

Chiller Controller

A7-S304FT-01/02

The model **A7-S304XX** is meant for controlling chillers that processes normal/brine water. The system that could be wired for single or double compressor operation has an operating range between (-20) and +50. A three-digit seven-segment display is provided to indicate outlet water temperature (OWT) and inlet water temperature (IWT). The upper and lower temperature limits could be set between these ranges using the push buttons. IWT sensor is provided to measure the inlet water temperature to the chiller. These field-proven cost-effective controllers designed and built as per **IEC** standards and are cleared for **EMC/EMI**.

This system that could control up to two compressors is provided with controllers for condenser water pumps, compressor(s), hot gas bypass valve and a solenoid to activate the pump down function. Duty cycling between the two compressors at every two hours, equalizing of the compressor is also provided in the system.

These field proven controllers are widely used in many chiller plants, hospitals, plastic moulding machines, food industries, etc.

Product Highlights

- Status Indication
- Single/double comp. operation
- -20 to 50°C-temperature setting
- Outlet and inlet water temperature display
- Power down memory
- Password protection for system settings.
- Provision for hot gas bypass
- Pump down function
- Brine / Ordinary water operation
- Compressor run time equalization
- Error status indication
- HP, LP, AF, SPP, Pump, Flow switch error protection and interlocks.
- Alarm output

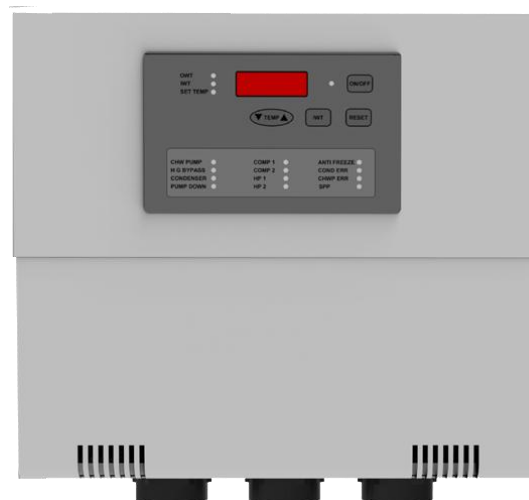


Fig.1 Chiller controller A7-S304FT-02

The **Pump Down** function is carried out by operating a three-way solenoid valve. This solenoid valve will be kept energized, during the normal operation of the unit. The controller would de-energize the solenoid valve and the compressor would continue to work until LP switch initiate switching OFF of the unit, whenever the unit is switched OFF.

The model **A7-S304FT-02** is used to operate screw compressor model chillers. It has a single compressor with two solenoid valves (SV1 & SV2), a chilled water pump, a condenser and a pump down valve. The compressor will be switched ON for the entire period and depending on the OWT the controller will energize or de-energize the solenoid valves SV1 and SV2 and adjust the gas flow. This model is also provided with a star – delta starting to reduce the initial starting current.

These controllers, designed to save energy and operational cost of the sites, detect most of the failure mechanisms of the chillers like chilled water flow failure, fan failure, antifreeze, overload, power failure, HP, LP, etc. On the generation of an error, the controller will generate an alarm by operating a potential free contact.

Application

- Chiller plants
- Hospitals
- Industrial coolers
- Oil coolers
- Brine coolers

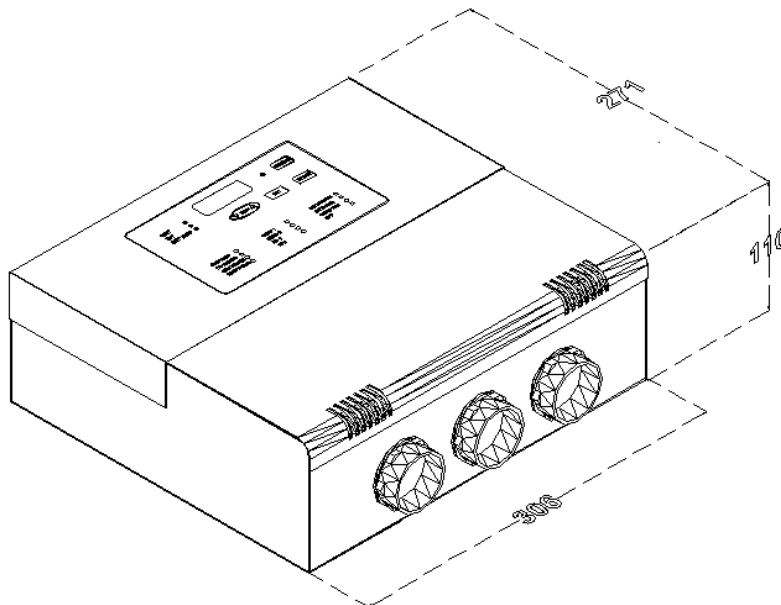
Product Selection Chart

Model Number	OWT temp. & display	IWT temp. & display	Outputs							Error interlocks						Type of display			
			Chilled water pump	Condenser pump	Compressor	Comp. solenoid valves	Hot gas bypass valve	Pump down valve	Alarm	HP	LP	Antifreeze	Condenser error	Chilled water pump error	Compressor overload		CTP	SPP	Star / Delta starting
A7-S304FT-01	✓	✓	1	1	2	*	1	1	1	✓	✓	✓	✓	✓	✓	*	✓	*	LED
A7-S304FT-02	✓	✓	1	1	1	2	*	1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	LED

✓ - Provided * - Not provided

Mechanical dimensions (in mm)

L × B × H: 306 × 271 × 110



Electrical specifications

Input Voltage (V AC)			Frequency (Hz)			Power consumption (VA)	Relay rating (A)
Min.	Typ	Max.	Min.	Typ	Max.		Steady state
180	220	270	45	50	55	6	5

Notes & Abbreviations

CTP – Compressor thermal protection, HP – High pressure, LP – Low pressure, SPP – Single phasing preventer

The electrical wiring diagram can be given on request

The specifications, designs and information in this brochure are subject to change without notice

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