



Features

- Compressor Cycling Protection
- Compressor Minimum Run time
- Low Pressure Protection
- Loss of Refrigerant Protection
- Head Pressure Fan Speed Control
- Indoor Coil Icing Protection
- Outdoor Coil De-icing
- Status indication via 7 segment display
- Common Fault Output
- Repeat Fault Lockout Protection

Test Function

Press and hold the test button for 3 sec. to initiate a test cycle. During this cycle, all the outputs one by one from Fan Speeds, Compressors, Reverse Valves to Crankcase Heater and Compressor Solenoid switches on for 5 seconds each. The test can be terminated early by pressing this button again for 3 sec. Press test button for 10 sec. to run Commissioning mode (reduces all timer settings to 1/10th set value; resets after 30 minutes). The test sequence can only be initiated when the compressor(s) is (are) not running!

7 Segment Display Functions

Display	Description	Note
0	Normal operation	
1	Compressor timer active	Compressor is held OFF until timer expires
2	Compressor timer active	Compressor is held ON until timer expires
3	Loss of refrigerant alarm	
4	High pressure alarm Or High Suction temp. alarm	Stops the compressors if HP exceeds the 42 bar threshold. Or Suction temperature is above 30°C continuously for 15 minutes.
5	Temperature sensor signal out of range	A temperature sensor may be faulty, disconnected or short circuit.
6	Pressure transducer signal out of range	A transducer may be faulty, disconnected, short circuit, inadvertently swapped with another, or the wrong type is fitted.
7	Indoor coil frost alarm	In the cooling cycle, if the evaporator temperature is less than -10°C (adjustable between -2 and 10°) for a period of time, the compressor will stop for 15 mins.
8	Outdoor coil de-ice cycle is active	Heating mode, if the de-ice sensor is below -4°C then a de-ice cycle is initiated. 30 minutes min. between cycles
9	High discharge line temperature alarm	If the discharge line temperature rises above 110°C the compressor will be stopped.
A	Test mode	Unit is in test mode
b	D.R.E.D. active (reduced capacity operation)	One of the 3 possible DRM modes is activated.
C	RS485 Modbus communications alarm	Check connections with TZT-100 thermostat and/or any inverter compressor driver in the unit.
d	Unit turned OFF by an external On/Off signal, Phase Rotation error, or an Open Circuit Overload.	When a TZT-100 thermostat is used then inputs DI5 and DI6 are used as overload input signals. Usually these monitor condenser fan overloads.
E	Commissioning mode	
F	Lock out (A repetitive fault has caused the system to shut down)	The specific repetitive fault that caused the lockout is identifiable: 1. Frost_lockout_comp1/2 2. HP_lockout_comp1/2 3. HT_lockout_comp1/2 4. REF_lockout_comp1/2