ALPHA DISPENSER FOR AdBlue

Applies to the following models ONLY:

ALPHA...

/40AB	/40AB.F	/DSAB	/DSAB.F

Please read carefully BEFORE commencing installation.

Registered Office: HYTEK (GB) LIMITED,
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CM22 6DS UK.
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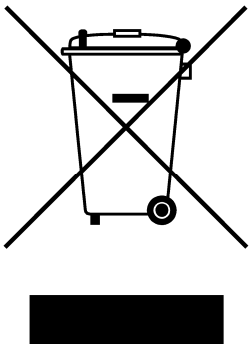
Email: info@hytekgb.com

ENVIRONMENTAL INFORMATION



UK Regulation SI 2013 3113 requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product must be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities.

IMPORTANT WARNING NOTES

1. This dispenser MUST NOT be used to dispense petrol or other flammable liquids and must only be used to dispense AdBlue®.
2. It must not be sited adjacent to a petrol dispenser or in any other hazardous zone.
3. On above ground storage tanks an angle check valve fitted with the appropriate spring or pressure regulating valve must be fitted at the tank outlet to prevent loss of fuel under gravity in the event of vandalism or accidental damage.
4. Installation and maintenance of this equipment along with its associated tank, pipe work and fittings should only be carried out by qualified and competent engineers. Access to the keys, used to open the cabinet, should be restricted to competent engineers only.
5. The installation must conform to all relevant electrical and local authority regulations and standards.
6. It must not be used with other liquids or for other applications. We will accept no warranty claims or liability if it is used for other liquids or applications.
7. Ensure that the AdBlue® supply is suitably filtered to prevent any debris from entering the metering unit and causing damage to the turbine.
8. The pumped AdBlue® supply to the dispenser must not exceed 30 litres per minute. Fuel delivery speed in excess of 30 LPM will exceed the accuracy capabilities of the meter.

CALIBRATION

The meter on this pump unit must be calibrated electronically to ensure accuracy and reliability. See page 7 for instructions on how to carry out this procedure.

INSTALLATION INSTRUCTIONS

1. Check you have the following items:

   1 off Alpha dispenser
   1 off delivery hose
   1 off panel key

2. Open the front panel using the key provided.
3. Remove the rear panel, if necessary, and store safely.

MOUNTING

4. Bolt the dispenser to a firm level foundation by means of the four 14 mm diameter-mounting holes provided.

PUMPED ADBLUE® SUPPLY

5. The AdBlue® supply to the dispenser must not exceed a pressure of 2.7 bar (40PSI) with a maximum flow rate of 30 litres per minute for the ALPHA/DSAB.
6. If multiple dispensers are to be supplied from one pump an independently controlled solenoid valve or similar must be installed before each dispenser to prevent unauthorised delivery of AdBlue®.

PIPEWORK

7. Connect the pipe from the pump to the inlet of the dispenser. Seal the joints with a suitable thread-sealing compound. The pipe work must be sealed to the drip tray (if fitted) to ensure no leaked fuel can flow underground. An alternative pipe work entry point, for above ground pipe work, is provided at the rear of the dispenser base.

8. Connect one end of the delivery hose onto the outlet elbow. Ensure the hose-sealing washer is in place inside the hose end. It should be hand tight plus a quarter turn.
9. Screw the nozzle onto the other end of the hose; again ensuring the washer is in place. No other sealing compound is necessary. Hand tight plus a quarter turn.

ELECTRICAL

10. Remove the covers from the 220/240V supply and the external pulse output connection junction boxes.

11. Connect a constant 220/240V AC 50 Hz supply, fused at 16 amps, to the terminal block in the 220/240V supply junction box as shown on the wiring details diagram.

    NB: The Alpha dispenser must have a continual 220/240V AC supply, even when not in use

12. A 230VAC switched motor supply rated at 10 Amps max. is provided, to control a remote pump motor or relay, at the terminals labelled 230V Motor Output.

13. A 12VDC switched solenoid valve supply rated at 8 W max. is provided, to control a remote solenoid valve or relay, at the terminals labelled SOL OUTPUT.

14. If the Alpha is to be operated in conjunction with a key/card system, remove the link in the 220/240V supply junction box (shown on the Alpha Installation Wiring Diagram) and connect so that the control system makes and breaks the connection.

    Make connection – Pump running
    Break connection – Pump not running

    Alternatively remove the link and connect a switched live supply (230V AC 16A max.) to terminal 4 (shown on the Alpha Installation Wiring Diagram)

    Live supply switched on – Pump running
    Live supply switched off – Pump not running

15. A pulse output for connection to key/card systems is available from the separate terminals located in the junction box. This is a passive contact giving 10 or 100 pulses per litre. Contact ratings are as follows:

    Maximum current - 0.25 amps
    Maximum voltage - 50 volts
    Maximum power - 5 VA

16. Ensure all the terminal screws are tight and replace the junction box covers.

INSTRUCTIONS FOR USE

1. Remove the nozzle from the holster.
2. Place the nozzle spout in the AdBlue® tank.
3. Squeeze the nozzle trigger to dispense fuel.

   On completion of the delivery release the trigger and replace the nozzle in the holster.

MAINTENANCE

The Alpha should require minimum maintenance in normal regular use, but as with all mechanical apparatus regular servicing will prolong its life and ensure maximum efficiency & reliability.

The following should be carried out every 12 months or 1 million litres which ever comes first.

- **Isolate power supply**
- **Inspect & clean or replace inlet filter**
- **Re-calibrate electronic display**

METER MAINTENANCE:
If any metal swarf or particles have entered the meter and jammed the gears then these will need to be carefully removed to avoid damaging the gears.

WARNING:
DO NOT USE COMPRESSED AIR THROUGH THE METER, TO AVOID ANY DAMAGE DUE TO EXCESSIVE ROTATION.

ELECTRONIC DISPLAY/CALCULATOR

FEATURES

6-digit backlit Main LCD display:	Up to 9999.99 or 99999.9 litres per delivery
8-digit backlit totaliser LCD display:	Up to 99999999 litres

Display retained during power failure

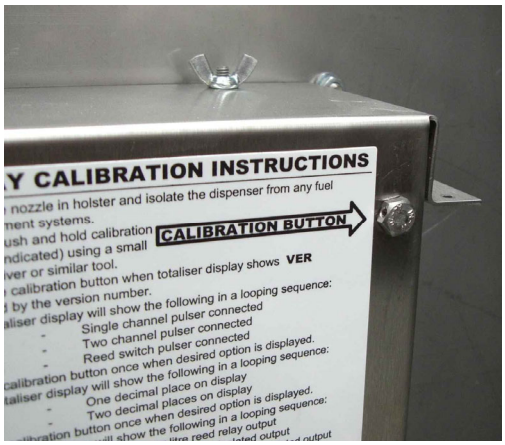
OPERATION

Stand-by mode:	Upper line of LCD display shows previous delivery Lower line of LCD display shows ongoing total
Nozzle removed:	Upper line shows “all eights” then “all zeros” Lower line shows “FUELLING” Pump starts
Fuel drawn:	Upper line shows litres dispensed Lower line shows “FUELLING”
Nozzle Returned:	Pump stops Upper line of LCD display shows previous delivery Lower line of LCD display shows ongoing total

CALIBRATION PROCEDURE - (MUST BE CARRIED OUT TO ENSURE PUMP ACCURACY)

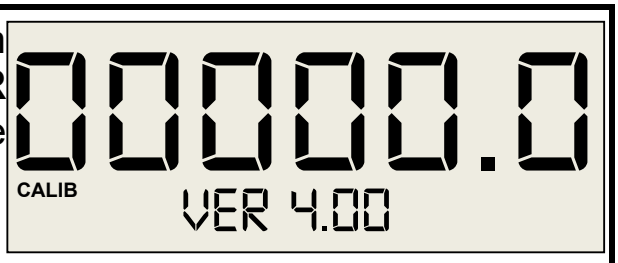
1. Ensure the nozzle is stowed in the holster and the dispenser is isolated from any fuel management systems.

2. Remove calibration button cover bolt from rear of display / calculator housing (if fitted).

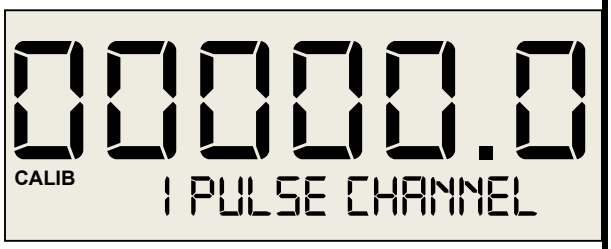


3. Gently push and hold the calibration button using a small screwdriver or similar tool.

4. Release the calibration button when the totaliser display shows **VER** followed by the version number on the lower line of the display.



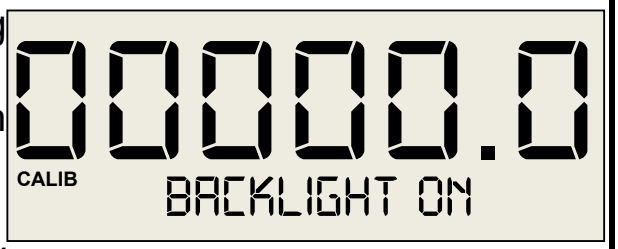
5. The lower line will show the following in a looping sequence:
1 PULSE CHANNEL - Single channel pulser connected
2 PULSE CHANNEL - Two channel pulser connected
REED PULSER - Reed switch pulser connected



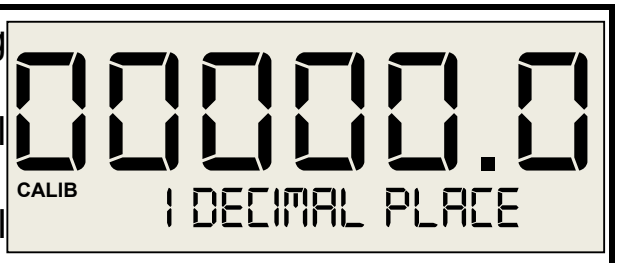
Press calibration button once when desired option is displayed.
Select **2 PULSE CHANNEL** for Weights & Measures Alpha, **REED PULSER** for Alpha fitted with PULS.E18 reed switch pulser (pre August 2003) or AdBlue® Alpha and **1 PULSE CHANNEL** for all other Alpha versions.

6. The lower line will show the following in a looping sequence:
LITRES – Display measures in litres.
GALLONS – Display measures in gallons (Imperial or US)
Press calibration button once when desired option is displayed.

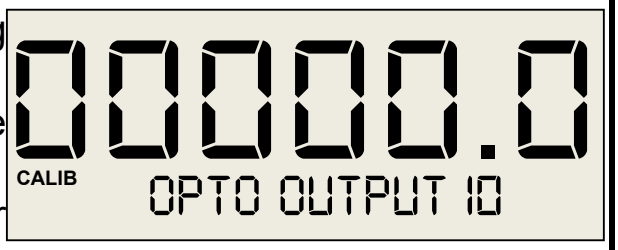
7. The lower line will show the following in a looping sequence:
BACKLIGHT ON – backlight on constantly.
BACKLIGHT OFF – backlight off.
ON FOR FUELLING – backlight only on during fuelling.
Press calibration button once when desired option is displayed.



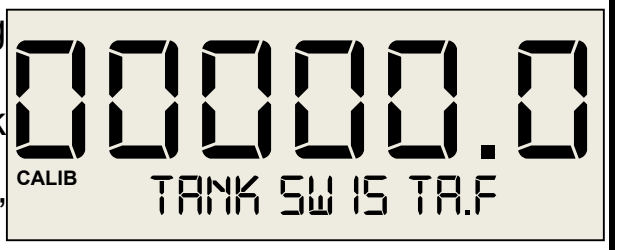
8. The lower line will show the following in a looping sequence:
   1 DECIMAL PLACE - One decimal place on display
   2 DECIMAL PLACE - Two decimal places on display
   Press calibration button once when desired option is displayed.



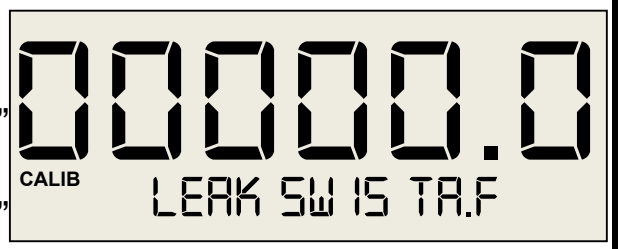
9. The lower line will show the following in a looping sequence:
   REED RELAY 10 - Ten pulse per litre reed relay output.
   OPTO OUTPUT 10 - Ten pulse per litre opto-isolated output.
   OPTO OUTPUT 100 - One hundred pulse per litre opto-isolated output.
   Press calibration button once when desired option is displayed.



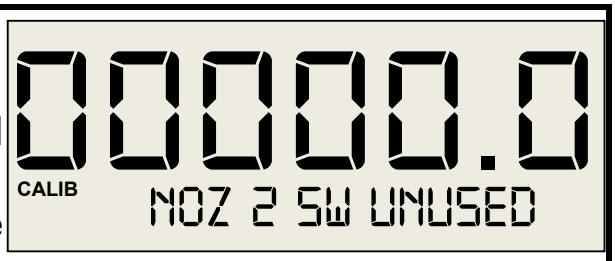
10. The lower line will show the following in a looping sequence:
    TANK SW UNUSED – No "tank empty" switch connected.
    TANK SW IS TA.F – "Tank empty" switch connected is Hytek TA.F type.
    TANK SW NOT TA.F – "Tank empty" switch connected is standard "normally closed" float switch.



11. The lower line will show the following in a looping sequence:
    LEAK SW UNUSED – No "pump leak" switch connected.
    LEAK SW IS TA.F – "pump leak" switch connected is Hytek TA.F type.
    LEAK SW NOT TA.F – "pump leak" switch connected is standard "normally open" float switch.

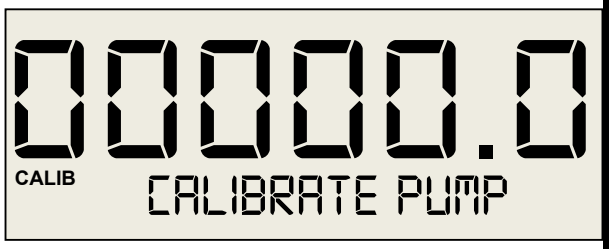


12. The lower line will show the following In a looping sequence:
    NOZ 2 SW UNUSED – No additional /remote nozzle switch connected.
    2nd NOZ SW N/O – Additional nozzle switch is normally open type.
    2nd NOZ SW N/C – Additional nozzle switch is normally closed type.



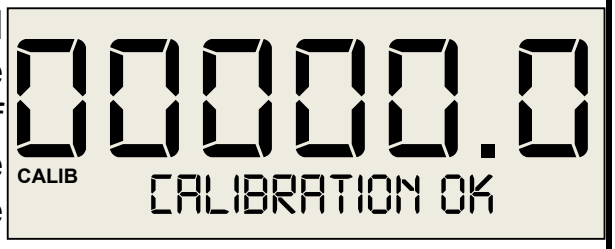
13. The lower line will show the following in a looping sequence:
    STAND ALONE - Pump external serial interface not used. **SELECT THIS OPTION**
    CONFIG NETWORK – Configure serial network. **DO NOT SELECT**

14. The lower line will show the following in a looping sequence:
    SAVE AND EXIT – Save all settings entered and return to normal operation.
    CALIBRATE PUMP – Continue and calibrate pump with 20 litre measure.
    ABANDON CONFIG – Do not save any settings entered and return to normal operation.



15. If **CALIBRATE PUMP** was selected **TAKE NOZZLE** will be shown.
    Take the nozzle (the lower line will show **DISPENSE 20L)** and dispense 20 litres into a calibrated test measure.

16. Once 20 litres have been dispensed hang up the nozzle. The lower line should show **CALIBRATION OK**. If there is an error in the calibration the relevant error message will be displayed.



ERRORS

If an error occurs **ERROR**, followed by a brief description is shown on the lower display. The errors are classified as follows:

FLOW TOO FAST The pulser has run too fast (in excess of 300 pulses per second)

UNAUTH FLOW The meter has turned without the nozzle being removed

CALIBRATE FAIL A time delay of 2 minutes or more has occurred during the 20 litre calibration.

PULSER SIGNAL One of the pulse transmitter's pulse trains has been interrupted.

PULSE REVERSE The meter has run backwards during a delivery

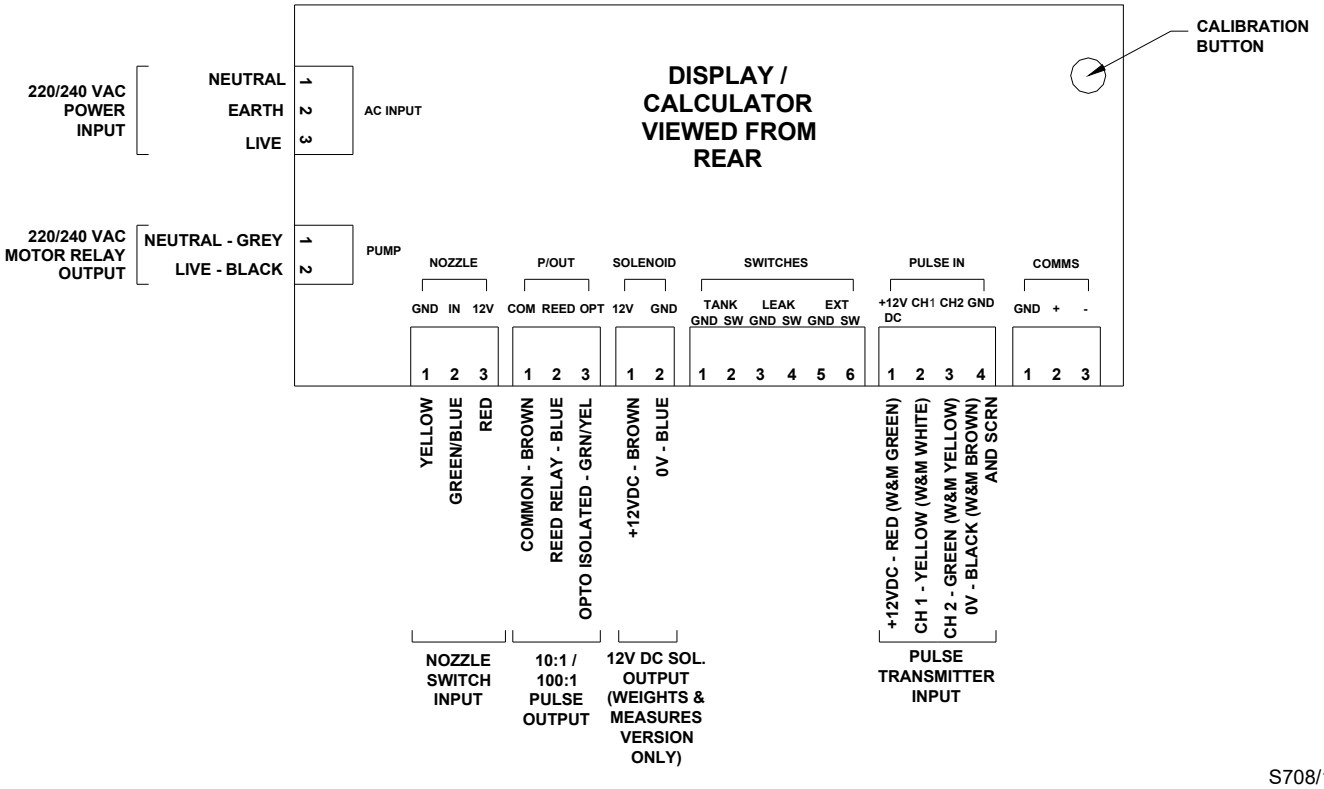
PULSER POWER The pulser has been disconnected

The error condition is maintained until the nozzle is returned to its holster, for at least 2 seconds, and then removed again to restart the fuelling sequence.

TIMEOUT

If, during a delivery, no fuel is dispensed for 2 minutes the display will show **TIMEOUT** alternating with **REPLACE NOZZLE** and the pump will stop running until the nozzle is returned to its holster, for at least 2 seconds, and then removed again to restart the fuelling sequence.

DISPLAY CONNECTION DIAGRAM



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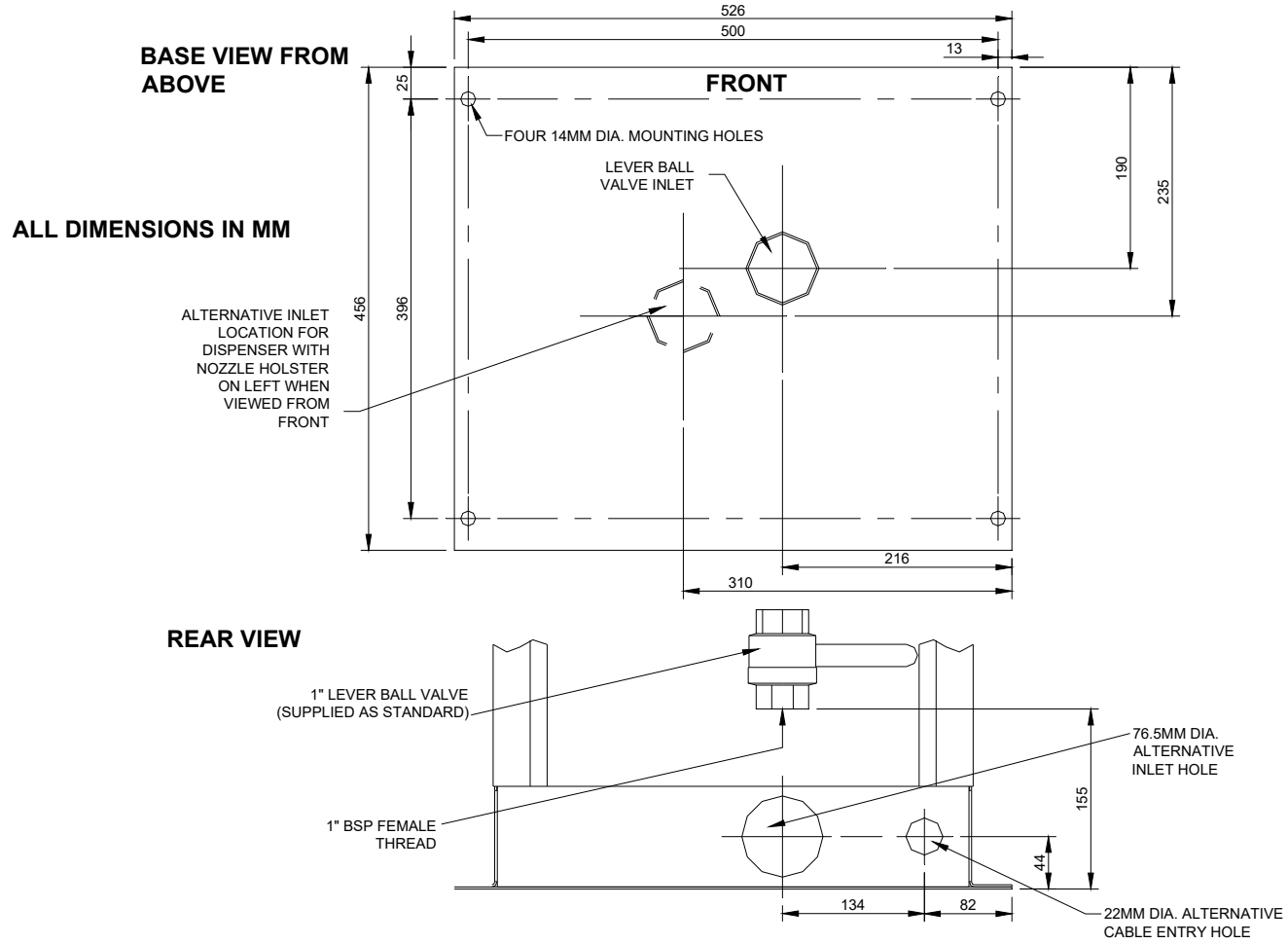
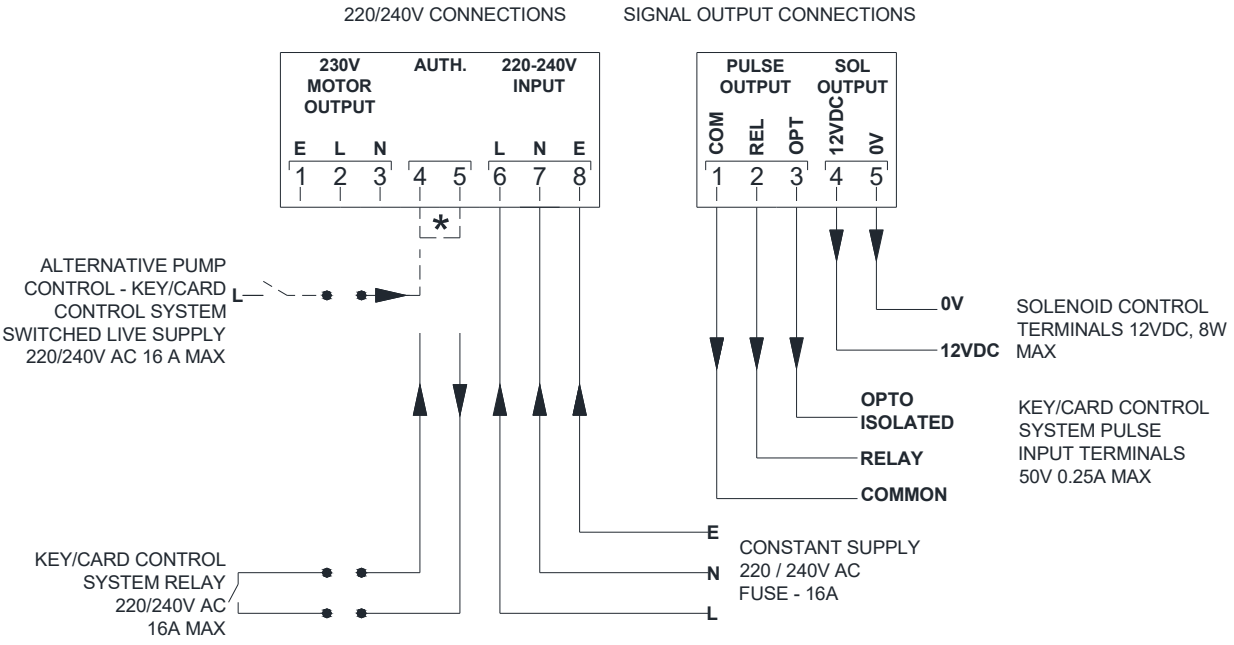
DISPENSER BASE AND INLET CONNECTIONS



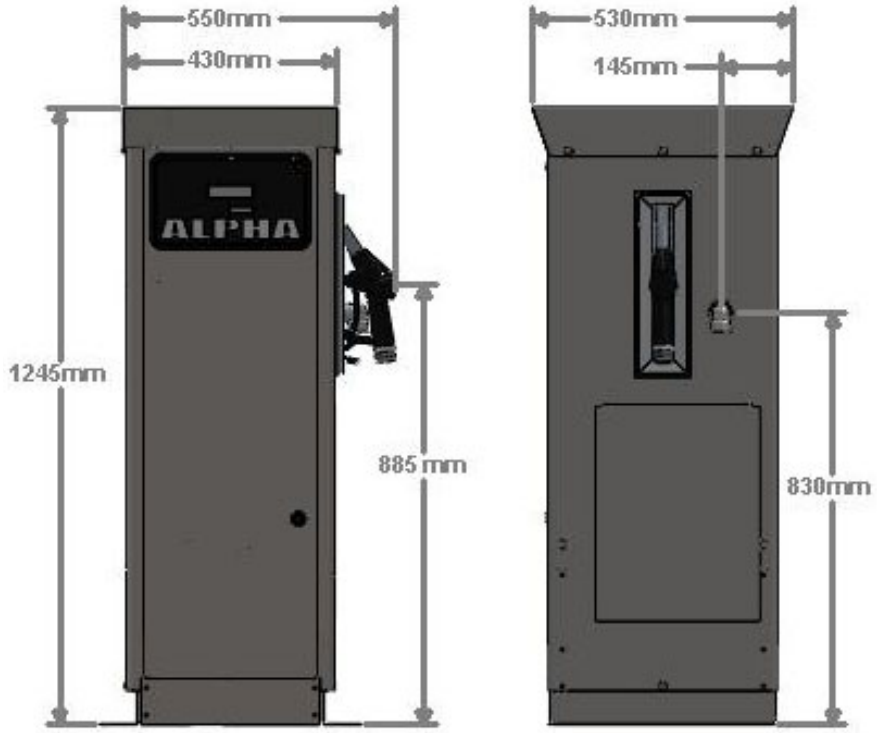
ALPHA INSTALLATION WIRING DIAGRAM

ALPHA MAIN JUNCTION BOX INSTALLATION WIRING DETAILS

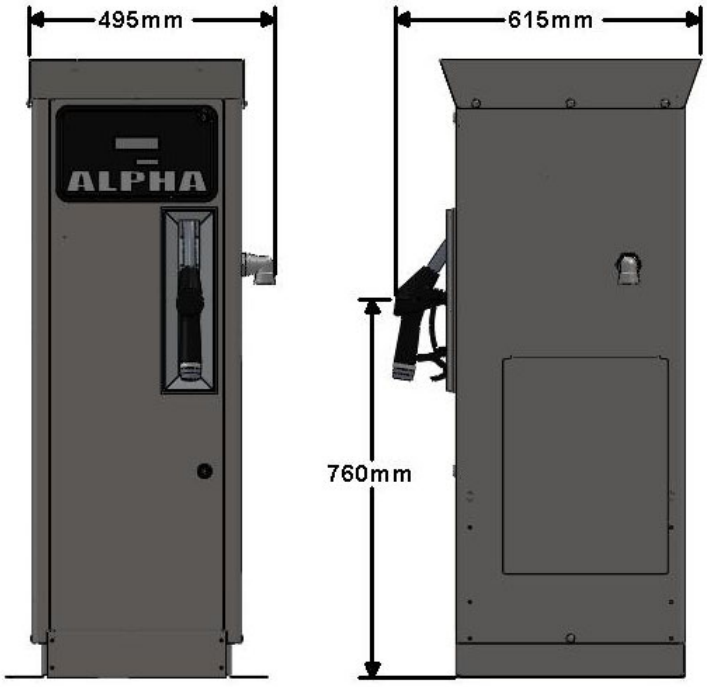


* SUPPLIED WITH LINK FITTED BETWEEN TERMINALS 4 AND 5.
REMOVE LINK FOR REMOTE KEY/CARD CONTROL

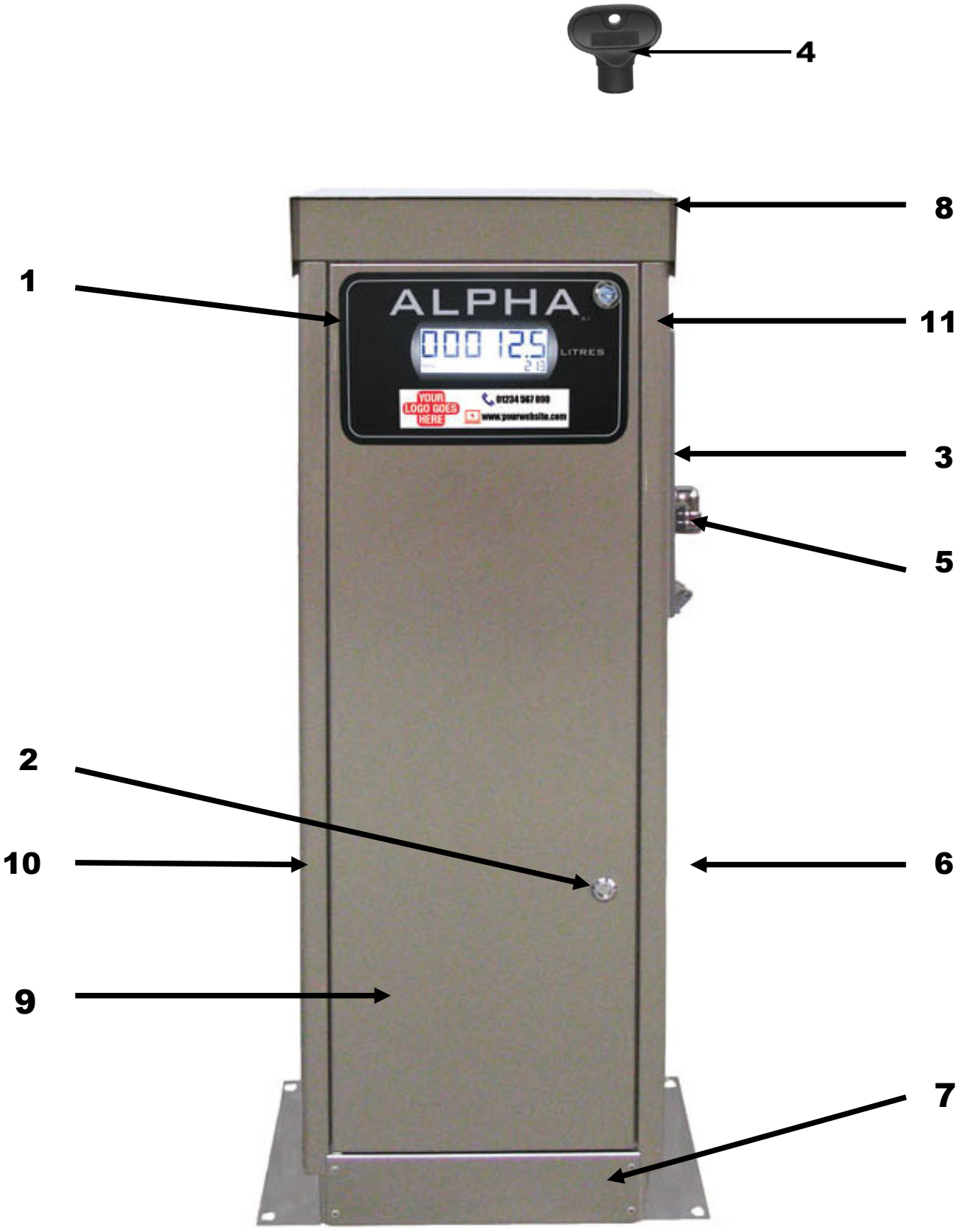
ALPHA EXTERNAL DIMENSIONS
SIDE NOZZLE HOLSTER



ALPHA EXTERNAL DIMENSIONS
FRONT NOZZLE HOLSTER



ALPHA/DSAB EXTERNAL VIEW



ALPHA PARTS LIST

DRG REF	PART DESCRIPTION	PART NO.
	EXTERNAL COMPONENTS	
1	LCD DISPLAY UNIT	ALP.DISP.PCB.3A
2	LOCK (x 2)	ALP.LOCK3
3	NOZZLE HOLSTER WITH SWITCH	ALP.NOZBOOT.A
4	DOOR KEY	209.KEY
5	OUTLET ELBOW	ELB.4MFSS.T
6	SIDE ACCESS PANEL	ALP.ACCPAN3
7	MOUNTING BASE	ALP.BASE3
8	TOP CAP	ALP.CAP3
9	DOOR	ALP.DOORASS.AB3
	DOOR (FRONT NOZZLE OPTION)*	ALP.DOORASS.AB.F3
10	SIDE PANEL	ALP.SPAN.BL3
11	SIDE PANEL WITH HOSE OUTLET	ALP.SPANH.3
	SIDE PANEL WITHOUT HOSE OUTLET (FRONT NOZZLE OPTION)	ALP.SPANH.F3
	INTERNAL COMPONENTS	
12	DOOR STAY *	ALP.DSTAY3
13	PULSER AND METER*	FMOGABP
14	INLET STRAINER*	YSTR.1S
15	RELAY (INSIDE JUNCTION BOX)*	ALP.RELAY
16	UPPER PANEL (x 2)*	ALP.UPAN3
17	DISPLAY COVER*	ALP.DISPCOV3A
18	PUMP MOUNTING FRAME (x 2)*	ALP.PFRAME3
19	JUNCTION BOX*	ALP.DBOX3
20	INLET LEVER BALL VALVE*	LBV.4S

*Not shown on illustration

DECLARATION OF CONFORMITY

Company Name: **Hytek (GB) Ltd**

Address: **Delta House**
Green Street
Elsenham,
Bishop's Stortford
Hertfordshire
CM22 6DS

Date of Issue: **25th October 2022**

Equipment Details: **Alpha AdBlue® Dispenser**

ALPHA/DSAB, ALPHA/DSAB.F, ALPHA/DSAB.L

Applicable Directives: **SI 2016 1091 Electromagnetic Compatibility Regulations**

& Standards **SI 2016 1101 Electrical Equipment Safety Regulations**

SI 2008 1597 Supply of Machinery Safety Regulations

SI 2016 1105 Pressure Equipment Safety Regulations

SI 2013 3113 Waste Electrical & Electronic Equipment Regulations

SI 2012 3032 Restriction of Use of Certain Hazardous Substances Regulations

Declaration Number: **UK077 Issue 4**

On behalf of the above-named company, I declare under our sole responsibility that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives.

Clive Wellings

Clive Wellings, Process Co-ordinator
25th October 2022,
Bishop's Stortford, Herts

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