sauermann

PE 5000 - PE 5100 - PE 5200

Cod. 0000136282

Instruction Manual

EAC

The PE range of Peristaltic pumps are designed to remove condensate water. They are particularly adapted for use in Air Conditioning, Evaporator & Refrigerated cabinet applications.

Characteristics:

- Flow 6 l/h
- Max Discharge Head.: 12 m
- Max Suction Height: 2 m
- Power Supply: 230 V~ - 50/60 Hz
- Motor Power Level: 11 W
- IP 65
- Max Design Ambient Temperature: 50° C

0. SECURITY

0.1 **In any case PE series peristaltic pumps have not to run continuously**

0.2 Sauermann recommends to use a security system (Floating alarm ACC00601 NO/NC 10 Amp – 230 Vac (optional; see fig.8) or similar) allowing to stop the unit and prevent the overflowing whenever an excessive amount of condensate is produced. The PE 5200 pump is equipped with a NC 8 Amp – 250 V contact allowing this function.

0.3 **Sauermann does not accept any responsibility in case of not respect of these recommendation**

1. INSTALLATION

Warning: Before carrying out any operation on the pump, make sure the installation is disconnected from the power supply.

We recommend the pump be positioned with the suction & discharge spigots pointing downward.

➢ *Installation with Mounting Bracket supplied* (fig. 1)

- Fasten the Mounting Bracket with the screw & rawlplug supplied.
- Slide the pump body onto the bracket.

2. POWER SUPPLY (fig. 2 and 4)

2.1 *Connection to power supply*

Connect the pump to the power supply using a circuit breaker (not included) to standard IEC 345 on live & neutral.

2.2 *Connection for model PE 5000 (Cooling only, compressor signal) (fig. 2)*

Connect the black cable to one of the supply phases of the compressor power supply (see fig.2) or of the three-way valve (chilled water applications) in order to start the pump whenever the air-handling unit is in cooling mode. The presence of a 230 V supply on the black cable starts the pump. When the compressor stops, the voltage drops to zero. The pump continues to operate for 3 minutes on overrun and stops.
In any case the black cable have not to be direct connected before the power switch. Otherwise the pump will run continuously (see chapter 0).

2.3 Connection for model PE 5100 (Heat-pump, temperature differential sensors) see (fig. 3)

Position Blue sensor cable to air-off side of the air handling unit & the Red sensor cable on the return-air side. The pump operates as soon as a temperature difference of 6°C +/- 2°C is sensed. It will continue to operate as long as the temperature difference sensed is greater than 6°C +/- 2°C. When the temperature difference sensed drops below 6°C +/- 2°C, the pump will continue to operate on overrun for 3 minutes before stopping.
Warning: Temperature sensors must absolutely be placed into the air flow (Red: suction; Blue: delivery) and never placed either in the condensate water or the condensate tray or in the false ceiling for any reason. Otherwise the pump could run continuously (see chapter 0).

2.4 Connection for model PE 5200 (General Use, Remote Float Sensor) (see fig. 4)

Connect the interconnecting cable from the remote float sensor to the pump body.
The remote float sensor senses the presence of condensate & can start / stop the pump & send an alarm signal if it detects an abnormal amount in the sump.

Important: The alarm provided is an 8A/250V resistive NC contact. This can be used to stop the cooling cycle if an abnormal amount of condensate is detected & reduce the possibility of overflow accidents. Please consult & follow the air conditioning manufacturers electrical diagram & alarm connection recommendations at all times.

3. CONDENSATE CONNECTIONS

3.1 For models PE 5000 & PE 5100 (see fig. 2 and 3)

Condensate Removal

The suction end of the pump must be connected to the condensate tray fall pipe with the rubber adapter tube, reducer adaptor & clear tube supplied. The suction tube must be securely connected to the suction side of the pump (see Δ mark on cover plate) with the tie wraps supplied.

3.2 For model PE 5200 (see fig. 4)

a) Condensate Removal

The remote float detection unit must be connected to the condensate tray fall pipe with the rubber adapter supplied.

b) Remote Float Detection Unit

The suction end of the pump (see Δ mark on cover plate) must be connected to one of the two possible 7 mm connections on the remote float detection unit with clear 6 mm int. diam. tubing. The unused 7 mm connection on the float detection unit must be capped with the cap provided.

c) Breather Tube

The 4 mm diam. breather tube supplied must be connected to the top of the float detection unit such that the top of the free end of the tube is situated above the edge of the condensate tray.

d) Installation

Important: Install the float detection unit in a level attitude to ensure correct operation of the float (see fig.5).

3.3 Condensate Removal Pipe

The 6 mm diam. (1/4 inch braided or clear) condensate removal pipe must be securely connected to the discharge side of the pump (see exit mark ∇ on cover) with the tie wraps provided (see fig 2, 3 & 4). The waste end of the condensate removal pipe must terminate in an approved drain or waste water fall tube & may be connected to it with the **Sauermann ACC00205** self-sealing fitting (not provided).

4. POST-INSTALLATION OPERATION TEST

4.1 For models PE 5000 & PE 5100

Start the air conditioning unit & pour a small amount of water into the condensate tray using the **Sauermann ACC00401** priming squeeze bottle (not included) or other means.

Check that the pump is operating correctly & removing water from the tray by pressing the **Test** button situated on the side of the pump (see Fig.6). The pump will operate on overrun for three minutes & stop if correctly installed.

4.2 For model PE 5200

Pour a small amount of water into the condensate tray using the **Sauermann ACC00401** priming squeeze bottle (not included). Check that the pump is operating correctly & removing water from the tray. If correctly installed, the pump should stop when the water level has decreased.
To check Alarm function, continue to pour water into the tray until the float rises sufficiently to trigger your chosen alarm feature (switch off compressor, visual or audible alarm…). This will depend on individual Installer preferences.

5. CLEANING & MAINTENANCE

 WARNING: Before any intervention, switch off pump power supply at source.

5.1 Cleaning of remote detection unit for model PE 5200

The float detection unit & filter must be cleaned regularly with due regard to the prevailing levels & types of pollution in the operating environment of the unit.

Proceed as follows:

- Remove the cover from the detection unit body.
- Remove the metallic filter.

- Clean the detection unit & the filter body with a solution of water 5% bleach.
- Replace the filter & firmly replace the cover on the detection unit body.

Important: We recommend that after every service, the pump operation & alarm features should be tested as in Para 4 above to ensure serviceability.

5.2   Replacing worn pump head tube

Regularly inspect pump head tube & replace every 12 months or as required depending on the operating environment of the pump.
Warning: Be sure to disconnect the pump from the power supply to ensure it cannot start & potentially injure the engineer while the tube is being replaced.

5.2.1   Removal of pump head tube

- Disconnect the suction & waste tubes from the pump
- Remove the cover plate
- Rotate the roller assembly manually into a vertical position
- Remove the suction side connector from its housing by pulling upwards
- Keep pulling the tube upwards & remove it by rotating the roller assembly clockwise.
- The waste side connector can now be removed from its housing & the tube has successfully been removed.

5.2.2   Fitting the replacement pump head tube (see fig.7)

- Insert the suction side (left hand) connector into its housing & place the tube in position with one hand. Rotate the roller assembly clockwise until the tube is seated correctly and insert the waste side (right hand) connector in its housing.
- Replace the protective cover plate in position.

- **Note:** Always test the pump after any intervention to ensure serviceability.

6.   <u>WARRANTY</u>

6.1   Sauermann warranty for these products is 2 years from date of delivery. The warranty is strictly limited to the replacement or remanufacture of those parts that are defective or show defects in production. No other warranty is offered either explicitly or implicitly in respect of any other matter whatsoever.

6.2   Entire pumps, pump heads or components returned under warranty must be complete & accompanied by a note detailing the installation date, address & the defect observed by the engineer.

6.3   This warranty is not related to the membrane tube

6.4   **We decline any responsibility whatsoever for pump failures in case of incorrect installation, not respect of these recommendations, poor or incorrect cleaning & maintenance or non-connection of an alarm contacts (ACC00601, optional) to prevent overflow in case of problems in removing condensate.**

DRAWINGS

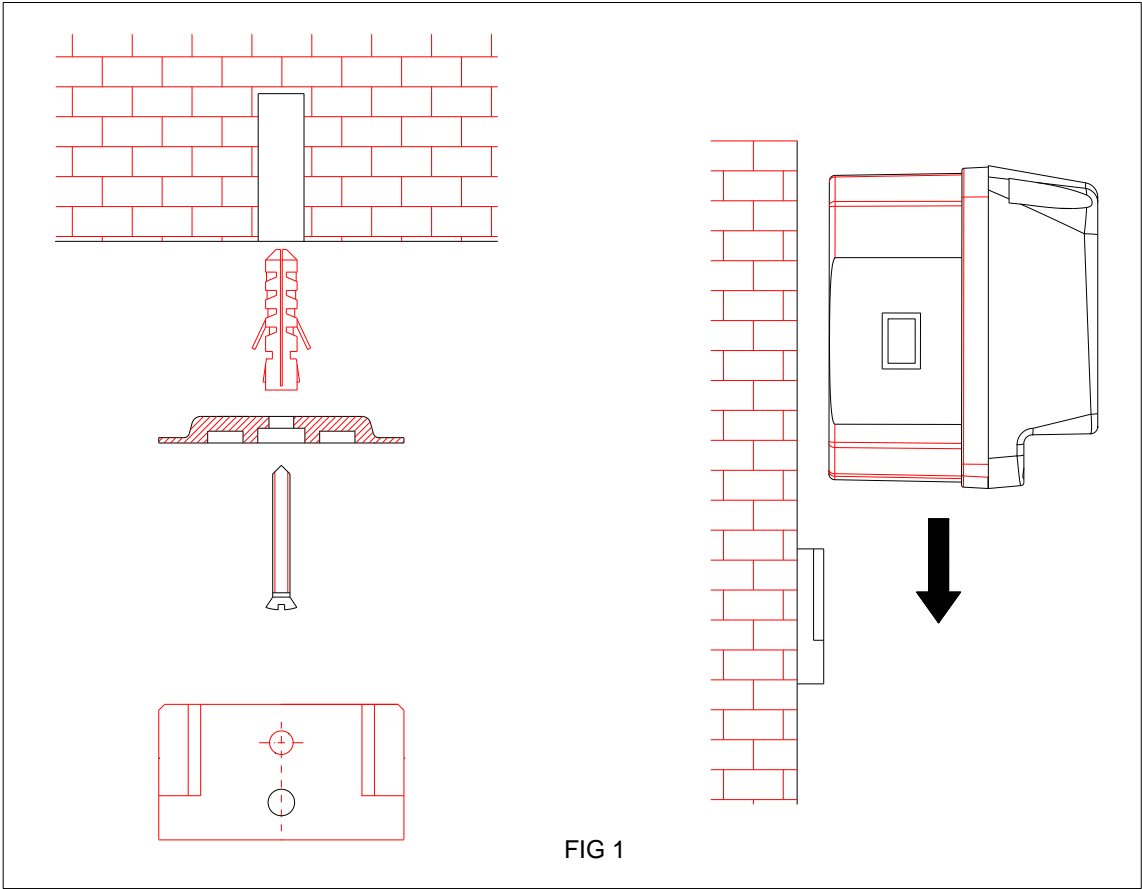<u>Please get attention to the used letters for the electrical connections</u>

P	Live	Brown	N	Neutral	Blue
	Phase	Marron		Neutre	Bleu
	Fase	Marrone		Neutro	Blu
	Fase	Marron		Neutro	Azul
	Phase	Braun		Nulleiter	Blau
	Фаза	Коричневый		Нейтраль	Синий

PE 5000 (220 – 240 V)

C	Cooling Signal (compressor)	Black
	Signal Froid (compresseur)	Noir
	Segnale Freddo (compressore)	Nero
	Sinal Frio (compressor)	Negro
	Kühlsignal (Verdichter)	Schwarz
	Сигнал холода (компрессор)	Черный

PE 5200 (8 A – 250 V)

C – NC	Alarm	Black
	Alarme	Noir
	Allarme	Nero
	Allarme	Negro
	Alarm	Schwarz
	Сигнализация	Черный

FIG 1

MAX 5m | MAX 20m

Ø6mm

ACC00205

MAX 12m

N (BLUE-BLEU)
P (BROWN-MARRON)
C (BLACK-NOIR)

IN   OUT

TEST BOTTON (3")
BOUTON DE TEST (3")

TIE WRAPS
CLIP DE SERRAGE

FALSE CEILING
FAUX - PLAFOND

MAX 2m

DRAIN TRAY
BAC DE CONDESATS

RUBBER
MANCHON

FIG 2

MAX 5m

MAX 20m

Ø6mm

ACC00205

AIR SENSOR COLD

N (BLUE-BLEU)

P (BROWN-MARRON)

AIR SENSOR HOT

MAX 12m

IN   OUT

TEST BOTTON (3")
BOUTON DE TEST (3")

TIE WRAPS
CLIP DE SERRAGE

FALSE CEILING
FAUX - PLAFOND

MAX 2m

DRAIN TRAY
BAC DE CONDESATS

RUBBER
MANCHON

FIG 3

MAX 5m   MAX 20m

Ø6mm

ACC00205

MAX 12m

NC (BLACK-NOIR)
C (BLACK-NOIR)
N (BLUE-BLEU)
P (BROWN-MARRON)

IN   OUT

TEST BOTTON (3")
BOUTON DE TEST (3")

TIE WRAPS
CLIP DE SERRAGE

FALSE CEILING
FAUX - PLAFOND

MAX 2m

DRAIN TRAY
BAC DE CONDESATS

S12858

RUBBER
MANCHON

FIG 4

Water level - Niveau d'eau - Wasserstand - Livello d'acqua - Nivel de agua - Nivel Agua

A / ALARM	B / START UP	C / Pump shutdown
19mm ± 2	16mm ± 2	11mm ± 2
Alarme	Mise en marche	Arrêt pompe
Alarm	Einschalten	Pumpe ausschalten
Allarme	Messa in moto	Arresto pompa
Alarma	Puesta en marcha	Parada bomba
Alarm	Starten pomp	Stoppen pomp
Alarme	Arranque	Paragem bomba
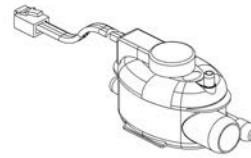
SI2958
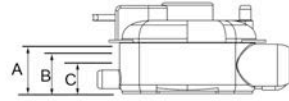
± 15°
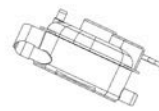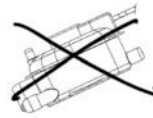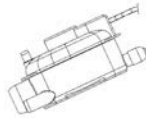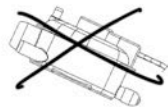
± 15°

FIG 5

TEST BUTTON
BOUTON DE TEST

FIG 6

FIG 7

FIG 8

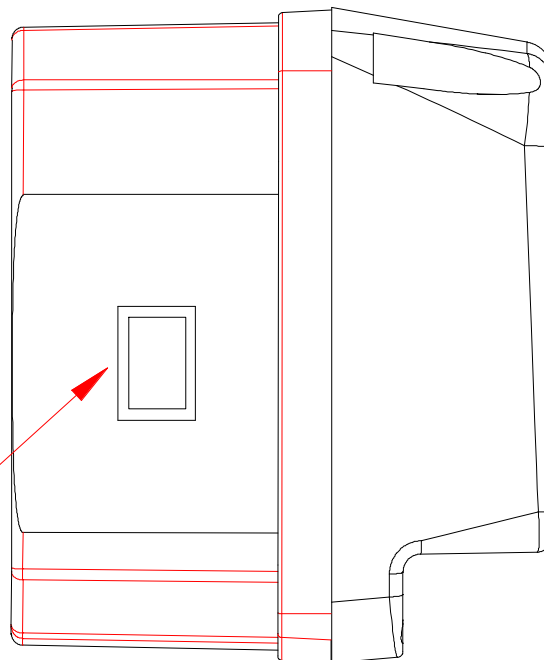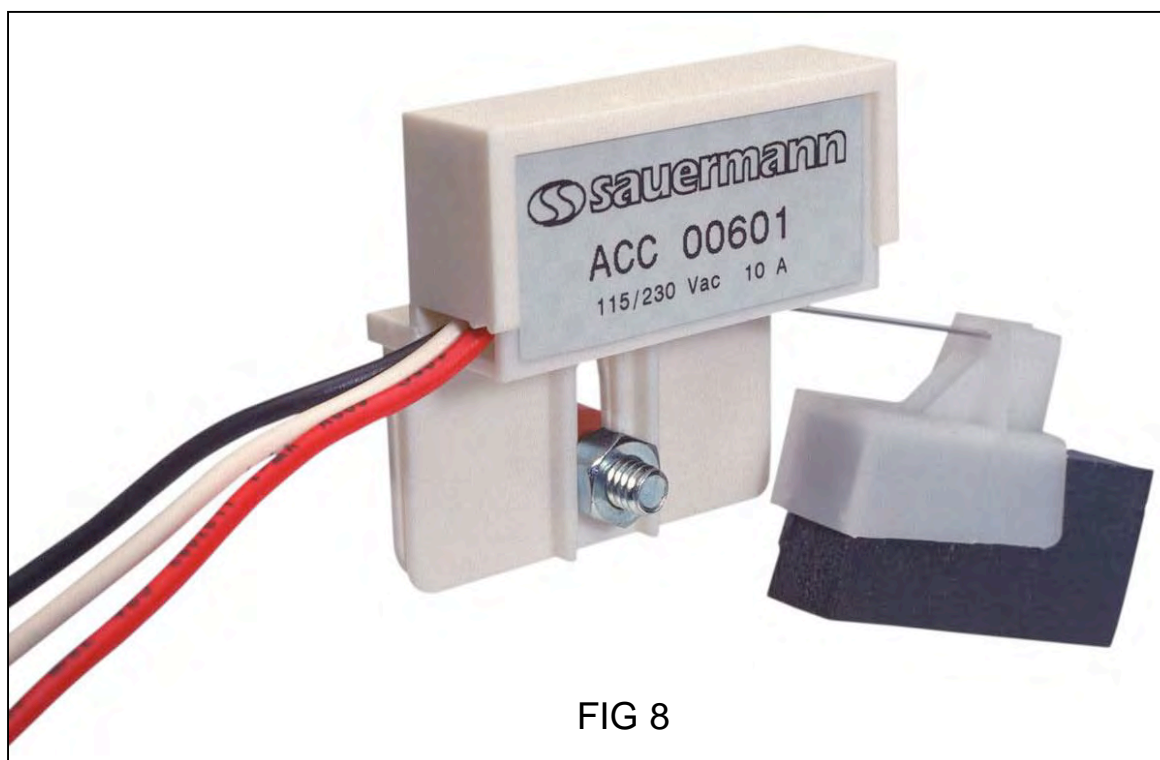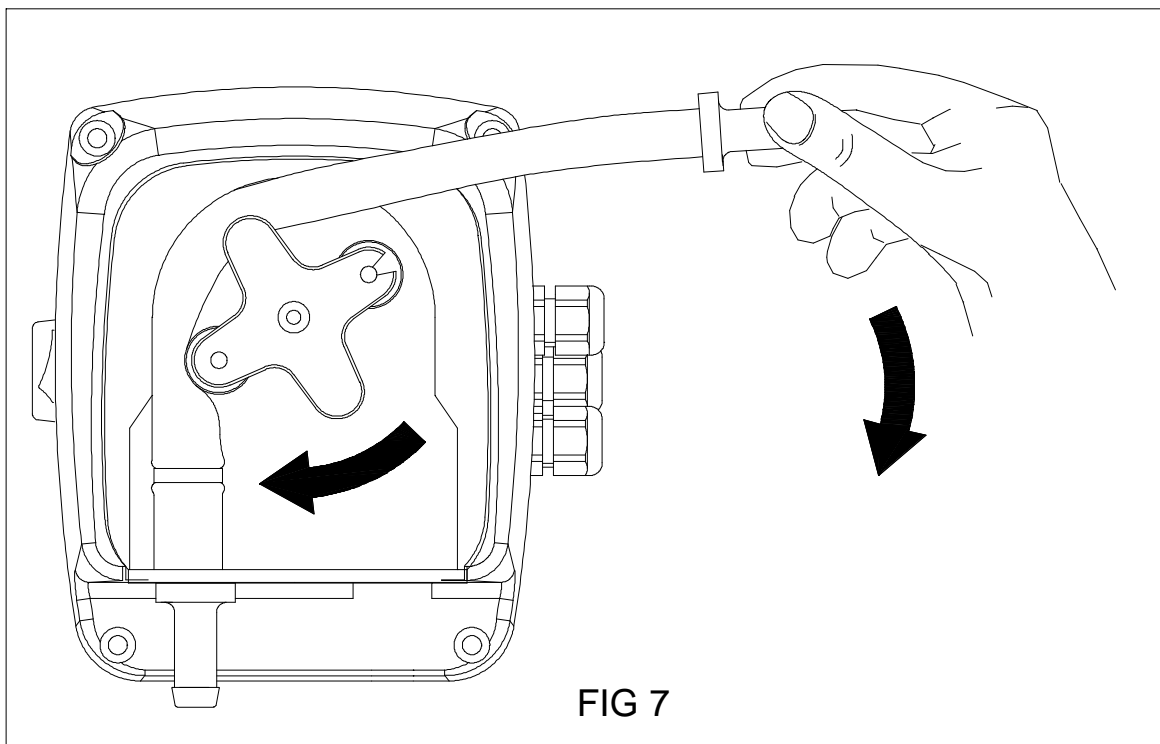## **ACC00601**

Flotteur à fixer sur le rebord du bac de récupération des condensats/Floating alarm, to be fixed on the edge of the drain tray
Contacts disponibles NO et NC 10 Amp – 230 Vac/NO & NC 10 Amp – 230 Vac available contacts
Rouge/Red = Commun/Common
Noir/Black = NB
Blanc/White = NO