEN settings. You will return to the previous menu.

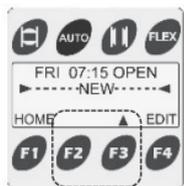


Note: you can now use F2(▼) and F3(▲) to scroll down and up into the generated list to check the current settings. You will now only see the Monday to Friday OPEN times set at 07:15.



11. Press F2(▼) and F3(▲) to scroll down and up to select a 'NEW' setting.

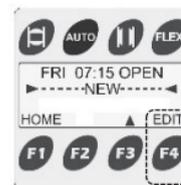
Note: The selected option is indicated by the two side arrows, i.e. .



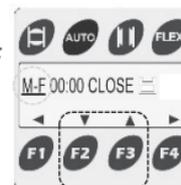
PROGRAMMING VALVE OPEN AND CLOSE DAYS AND TIMES 3/4

12. Press F4('EDIT') to set the new setting.

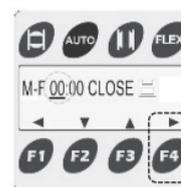
Continuing with programming the valve CLOSE day(s) and times.



13. Use F2(▼) and F3(▲) to scroll down and up and select *M-F* (option c, for this example):
Options:
a. *Mon, Tue, Wed, Thu, Fri, Sat, Sun* (individual day)
b. *ALL* for all days of the week (7-day week)
c. *M-F* for MONDAY to FRIDAY (5-day week)
d. *S-S* for SATURDAY and SUNDAY (weekend)

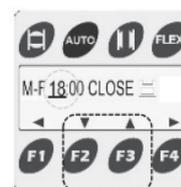


14. Press F4(▶) to choose the next setting (hours).

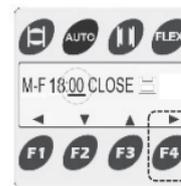


15. Choose the desired hour setting by pressing F2(▼) and F3(▲) to scroll down and up.

Set the hours to '18'.

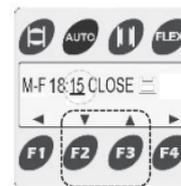


16. Press F4(▶) to choose the next setting (minutes).



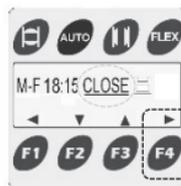
17. Choose the desired minutes setting by pressing F2(▼) and F3(▲) to scroll down and up.

Set the minutes to '15'.



PROGRAMMING VALVE OPEN AND CLOSE DAYS AND TIMES 4/4

18. Press F4(▶) to choose the next setting (open or close).



19. Choose the desired valve 'OPEN' or 'CLOSE' setting by pressing F2(▼) and F3(▲) to scroll down and up.



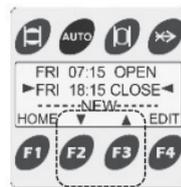
Set to 'CLOSE'.

20. Press F4(▶) to choose .



Press F3 to 'SAVE' your new valve CLOSE settings. You will return to the previous menu.

Note: You can now use F2(▼) and F3(▲) to scroll down and up into the generated list to check the current settings. You will see the Monday to Friday OPEN and CLOSE times in chronological order.



In this example the unit is now programmed to open at 7:15 and close at 18:15 every Monday to Friday.

Press F1('HOME') to return to the HOME screen.

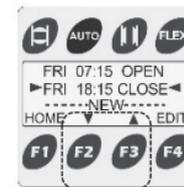
CHANGING VALVE OPEN AND CLOSE SETTINGS

1. Press F1 to activate the display.



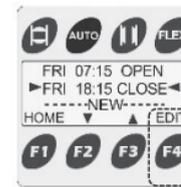
Press F3('PROG').

2. To **change** a setting, choose the desired day and time by pressing F2(▼) or F3(▲) to scroll down or up.

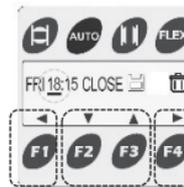


Note: Your selected option is indicated by the two side arrows, i.e. ▶FRI 18:15 CLOSE◀

3. Press F4('EDIT') to **change** the setting.



4. Select the setting you like to **change** (day, hours, minutes, open/close) by pressing F1(◀) or F4(▶).



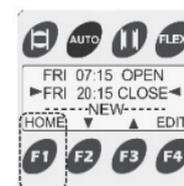
Change the setting by pressing F2(▼) or F3(▲).

5. Press F4(▶) to choose .



Press F3 to 'SAVE' your new settings. You will return to the previous menu.

6. Press F1('HOME') to return to the HOME screen.



DELETING VALVE OPEN AND CLOSE SETTINGS

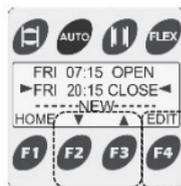
1. Press F1 to activate the display.

Press F3('PROG').

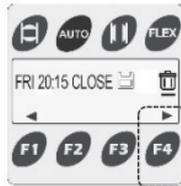


2. To **delete** a setting, choose the desired day and time by pressing F2(▼) or F3(▲) to scroll down and up. Press F4('EDIT') to select.
Note: Your selected option is indicated by the two side arrows, i.e.

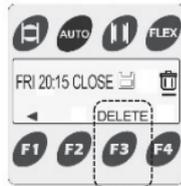
►FRI 20:15 CLOSE◀



3. Press F4(▶) to choose .

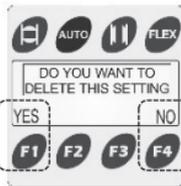


4. Press F3('DELETE').

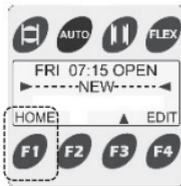


4. Press F1('YES') to **delete** or F4 ('NO') to **cancel**.

You will return to the previous menu.



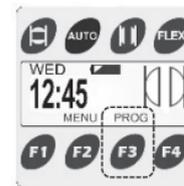
5. Press F1('HOME') to return to the HOME screen.



ADDING VALVE OPEN AND CLOSE SETTINGS

1. Press F1 to activate the display.

Press F3('PROG').



2. To **add** a setting, press F3(▲) to go up and select the free setting line ('---NEW---').

Note: The selected option is indicated by the two side arrows, i.e.

►-----NEW-----◀



3. Press F4('EDIT') to add a setting.



4. Go to page 11 'PROGRAMMING VALVE OPEN AND CLOSE DAYS AND TIMES': ➡ **SKIP THE INSTRUCTIONS "FIRST DELETE ALL PRE-PROGRAMMED...('FACTORY RESET')!"** and follow the programming instructions (step 3 - 10) to add the desired new settings.

LANGUAGE SELECTION

You can change the pre-set language (English) of the unit. The language options are: English, Deutsch, Español, Nederlands and Français.

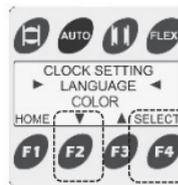
1. Press F1 to activate the display.

Press F2('MENU') to enter the menu.

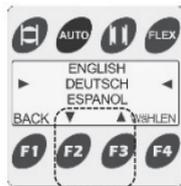


2. Use F2(▼) to scroll down to select 'LANGUAGE'.

Press F4('SELECT') to enter the menu.

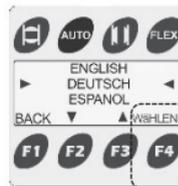


3. Choose your desired language, *i.e.* 'DEUTSCH', by pressing F2(▼) or F3(▲) to scroll down or up.



4. Press F4('WÄHLEN') to change to your desired language.
Note: The selected option is indicated by the two side arrows, i.e.

▶ DEUTSCH ◀



5. Press F1('HOME') to return to the HOME screen.



BACKLIGHT COLOR SELECTION

You can change the backlight color of the display.

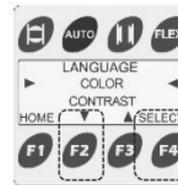
1. Press F1 to activate the display.

Press F2('MENU') to enter the menu.

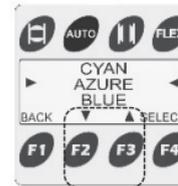


2. Use F2(▼) to scroll down to select 'COLOR'.

Press F4('SELECT') to enter the menu.

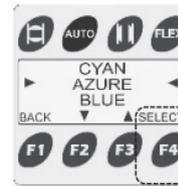


3. Choose your desired backlight colour, *i.e.* 'AZURE', by pressing F2(▼) or F3(▲) to scroll down or up.

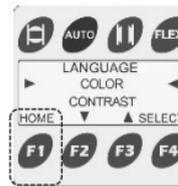


4. Press F4('SELECT') to change to your desired colour.
Note: The selected option is indicated by the two side arrows, i.e.

▶ AZURE ◀



5. Press F1('HOME') to return to the HOME screen.



ADJUST CONTRAST LEVEL

You can change the contrast level of the display.

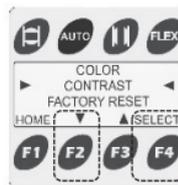
1. Press F1 to activate the display.

Press F2('MENU') to enter the menu.



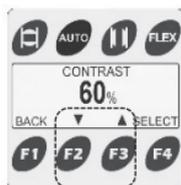
2. Use F2(▼) to scroll down to select 'CONTRAST'.

Press F4('SELECT') to enter the menu.

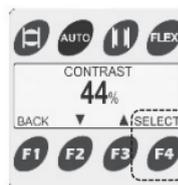


3. Choose your desired contrast level (%) by

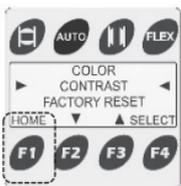
pressing F2(▼) or F3(▲) to scroll down or up.



4. Press F4('SELECT') to change to your desired contrast level.



5. Press F1('HOME') to return to the HOME screen.



FACTORY RESET

You can delete all programmed time cycles, clock settings and selected language by resetting the unit.

1. Press F1 to activate the display.

Press F2('MENU') to enter the menu.

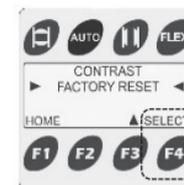


2. Press F2(▼) to scroll to 'FACTORY RESET'.

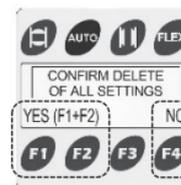
Press F4 to select.

Note: The selected option is indicated by the two side arrows, i.e.

▶ FACTORY RESET ◀



3. Press F1+F2 simultaneous to confirm ('YES') or F4 to cancel ('NO').



4. The unit has now been reset and the complete memory has been deleted. First action is to set the current day and time, see page 9 (step 3) for the procedure.

VALVE OPEN OR CLOSE BUTTONS

By pressing the VALVE OPEN or VALVE CLOSE button you can OPEN or CLOSE the ball valve, overruling the AUTO program.

1. You can open or close the ball valve by pressing the VALVE

OPEN  or VALVE CLOSE  button.



2. By pressing the VALVE OPEN  or VALVE CLOSE  button, the AUTO program will be overruled indefinite.

When set to this mode, the display will turn red. A warning sign with an arrow pointing at the VALVE STATUS INDICATOR and a text will flash, indicating the valve is OPENED or CLOSED, overruling the AUTO program.



3. Press AUTO  to go back to the programmed valve OPEN AND CLOSE settings.

The unit will now return to its programmed time cycles and background colour.



FLEX FUNCTION (1/2)

The FLEX function is designed to operate (OPEN or CLOSE) the motorised ball valve during programmed OPEN and CLOSE time cycles (i.e. for working overtime, during vacation or maintenance activities).

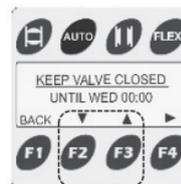
In this example the ball valve will be closed for 4 hours for maintenance activities.

1. Press 'FLEX' to open the FLEX function.

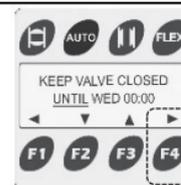


2. Choose 'KEEP VALVE OPEN' or 'KEEP VALVE CLOSED' by pressing F2(▼) or F3(▲) to change the option.

For this example we choose 'KEEP VALVE CLOSED'

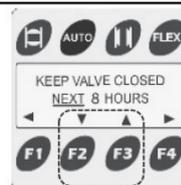


3. Press F4(▶) to go the next setting.



4. Choose 'UNTIL ... 00:00' or 'NEXT ... HOURS' by pressing F2(▼) or F3(▲) to change the option.

For this example we choose 'NEXT ... HOURS'



5. Press F4(▶) to go the next setting.



6. Press F2(▼) or F3(▲) to change the value.

For this example we choose '4'



FLEX FUNCTION (2/2)

7. Press F4(▶).



8. Press F3('SAVE') to save your settings and return to the HOME screen.



9. 'FLEX with an arrow pointing at the valve status indicator and remaining time' will now flash on the HOME screen, indicating the timer is now in FLEX FUNCTION. *The background color of the display will turn red.*



10. The unit will automatically return to its programmed settings when the FLEX modus is ended.

You can exit the FLEX FUNCTION mode by pressing 'AUTO'.

The unit will now return to its programmed time cycles and background colour.



BATTERY

The clock operates on one CR2032 (3V) button cell battery. The battery only act as a back-up for the clock during a power failure. The battery does not operate the valve in the case of a power failure. The battery indicator on the display shows when it is time to replace the battery (background colour of the display will turn red, indicating it is urgent to replace the battery). Rely as little as possible on the battery back-up.



Battery full, no action required.

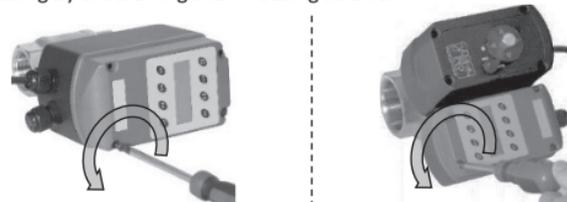


Battery half full, no immediate action required.

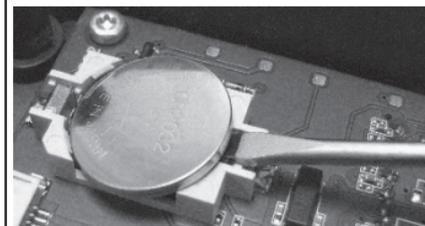


Battery nearly empty, time to replace battery (display colour of the display will turn red)

1. To change the battery, turn off the power supply and open the housing by unscrewing the 4 housing screws.



2. Remove the battery carefully using a small screwdriver.



3. Carefully place the new battery. Push it in (1) and down (2) until it clicks into place.



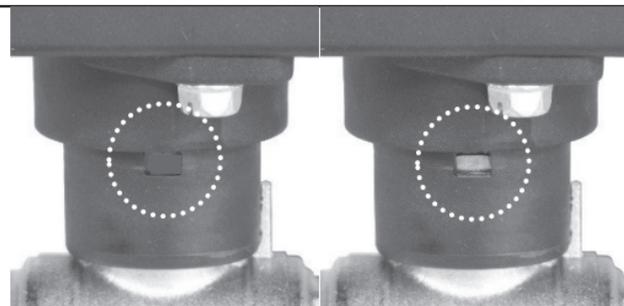
Make sure the markings on the battery are pointing upwards.

4. Close the housing and turn the power supply back on.

See page 9 + 10 to set current day and time (programmed VALVE OPEN AND CLOSE DAYS AND TIMES will remain stored in the units memory).

1" VERSION MANUAL OVERRIDING

You can manually open and close the 1" ball valve by pushing the actuator towards the ball valve and turning it left or right 90°.

**VALVE INDICATOR**

**RED =
VALVE OPEN**

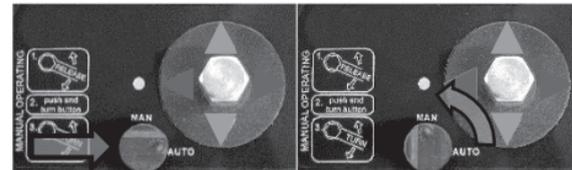
**No colour (metal) =
VALVE CLOSED**

PLEASE NOTE: After a manual override the actuator will be 90° rotated versus the ball valve. All indicators (except for the valve indicator) and settings will become reversed, meaning the pre-programmed OPEN and CLOSE settings will become reverse, i.e. OPEN will become CLOSED and CLOSED will become OPEN.

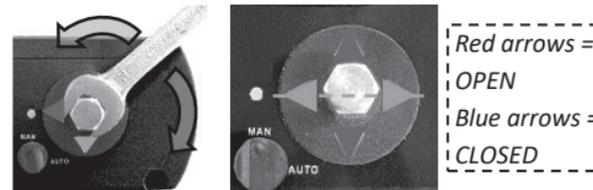
2" VERSION MANUAL OVERRIDING

You can manually OPEN and CLOSE the 2" ball valve.

1. Push down and turn the switch from 'AUTO' to 'MAN'.



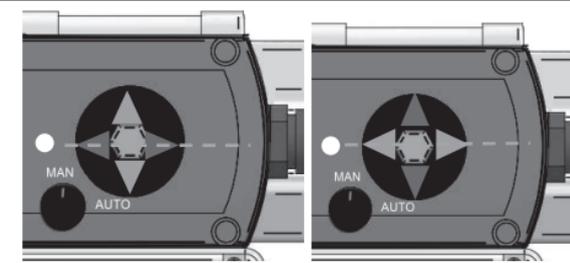
2. Use a 13mm wrench to OPEN or CLOSE the ball valve.



Red arrows =
OPEN
Blue arrows =
CLOSED

Please note: When the manual override switch is in 'MAN' position, the clock will not open or close the valve automatically. The clock will only open or close the valve, according to the programmed valve open and close times, in 'AUTO' position.

When in 'MAN' position, the clock will not display the actual Open or Close position of the ball valve.

VALVE INDICATOR

**RED ARROWS =
VALVE OPEN**

**BLUE ARROWS =
VALVE CLOSED**

TECHNICAL SPECIFICATIONS

Min./max. system pressure	0 - 16 bar	0 – 230 psi
Min./max. medium temperature	1 - 100 °C	34 – 210 °F
Min./max. ambient temperature	1 - 50 °C	34 – 120 °F
Supply voltage options	115VAC or 230VAC 50/60Hz. (please check label)	
Power consumption	1": 7W during cycle rotation	2": 9W during cycle rotation
Enclosure protection rating	IP54 (NEMA 13)	
Valve inlet/outlet connections	1" or 2" (BSP or NPT)	
Valve opening/closing duration	1": 30 sec. (90°)	2": 105 sec. (90°)
Valve housing material	Brass, nickel plated	
Illuminated LCD display	Indicating day, time, valve status, battery life <i>(with background color and contrast options)</i>	
LCD display battery	1x CR2032 (3V) Button cell battery	
Programmable options	Weekplanner, max. 100 switching points, to be distributed over 1-7 days	
Manual override	Yes	
Remote controllable	Yes	

DIMENSIONS (mm)

