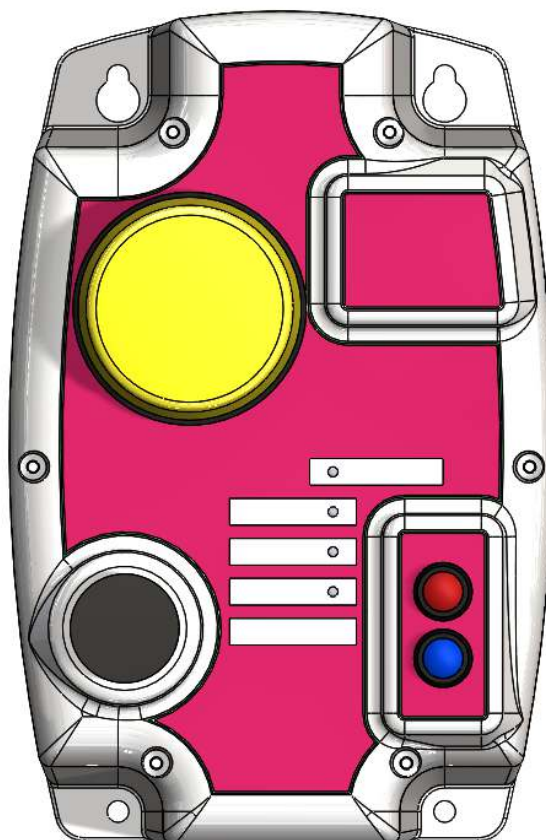


Technical Data

HYTEK ATEX APPROVED DAY TANK CONTROLLER



Applies to the following models **only**:

- TA3A.DTC.P - TA3A.DTC.B

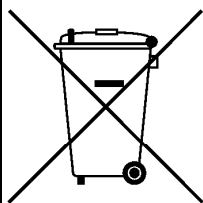
Please read carefully before commencing installation

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Web: www.hytekgb.com

ENVIRONMENTAL INFORMATION



European Directive 2012/19/EU 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.

PRODUCT DESCRIPTION

The Hytek Day Tank Controller is designed to control the automatic filling, from a bulk fuel storage tank, into a remote “day” tank used to supply fuel to a generator or heating system. The Day Tank Controller will also provide visual and audible alarms, in the event of a pre-determined upper fuel level being reached, to give warning of a potential tank overflow. There is also the option to set a timeout whereupon the pump will stop, and the alarm will sound after a pre-set time limit has been reached without the tank full float switch being activated.

The system consists of three-weighted float switches and an enclosure weatherproof to an IP54 standard which contains the visual and audible alarms and the electronic PCB.

This controller is approved to operate with flammable liquids classed as category 1, 2 or 3 in accordance with European Regulation No. 1272/2008. It is ATEX certified in accordance with EN 60079-0:2012 and EN 60079-11:2012. It is also IECEx certified in accordance with IEC 60079-0:2011 Ed 6 and IEC 60079-11:2011 Ed 6.

The controller box, featuring the warning devices and test/mute/cancel buttons, must be located outside any hazardous zone and bears the following certification marking and number:

CML16ATEX2355X
IECEx CML 16.0128X



II 1 G
[Ex ia IIA Ga]
-20°C to +40°C

CE 2776

The float sensor(s) can be located in hazardous zones 0,1 or 2 and bears the following certification marking and number:

CML 16ATEX2355X
IECEX CML 16.0128X
CML 16ATEX2356X
IECEX CML 16.0129X



Ex ia IIA T3 Ga
-20°C to +40°C

CONDITIONS OF CERTIFICATION

1. Due to safety critical internal creepage and clearance distances in the control unit, if installed in a location other than a clean and dry environment, the user shall ensure that the control unit is additionally provided with protection having an ingress protection rating of at least IP54 and is maintained throughout the lifetime of the equipment.
2. The float switch incorporates an isolated metal part which could become either charged in use or be a discharge point for charged liquids upon filling or emptying. The float switch shall only be used in applications where static generated via contact liquids are controlled so not to be considered an ignition source.
3. The relay contacts in normal operation shall not switch more than 5Arms, 250Vrms or 100VA in accordance with IEC 60079-11:2011 Clause 6.3.14.
4. Where applicable, only alkaline batteries of the same make shall be used as replacements. All batteries shall be replaced at the same time.

IMPORTANT WARNING NOTES

1. This controller is designed for use with liquids classed as category 1, 2 or 3 in accordance with European Regulation No. 1272/2008, including petrol, diesel, gas oil, water, hydraulic oil and heating oil. It can be used with Anti-freeze or AdBlue® if the optional stainless-steel float switch assembly is fitted.
2. The controller box featuring the warning devices and test/mute/cancel buttons must not be installed in a hazardous zone or below ground

level. The float sensor can be located in zones 0, 1 or 2 with the supplied connecting wire running to the controller box.

3. The user must ensure that chemicals present in the atmosphere do not affect the performance or degrade the polycarbonate enclosure.
4. Only the correct ATEX/IECEX certified float switches supplied by Hytek can be used with the Day Tank Controller.
5. Installation of this equipment and its associated tank, pipe work and fittings should only be carried out by qualified fuel installation engineers.
6. The installation must be carried out in accordance with the requirements of EN 60079-14 the latest relevant electrical and local authority regulations and standards.
7. It must not be used with any liquids or applications other than those specified. We will accept no warranty claims or liability if it is used for other liquids or applications.
8. This product must not be used if it is damaged.

SPECIFICATION

MAINS VERSION

- 230V 3-channel controller.
- IP55 weatherproof enclosure, for outside mounting.
- Channels used to initiate filling, stop filling and provide overfill alarm.
- High power alarm sounder.
- High visibility flashing zenon beacon.
- Test button checks float switches as well as beacon & sounder.

BATTERY VERSION

- Battery 3 channel alarm.
- Channels used to initiate filling, stop filling and provide overfill alarm.
- High power alarm sounder.
- No zenon beacon, but individual channel LED's.
- Test button checks float switches as well as batteries & sounder.
- Battery life depends on number of test & alarm incidents.

INSTALLATION INSTRUCTIONS

MOUNTING

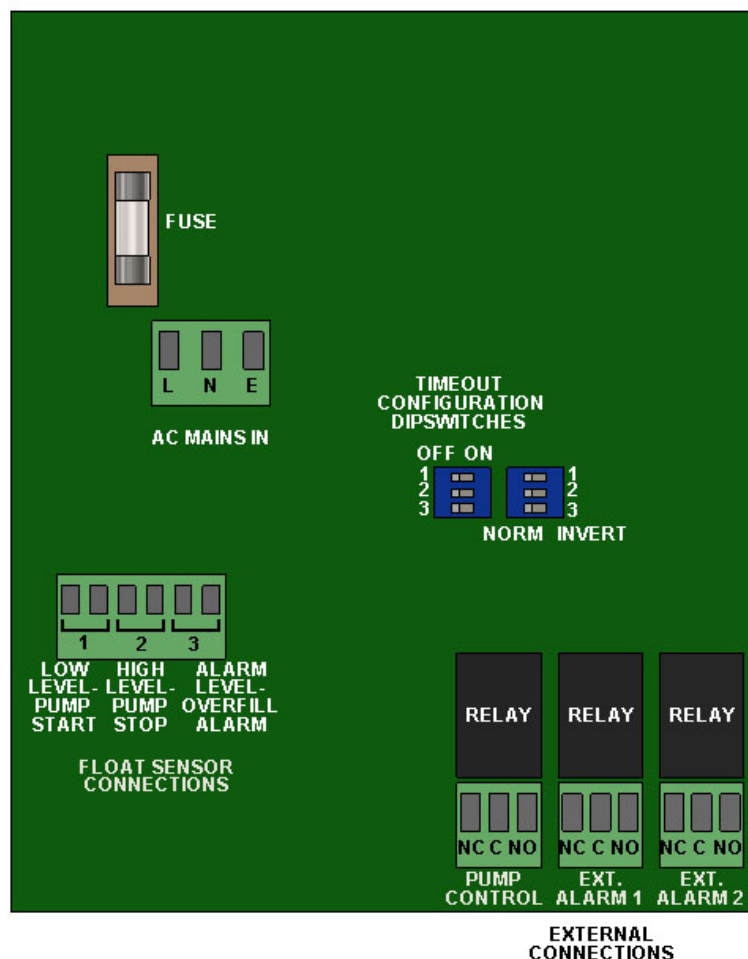
The float switch assembly is supplied with 5 metres of 2-core PUR fuel resistant cable that may be extended, as necessary, up to 100 metres.

1. Remove front display lid from controller box and disconnect ribbon cable. Place the lid somewhere clean and safe.
2. Using wall-mounting bracket, fix controller box into position.
3. Self-adhesive product labels are supplied and are to be fixed alongside the corresponding channel LED indicator on the front of the alarm unit.

POWER SUPPLY

4. The TA3A.DTC.P is designed to have a continual 230V AC supply fused at a rating of 6 amps max. The TA3A.DTC.B has an internal battery power supply. See Connections diagram.

CONNECTIONS DIAGRAM



FLOAT SWITCH INSTALLATION

5. To ensure the float switch is positioned at the correct depth in the tank, locate the gland, fitted to the gland plate, at the appropriate point along the float switch cable.

Carefully install float switch through a 30mm hole in the top of the tank, ensuring the sealing gasket is in place. Secure the gland plate to the tank using two self-tapping screws (not supplied). See Float switch installation diagram. Alternatively, for steel tank installations, an optional 1 1/2" brass cap (Hytek order ref - TA.CAP) can be used.

NB: Installation of the float switch should be as far away from the fill point of the tank as possible.

FLOAT SWITCH ACTIVATION AND CONFIGURATION

6. Connect the float switch cables to the float switch terminals inside the control box shown on the connections diagram. Ensure that the low-level float switch is connected to the set of terminals labelled "1". When the liquid level in the tank drops to the level of this float switch the pump will start and begin filling the day tank.

Ensure that the high-level float switch is connected to the set of terminals labelled "2". When the liquid level in the tank rises to the level of this float switch the pump will stop and halt the filling of the day tank.

The float switch connected to the terminals labelled "3" must be located at the level at which an alarm needs to be raised to give warning of an impending tank overfill. Alternatively, this float switch can be located in the bund space to warn of a tank leak.

TIMEOUT CONFIGURATION DIPSWITCH SETTING

7. Ensure that the top "NORM / INVERT" dipswitch (numbered "1") is set to "INVERT" and the middle and lower dipswitches ("2" and "3") are set to "NORM".
8. To configure the timeout function set the "ON / OFF" dipswitches to one of the settings listed below.

No Timeout	30 Mins	45 Mins	60 Mins	75 Mins	90 Mins	105 Mins
1 OFF	1 ON	1 OFF	1 ON	1 OFF	1 ON	1 OFF
2 OFF	2 OFF	2 ON	2 ON	2 OFF	2 OFF	2 ON
3 OFF	3 OFF	3 OFF	3 OFF	3 ON	3 ON	3 ON

This will set the time duration for which the pump will run, after which the pump will stop and the alarm will activate to indicate that the tank has not been filled.

EXTERNAL RELAY OUTPUTS

9. External relay 1 must be used to control the pump. Connect the pump live/positive supply to the “Common / Normally Open” relay connections. External relays 2 and 3 will both activate in the event of an overfill or fault with the controller and can be used to activate remote alarms. The relay contacts are rated at 250 volts, 5 amps / 100VA max.

NB: The relays are a switch only and do not offer a power source for any external equipment.

COMPLETION OF INSTALLATION

10. Install batteries provided (TA3A.DTC.B Only).
11. Refit lid to controller box ensuring that ribbon cable is reconnected to the main PCB and the lid seal is in place.
12. Switch on power. The green "POWER" LED should illuminate (TA3A.DTC.P only).

OPERATION

POWER STATUS

MAINS VERSION: The Power LED will remain illuminated to indicate that there is mains power to the unit

BATTERY VERSION: The Battery LED will flash every 2 seconds to indicate that there is battery power to the unit. If the battery charge is too low then the sounder will activate intermittently to indicate this.

NORMAL OPERATION

When the day tank is being filled the “TANK FILLING” LED will be illuminated.

When the day tank is full the “TANK FULL” LED will be illuminated.

The filling of the tank can be halted at any time by pressing the “MUTE/CANCEL” button for 1.5 seconds.

TANK OVERFILL

When the day tank is in danger of being overfilled the “OVERFILL/LEAK” LED will be illuminated, the beacon will flash (TA3A.DTC.P only) and the sounder will be activated. Also, the pump will stop running. The sounder can be muted if the “MUTE/CANCEL” button is pressed for 1.5 seconds. The alarm state will remain, with the external alarm relays remaining activated until the liquid level drops. If the overfill float switch is used in the bund to detect a leak the same functionality applies.

TIMEOUT

If the “TIMEOUT” dipswitches have been configured to enable the timeout function and the pump runs longer than the pre-set run time duration the three LEDs will flash repeatedly in sequence, the beacon will flash (TA3A.DTC.P only) and the sounder will be activated. Also, the pump will stop running. The alarm state will remain until the “MUTE/CANCEL” button is pressed for 1.5 seconds.

FLOAT SWITCH FAULT INDICATION

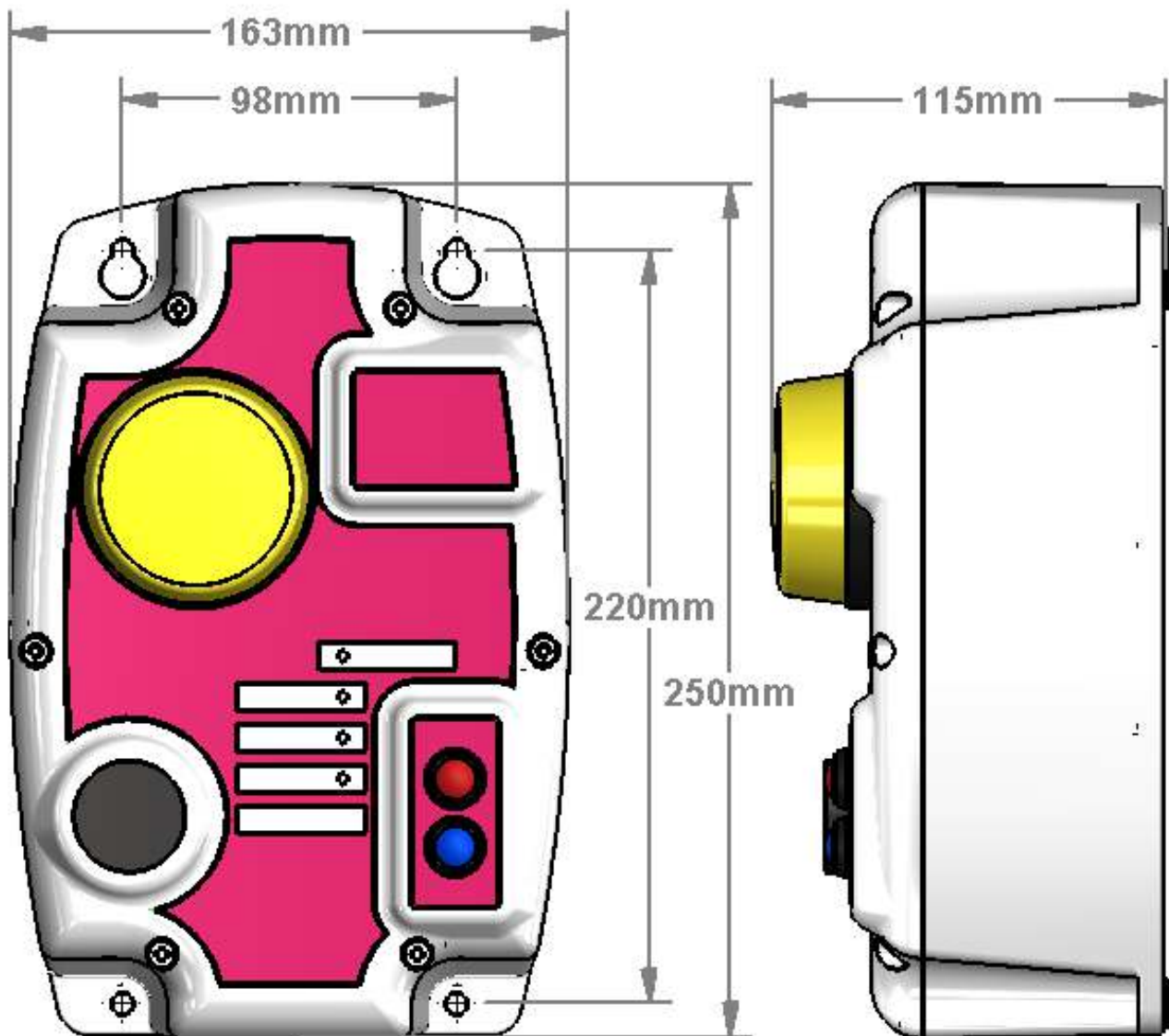
If there is a fault with any of the float switches the beacon will flash (TA3A.DTC.P only) and the sounder will be activated. Also, the pump will stop running. The sounder can be muted if the “MUTE/CANCEL” button is pressed for 1.5 seconds. The alarm state will remain, with the external alarm relays remaining activated until the fault has been rectified.

ALARM TEST

To test the Controller, push and hold the test button on the lid. For the first 2 seconds of the test the sounder and beacon will be activated with the LEDs all illuminated. If there is a fault with any of the float switches the corresponding LED will flash. For the second 2 seconds of the test the siren will silence with the beacon still flashing and the LEDs illuminated. For the last 2 seconds of the test the sounder and beacon will be inactive.

Battery version: *If no sounder is heard and no channel LED's illuminate, check batteries and change as necessary.*

FITTING DIMENSIONS



PARTS LIST

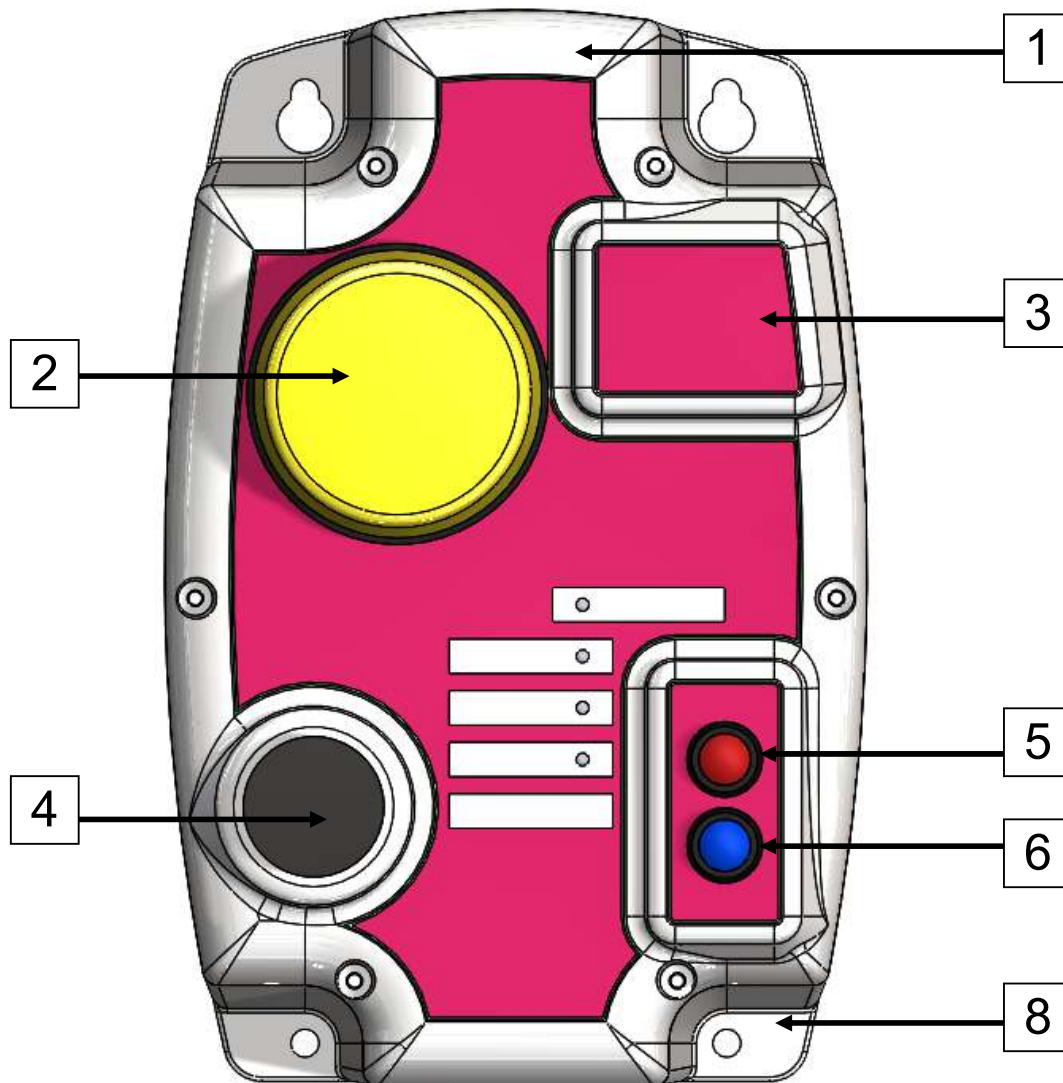
HYTEK TANK ALARM PARTS LIST		
REF.	PART NUMBER	PART DESCRIPTION
1▼	TA3A.LID	Tank alarm lid with all components - MAINS
▶	TA3A.LID.BAT	Tank alarm lid with all components - BATTERY
2	TA.BEACON	Tank alarm amber beacon
3▼	DTC.LABM	Display lid label (mains)
▶	DTC.LABB	Display lid label (battery)*
4	TA.SOUND	Tank alarm sounder
5	TC.AT	Tank alarm test button
6	TC.AS	Tank alarm mute button
7	TA.GLND	Cable gland PG7*
8	TA3A.BOX	Tank alarm box (base only)
9▼	TA3A.PCBMR	Alarm PCB 230Vac with Relays*
▶	TA3A.PCBR	Alarm PCB 6Vdc Battery with Relays*
10	TA.CONM	Plug connector (230/110v mains)*
11	TA.CONR	Plug connector (relays)*
12	TA.CONF	Plug connector (floats)*
13	TA3A.BLANK	12.7mm hole blank *
14	TA.LABP	Product label (9 labels per sheet) *
15	TA.PCBDISP	Alarm display PCB*

*not shown

SPARES

PART NUMBER	DESCRIPTION
TA.FA5	5m universal float switch
TA.FA10	10m universal float switch
TA.FA.SS5	5m stainless steel float switch
TA.CAP	1 ½" threaded brass cap for steel tanks
TA.CABLE	Extra cable to extend float switches
TA.CABEXT	Use to join extra cable - IP68 rated
TA.BATTERY	Type D battery (4 per unit)

OUTSIDE VIEW



TA3A.DTC.P (230V AC) - SHOWN

E.U. DECLARATION OF CONFORMITY

HYTEK
FUEL & LUBRICATION
EQUIPMENT

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

Address: **Delta House, Green Street. Elsenham,
Bishops Stortford, Hertfordshire, CM22 6DS, UK**

Date of Issue: **16th September 2020**

Equipment Details: **Hytek ATEX Tank Alarm & Day Tank Controller**
TA3A.P, TA3A.PR, TA3A.B, TA3A.BR, TA3A.DTC.P, TA3A.DTC.B

Applicable Directives:
& Standards **2014/30/EU EMC Directive**

EN 61326-1:2013

Electromagnetic compatibility (EMC) – Group 1, Class B Eq. (Emissions)

EN 61326-1:2013

Electromagnetic compatibility (EMC) – Industrial Environment (Immunity)

2014/35/EU Low Voltage Directive

2006/42/EC Machinery Directive

2012/19/EU Waste Electrical & Electronic Equipment Regulations

2011/65/EU Restriction of Hazardous Substances Directive (RoHS2)

2014/34/EU ATEX Directive

ATEX - EN 60079-0:2018 and EN 60079-11:2012

IECEx - IEC 60079-0:2017 and IEC 60079-11:2011 Ed 6

EC Type examination Certificate

Number: CML 16ATEX2355X

IECEx CML 16.0128X

Issued by Notified Body: CML Ltd. Number CML 2503

Unit 1 Newport Business Park,

New Port Road, Ellesmere Port, CH65 4LZ UK

Marking:

Alarm Box:

Float Sensor

CML16ATEX2355X

CML 16ATEX2355X

IECEx CML 16.0128X

IECEx CML 16.0128X

CML 16ATEX2356X

IECEx CML 16.0129X



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CE 2776



II 1 G

Ex ia IIA T3 Ga

-20°C to +40°C

Notified Body Issuing QA: CML B.V Number 2776

Notification Certificate Chamber of Commerce No 6738671

Hoogoorddreef 15, Amsterdam, 1101 BA,

The Netherlands

Declaration Number: **EU130/7**

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, Technical Manager 16th September 2020, Bishops Stortford, Herts.

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