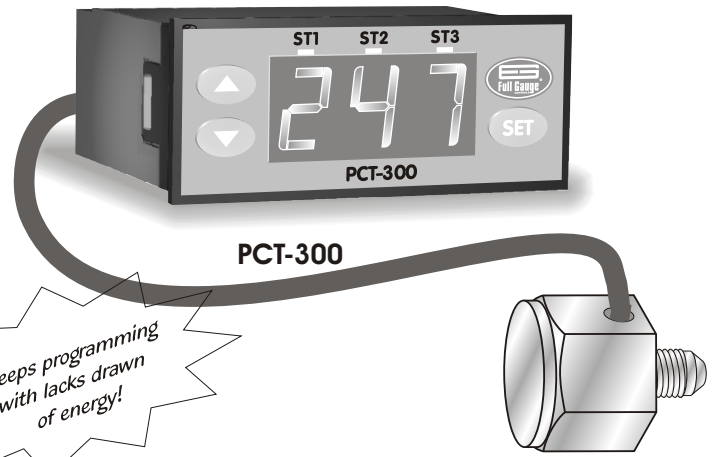


# PCT-300

## THREE-STAGE PRESSURE SWITCH



Find manuals of all line on Web:  
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 BRAZILIAN PRODUCT



*It keeps programming with lacks drawn of energy!*

### DESCRIPTION

Of wide range, from vacuum to 300 PSI (21 kg/cm<sup>2</sup>), this instrument is suitable to control one, two or three compressors both on the suction side and on the discharge side, controlling condensation.

The sensor, with 1/4 gas thread for threaded pipes, is rugged and exchangeable, featuring a high level of accuracy and repeatability.

The cable is 4 meters (13 ft) long, but it can be increased according to the specific distance to be covered. We keep cable rolls in stock for an off-the-shelf supply..

When ordering this instrument, it is necessary to specify the required measure unit: **lb/pol<sup>2</sup> (PSI)** ou **kgf/cm<sup>2</sup>**.

### TECHNICAL SPECIFICATIONS

- **Power supply with internal transformer:** 220 VCA

Other available by request: 110 VCA or

12 VCC/VCA - 24 VCC/VCA

- **Pressure range:** -15 to 300 PSI or

-1.0 to 21.0 kgf/cm<sup>2</sup> (by requesting)

- **Sensor:** with thread 1/4 gas for threaded pipes (cable length 4m)

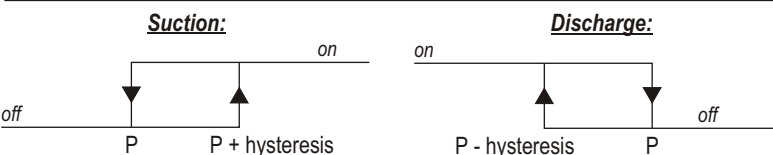
- **Load current:** 5A for stage

- **Dimensions:** 70 x 28 x 60 mm

### Configuration Parameters:

Configuration parameters protected by access code.

Function	Description	Minimum	Maximum	Unit
F01	Access code: 123 (one hundred and twenty-three)	-	-	-
F02	Display offset	-15 (-1.0)	15 (1.0)	PSI (kgf/cm <sup>2</sup> )
F03	1° stage operation mode	0 - suction	1 - discharge	-
F04	1° stage working pressure	-15 (-1.0)	300 (21.0)	PSI (kgf/cm <sup>2</sup> )
F05	Control differential (hysteresis) of 1° stage	1 (0.1)	30 (2.0)	PSI (kgf/cm <sup>2</sup> )
F06	2° stage operation mode	0 - suction	1 - discharge	-
F07	2° stage working pressure	-15 (-1.0)	300 (21.0)	PSI (kgf/cm <sup>2</sup> )
F08	Control differential (hysteresis) of 2° stage	1 (0.1)	30 (2.0)	PSI (kgf/cm <sup>2</sup> )
F09	3° stage operation mode	0 - suction	1 - discharge	-
F10	3° stage working pressure	-15 (-1.0)	300 (21.0)	PSI (kgf/cm <sup>2</sup> )
F11	Control differential (hysteresis) of 3° stage	1 (0.1)	30 (2.0)	PSI (kgf/cm <sup>2</sup> )
F12	Minimum delay between two stages (to turn on)	0	999	seconds
F13	Working sequence*	123	312	-
F14	Automatic switch-over of compressors**	0 - no	1 - yes	-



### Parameters visualization:

- Press **SET** for 2 seconds until **Fun** appears, and release then immediately. **F01** will appear.
- Use the keys **▼** and **▲** to access the desired function.
- After select the function, press **SET** (short touch) to display the value configured for that function.
- Press **SET** again (short touch) to return to the functions menu.
- To exit the menu and return to the normal operation (pressure displaying), press **SET** (long touch) until **---** appears.

### Parameters alteration:

- Press **SET** to access the F01 function for 2 seconds until **Fun** appears and then release it. **F01** will appear and then press **SET** (short touch).
- Use the **▼** and **▲** to enter with access code (123), and then press **SET**.
- Use the **▼** and **▲** to access the desired function.
- After selecting the function, press **SET** to display the value configured for that function.
- Use the **▼** and **▲** keys to change such value and then press **SET** to store the new value and return to the function menu.

**NOTE: If no keys are pressed for 30 seconds, the device will exit the menu and return to normal operation.**

### \*F13 - Working sequence:

**123** - 1<sup>st</sup> stage = 1<sup>st</sup> output (ST1)  
 2<sup>nd</sup> stage = 2<sup>nd</sup> output (ST2)  
 3<sup>rd</sup> stage = 3<sup>rd</sup> output (ST3)

**231** - 1<sup>st</sup> stage = 2<sup>nd</sup> output (ST2)  
 2<sup>nd</sup> stage = 3<sup>rd</sup> output (ST3)  
 3<sup>rd</sup> stage = 1<sup>st</sup> output (ST1)

**312** - 1<sup>st</sup> stage = 3<sup>rd</sup> output (ST3)  
 2<sup>nd</sup> stage = 1<sup>st</sup> output (ST1)  
 3<sup>rd</sup> stage = 2<sup>nd</sup> output (ST2)

### \*\*F14 - Compressors automatic caster

If automatic caster will be chosen, each time that the 3 outputs will be off, the working sequence is modified.

... → 231 → 312 → 123 → 231 → ...

### Leds:

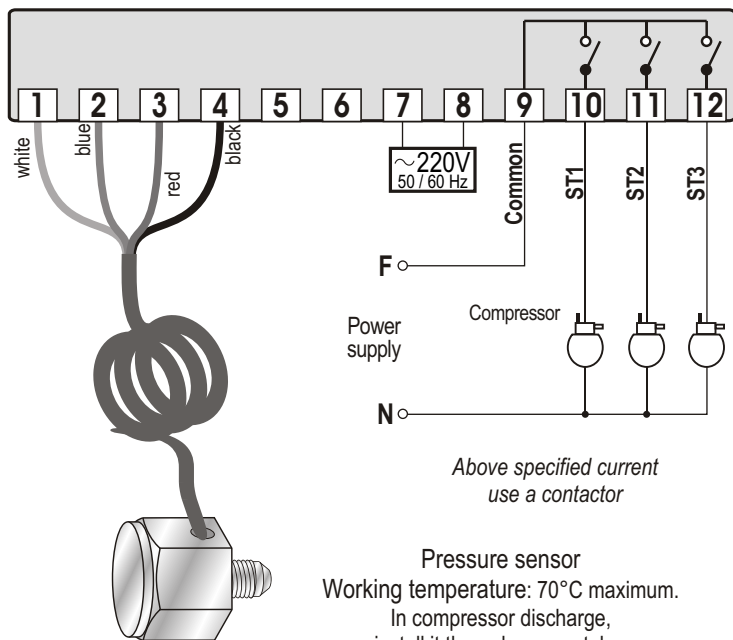
- ST1** - 1<sup>st</sup> output on
- ST2** - 2<sup>nd</sup> output on
- ST3** - 3<sup>rd</sup> output on

### Irregular situations:

If the sensor is damaged (short or open-circuited) or if the temperature recorded is outside the specified range, **Err** appears.

# Esquemas de ligação para o PCT-300:

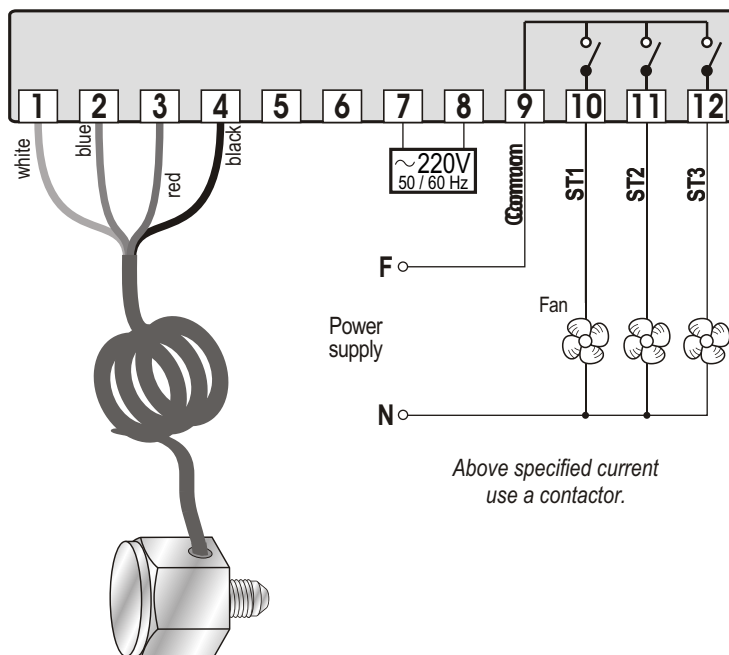
## SUCTION



Above specified current  
use a contactor

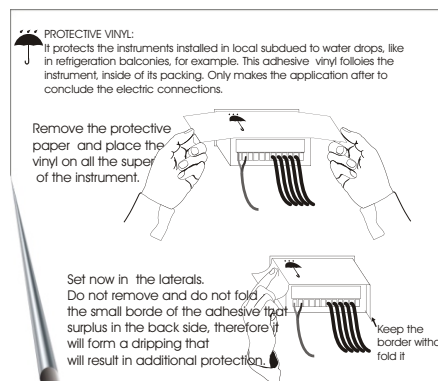
Pressure sensor  
Working temperature: 70°C maximum.  
In compressor discharge,  
install it through copper tube.

## DISCHARGE (CONDENSATION)



Above specified current  
use a contactor.

- 1 - White } Pressure sensor
- 2 - Blue }
- 3 - Red }
- 4 - Black }
- 5 - ---
- 6 - ---
- 7 - 220V
- 8 - 220V
- 9 - Common
- 10 - 1 output (ST1)
- 11 - 2ª output (ST2)
- 12 - 3ª output (ST3)



### IMPORTANT OBSERVATIONS

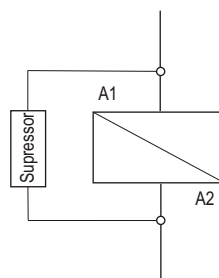
**Obs. 1** It is important to point out that when installing the controller the use conditions must be respected, being they: tension, current, temperature and humidity.

**Obs. 2** We recommend that power supply and drive of loads are kept moved away from the analogical and digital signals.

**Obs. 3** This controller is not protected against overloads, therefore the control output must be protected in some cases using fuses..

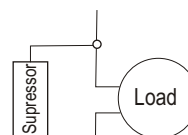
**Obs. 4** It is suggested to install suppressors of transient in parallel to loads.

### Wiring diagram of suppressors in contactors.



A1 and A2 are the contactor coil.

### Wiring diagram of supressor directly



For direct drive  
remember of the load current  
specified.

### IMPORTANT

The withdrawal or substitution of the adhesive panel frontal as well as alterations in the electronic circuit on the part of the user implies in the cancellation of guarantee.