Step Control

Automatic capacity control unit

General description & application

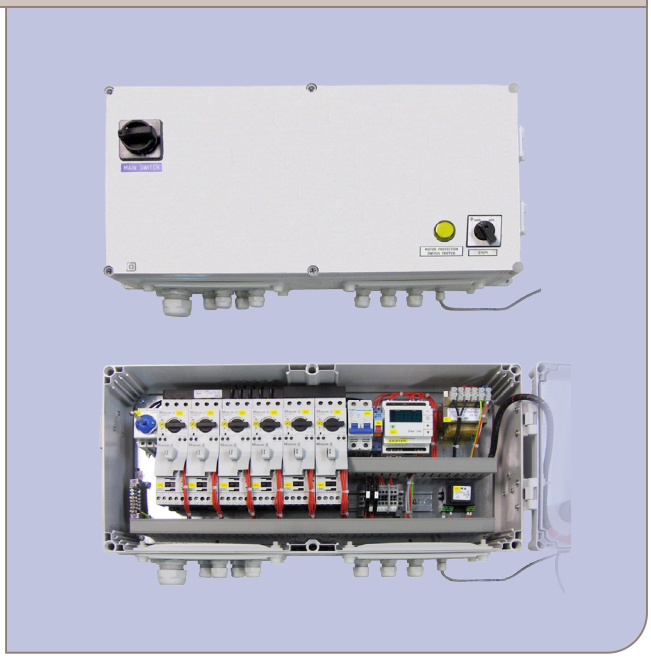
Step Control is intended to be used for stepwise capacity regulation of condensers and liquid coolers and for the starting cycle sequencing for fans.

Available SC control modes

- **SC - Te** Temperature control for liquid coolers
- **SC - Pr** Pressure control for condensers
- **SC - EC** External control
- **SC - ECU** External voltage control 0-10 V
- **SC - ECI** External current control 4-20 mA

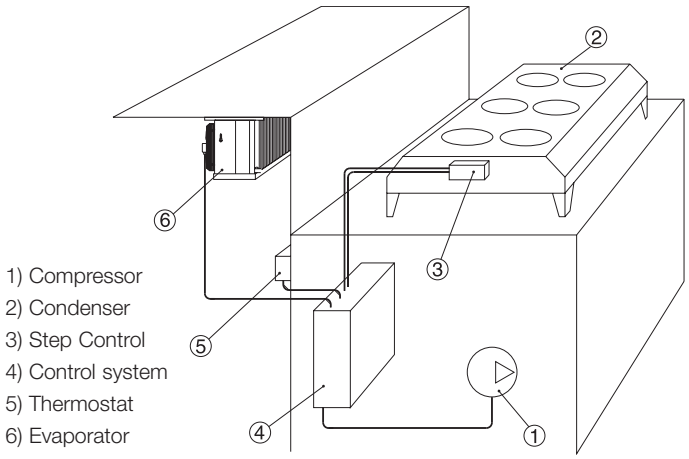
General features

- Power supply 3/380-420V and 3/220-240V
- Protection class IP 54
- Complies to LVD and EMC-directives
- CE-marked
- Standard installation to the heat exchanger end, with extended cover
- Tested and preset at the factory
- Suitable for all condenser, dry cooler & radiator product ranges
- Main switch with supply connection
- Motor overload protection
- Contactors
- Automatic fuse for control
- Multistep thermostat (Te) or pressostat (Pr) with sensor. Multistep control external signal control
- Sequence controller
- Potential-free points for alarm transmission
- Alarm signal light on unit box cover
- Manual/auto switch for test running



Step Control

Installation SC fan control in refrigeration plants



Model SC-Te & SC-Pr

The signal of sensor is transmitted to multistep thermostat or pressostat, which switches fans /steps on/off stepwise according to setting points. The programmable sequence controller changes the starting cycle of the fans/steps, eg. every 24 hours. For alarming there are potential free points and an alarm signal light. There's a single manual/auto switch for test running. The main supply cable will be wired to the main switch. The thermostat or pressostat sensor is mounted on the manifold.

Model SC-ECU/ECI

Same as above, exept customer gives signal from outside system and logic controls fans on/off.

Model SC-EC

The fans/steps are switched by the signals from an external control. This is a practical alternative when the system has a control of its own. The unit doesn't include alarming nor cycle sequencing. Special features SC-EC:

- supply connection
- terminals for contactor reel
- automatic fuse for control

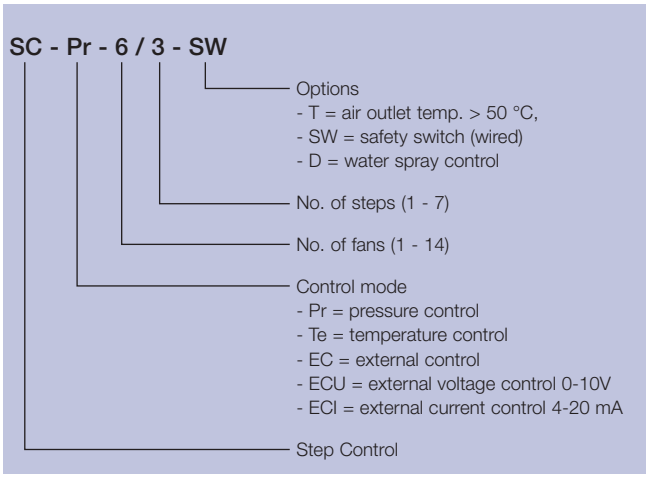
Options (all models)

- Special execution for air outlet temp. > 50 °C (T)
- Wiring to the fans' safety switches (SW)
- Water spray control (D)
  Only for temporary use. Water spray pipes to be ordered separately together with the unit. No. of steps to be incremented.

No. of steps for fan control

No. of fans	No. of steps
1 x 1	1
1 x 2	2
1 x 3	3
1 x 4	4
1 x 5	5
1 x 6	6
1 x 7	7
2 x 2	2
2 x 3	3
2 x 4	4
2 x 5	5
2 x 6	6
2 x 7	7

Code description



Benefits

- Safe & tested control systems.
- Plug & play - just insert power cable and in some cases start/stop signal.
- Stable operation of the refrigeration plant.
- Always an optimized precise unit control.
- Energy efficient - only required motors running.
- Motors rotating start order - switch motors continuously.
- Automatic process control.

Alfa Laval reserves the right to change specification without prior notification.

How to contact Alfa Laval
Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com