

Control Danel 'HndY' 56G CP114



0825-0001

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Installation and Operating Instructions

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Control panel PC114

CP114 is a control panel for connection to a single-phase mains supply 230 V/N/PE.



Max. pre-fusing 16 A. If a residual-current protection device (RCD) is used, a 2-pol. universal-current-sensitive or a super immunized RCD is recommended.

A three-phase pump 3x230 V max. IN=10 A can run on a variable frequency drive (VFD) type Altivar ATV12 (see part-no.).

Part-no.: 6216 0870 – CP114 up to 1,5 kW; 7,5 A (Part-no. VFD 1285 0276)

Part-no.: 6216 0871 – CP114 up to 2,2 kW; 10,0 A (Part-no. VFD 1285 0277)

If problems occur with existing RCD inside-installation, internal EMC filter of the VFD can be disabled. This can affect the EMC.

CP114 will be controlled by the ABS Pump Controller PC111 (part-no. 1270 0002). Useable PC111 units with the update firmware Ver. 1.6.



0625-0002

Figure 1 Pump controller PC111

This manual is a supplement to the standard manuals of the PC111 and simplified manual of the ATV12. All connections must be carried out in accordance to the enclosed wiring diagram.

General Information

- Main switch –Q0 interrupted the total control panel.
- Fuse – F2 only protects the controller – A1. VFD –A10 remains active.



Analogue and digital level-inputs of PC111 are not intrinsically safe. In Ex-applications additional appropriate safeguards are necessary.

- Fuse – X1/8 protects circuit of accumulator (option).
- Key lockable steel cabinet with separate wall brackets and cable glands.

Options

- Backup-battery 12 V; 1,2 Ah (part-no. 6216 0961)
It is possible to operate parts of the PC111 unit independent of mains. An integrated charger functions as a constant buffer for the battery. More information see manual of the PC111. The retrofit back-up kit includes 12 V lead-acid battery (1,2 Ah), fix bracket, wiring kit and installation guide.
- Thermostatic controlled heater 230 V, 10 W (part-no. 6216 0088)
If unfavourable mounting is necessary e.g. outdoor installation, a thermostatic heater can be installed inside of the steel cabinet. A retrofit kit includes thermostat (0° - 60°), heater 10 W, fuse 2 A, wiring kit and installation guide.
- External alarm unit (audio-visual) 12 VDC (part-no.: 6216 0978)
The external alarm unit combines a 12 VDC LED-alarm light and a piezo-buzzer IP65, mounted in plastic box IP66.

All fundamental settings and operating steps are described in the standard manual of the PC111 (part-no. 8130 0095A), they remain valid. Additionally you will find the following parameters in the start menu option 3.2, figure 3-2:

Menu item	Value	Comment
Stop criteria	(Stop float...)	stop criteria using floats...



New Functions

Relay 2 function	[Reversing pump, Start Cap., Off]	Reversing if fault. Activated by output LO1 from VFD.
Rev. Delay time	Minutes	Delay reverse function, so that the pump can stop.
Rev. Run time	Seconds	Running time in changed direction.
Max. no Attempts	1 - 3	After reversion the pump starts. Procedure is considered as successful if at least the running time of the "Rev. delay" is reached.
		After that the counter will be reset. If fault occurs again, next start attempt, max. 3 attempts possible. All further attempts stop the pump, created alarm have to be reset manually.
P1 Rel. when Rev.	ON - OFF	Function of relay 1 during reversion of rotation (MUST BE in position „OFF“).
Curr. Sensor P1	ON - OFF	Position „OFF“. Current measuring occurs via VFD.

Control panel type ABS CP114



Before starting-up, important settings on the VFD are to be made. VFD is preconfigured, according to part-no when distributed. An examination of the parameters is urgently recommend.



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Figure 2 Frequency converter (Fa. Schneider Electric)

A VFD of the Schneider Electric company, type Altivar ATV12 is used.

The most important settings and operating steps are explained in the enclosed simplified manual. A detailed guideline is available on the Schneider Electric Website under <http://www.global-download.schneider-electric.com> as Download.

After connecting mains voltage and switching on the main switch, the display of the VFD shows [rdy].

The following settings are to be made and/or checked.

Menu item	Value	Comment
Main menu [CO _n F] ↵ Submenu [FULL] ↵ Menu [I_O_] ↵ [ctd]	A	Threshold value for high pump current. Activate motor protection and/or reverse function.
Main menu [CO _n F] ↵ [nCr]	A	Nominal current of pump.
Main menu [CO _n F] ↵ [nPr]	kW	Nominal power of pump.
Main menu [CO _n F] ↵ Submenu [FULL] ↵ Menu [drC] [nsP]	rpm	Nominal speed of pump.

These settings can be stored with the following function.

Menu item	Value	Comment
Main menu [CO _n F] ↵ [SCS]	nO Str 1	Storage of the current configuration.
Main menu [CO _n F] ↵ [reC 1]		Reset stored configuration.

Technical data

(further technical data see manual PC111 and ATV12)

Ambient operating temperature	-10 to + 50 °C
Ambient storage temperature	-25 to + 70 °C
Humidity	5 – 95 % non-condensing
Dimensions	HxBxT 420 x 300 x 230 mm Height top edge flash light Depth top edge lock
Degree of protection	IP54
Power supply	210 – 240 V, 50 – 60 Hz single phase
Weight	Ca. 10 kg
Colour	RAL 7035
Special VFD values	
Max. altitude of site	1000 m 2000 m current reduction 1 % per added 100 m
Range of output frequency	0,5 – 400 Hz
Max. transient current for 60 sec. 2 sec.	150 % of VFD nominal current 165 % of VFD nominal current
C1 EMV category	Max. 5 m shielded cable, switching frequency 4, 8 or 12 kHz

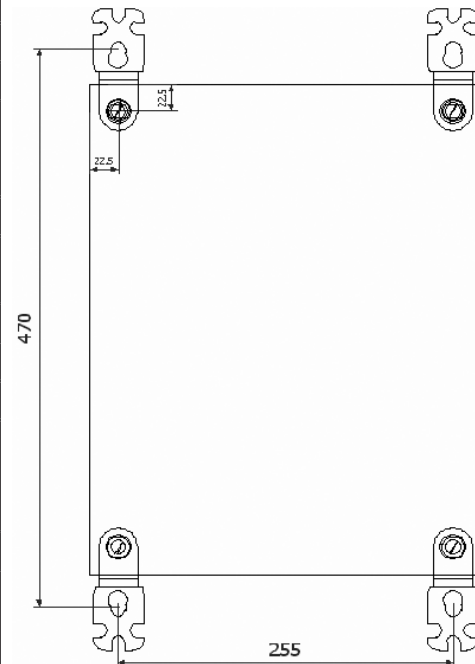
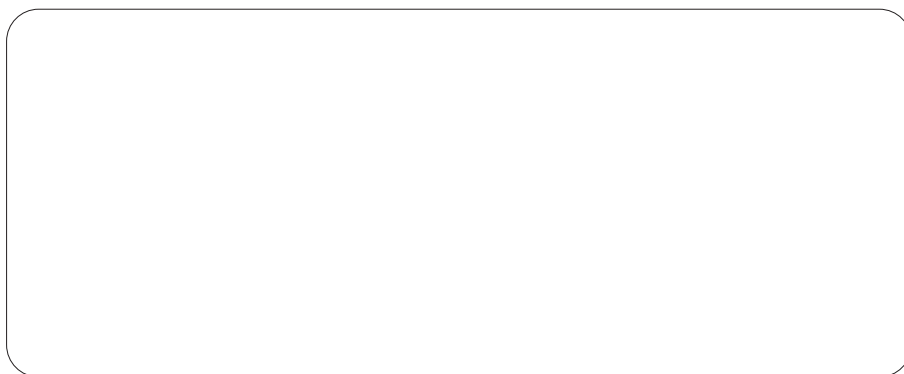


Figure 3 Dimensions



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