

APA-HL Air Pressure Alarm

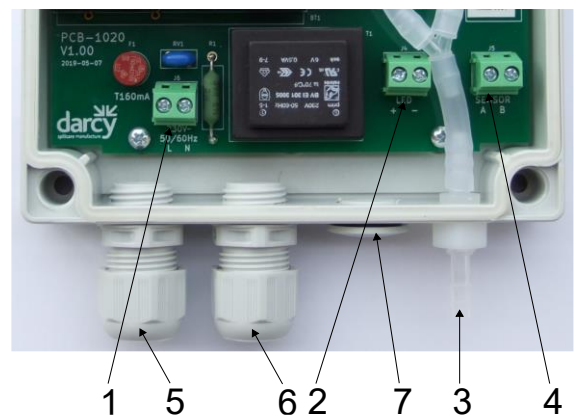
The sewage treatment plant pump air pressure and high level are monitored. The beacon flashes when the air pressure is outside the range 7kPa – 25kPa (70mbar – 250mbar) or a high level is detected.

The unit has battery backup and will alarm when a mains failure occurs. A low battery will also cause an alarm.

Separators And Alarms Should Be Serviced And Maintained In Accordance With BS-EN 858-2

Specification

Enclosure	IP65 ABS 130mm x 130mm x 35mm Colour: Base: Light grey (RAL7035) Lid: Smoked grey (transparent)
Weight	336g (without batteries)
Power (Mains, J6)	230VAC $\pm 10\%$ 50/60Hz 1.8W 3.3VA, $\cos \phi = 0.55$ Transformer primary fuse: T160mA TR5 (soldered to PCB)
Power (Battery, BT1)	4 x AA (LR6) 1.5V alkaline cells (not included) Battery life: Operated solely from battery, no alarms: At least 2 years
Battery check	Mains powered: every 5 seconds Battery powered: every 24 hours First check is 5 seconds after power up or reset Alarms when less than 4.1V
Power LED	Green Flash rate: Mains: continuously lit Battery: once every 5 seconds Mains failure detection typically takes 30 seconds. Restored mains detection typically takes 5 seconds.
Alarm LED beacon (J4)	6VDC 20mA to external LED beacon Short-circuit protected (37.5mA constant current) Flash rate: Mains: once a second Battery: once every 5 seconds Double flash indicates low battery (less than 4.1V)
Internal alarm LED (D2)	Flashes in synchronisation with LED attached to J4.
Air inlet	4mm barbed plastic for soft silicone tubing Lower trip point: 7kPa (70mbar) Upper trip point: 25kPa (250mbar)
High level sensor (J5)	Monitored continuously on mains power, every 15 minutes on battery backup. From volt-free contact. Should be normally closed when not in alarm which also allows a broken cable to be detected. Fit a wire link to J5 if not used.



Terminals

1. J6, mains in (230V $\pm 10\%$, 50/60Hz).
2. J4, external alarm LED beacon.
3. 4mm air inlet. Supplied from a tap in the silicone air line from the pump.
4. J5, high level sensor input.
5. Mains input cable gland (M16).
6. External alarm LED beacon cable gland (M16).
7. Fitted with M16 blanking plug as standard. May be replaced with M16 cable gland if high level sensor input is used.

Installation and Operation

Wiring

Mains Input

J6 Terminal	Wire Colour
L	Brown
N	Blue

Table 1 – Mains input wiring

External LED Beacon

J4 Terminal	Wire Colour
+	Red
-	Black

Table 2 – External alarm LED beacon wiring

High-Level Sensor

If the high-level sensor will be used, remove the blanking plug, and fit an M16 cable gland and wire according to Table 3. If the high-level sensor is not used, fit a wire link across the terminals of J5.

J5 Terminal	Wire Colour
A	Brown
B	Blue

Table 3 - High level sensor wiring

Fitting Alarm to Air Blower

1. Cut hose to approximately 100mm from blower.
2. Place Jubilee clips over hose.
3. Place T-piece in the middle of the hose pipe.
4. Tighten all Jubilee clips securely.
5. Connect the supplied 4mm tubing from the T-piece to the air inlet on the alarm.

Operation

An alarm is raised if:

- The air blower pressure goes outside the range 7kPa (70mbar) - 25kPa (250mbar).
- If the high-level switch is fitted and a high-level is detected (Monitored continuously on mains power, every 15 minutes on battery backup).
- A low or missing battery is detected.

A raised alarm flashes the external LED beacon and the internal red LED, D2. Flashes are once a second when mains is present or once every 5 seconds on battery backup. A double flash between single flashes indicates a low or missing battery.

See *Specification* section overleaf for further details.