ADDENDUM FOR TW SERIES IOM MANUAL
(PART# 6 720 220 329 Initial Release 01-12)

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MODEL NOMENCLATURE

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ABOUT THE ADDENDUM
This addendum is intended to provide the information on the new model TW122 that is being introduced in the residential market for the first time by BOSCH, highlighting only the differences from the other TW models where applicable with reference to the main TW manual (part # 6720220047).

Caution
TW122 is available with rear water connections only.

GENERAL DESCRIPTION
The TW122 Water-to-Water heat pump is a nominal 10 ton capacity 2 stage high efficiency unit that is Energy Star Tier 3 compliant and is very suitable and effective for residential radiant floor heating application. The cabinet and construction of the TW122 unit is different from TW025 to TW071 models due to two single-step compressors being utilized for achieving a two stage operation compared to one two-step compressor used for the other smaller sizes. However, this does not cause any issues and is more or less invisible/ transparent to either the installer or the home owner as the essential functionality of the unit related to performance, operation and safety are similar. This addendum provides information on some generic information applicable to the models (TW025-071) in the main manual such as the Comfort Alert Module (CADM) and some specific to the TW122 unit such as the wiring diagrams.

MODEL NOMENCLATURE

TW 122 - 1 CS C - R X X

NOT APPLICABLE

WATER CONNECTION LOCATION
R-REAR

WATER COIL OPTIONS
C-COPPER
N-CUPRO-NICKEL

Comfort Alert Module
COMFORT ALERT™ DIAGNOSTICS – FASTER SERVICE AND IMPROVED ACCURACY

The Comfort Alert diagnostics module (CADM) is a breakthrough innovation for troubleshooting heat pump and air conditioning system failures.

The module installs easily in the electrical box near the compressor contactor.

By monitoring and analyzing data from the Copeland Scroll® compressor and the thermostat demand, the module can accurately detect the cause of electrical and system related failures without any sensors. A flashing LED indicator communicates the ALERT code and guides the service technician more quickly and accurately to the root cause of a problem.

CADM - FLASH CODES

Note: Troubleshooting Information Solution column may reflect possible fault that may be one of, or a combination of causes and solutions. Check each cause and adopt “process of elimination” and or verification of each before making any conclusion.

<table>
<thead>
<tr>
<th>Status LED</th>
<th>Status LED Description</th>
<th>Status LED Troubleshooting Information Solution</th>
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</table>
| Yellow “ALERT” Flash Code 3 | Short Cycling Compressor is running only briefly | 1. Thermostat demand signal is intermittent  
2. Time delay relay or control board defective  
3. If high pressure switch present go to Flash Code 2 information  
4. If low pressure switch present go to Flash Code 1 information |
| Yellow “ALERT” Flash Code 4 | Locked Rotor | 1. Run capacitor has failed (may not be bad, verify)  
2. Low line voltage (contact utility if voltage at disconnect is low)  
   • Check wiring connections  
3. Excessive liquid refrigerant in compressor  
4. Compressor bearings are seized  
   • Measure compressor oil level |
| Yellow “ALERT” Flash Code 5 | Open Circuit | 1. Outdoor unit power disconnect is open  
2. Compressor circuit breaker or fuse(s) is open  
3. Compressor contactor has failed open  
   • Check compressor contactor wiring and connectors  
   • Check for compressor contactor failure (burned, pitted or open)  
   • Check wiring and connectors between supply and compressor  
   • Check for low pilot voltage at compressor contactor coil  
4. High pressure switch is open and requires manual reset  
5. Open circuit in compressor supply wiring or connections  
6. Unusually long compressor protector reset time due to extreme ambient temperature  
7. Compressor windings are damaged  
   • Check compressor motor winding resistance |
| Yellow “ALERT” Flash Code 6 | Open Start Circuit Current only in run circuit | 1. Run capacitor has failed (may not be bad, verify)  
2. Open circuit in compressor start wiring or connections  
   • Check wiring and connectors between supply and the compressor “S” terminal  
3. Compressor start winding is damaged  
   • Check compressor motor winding resistance |
| Yellow “ALERT” Flash Code 7 | Open Run Circuit Current only in start circuit | 1. Open circuit in compressor run wiring or connections  
   • Check wiring and connectors between supply and the compressor “R” terminal  
2. Compressor run winding is damaged  
   • Check compressor motor winding resistance |
| Yellow “ALERT” Flash Code 8 | Welded Contactor Compressor always runs | 1. Compressor contactor has failed closed  
2. Thermostat demand signal not connected to module |
| Yellow “ALERT” Flash Code 9 | Low Voltage Control circuit < 17VAC | 1. Control circuit transformer is overloaded  
2. Low line voltage (contact utility if voltage at disconnect is low)  
   • Check wiring connections Flash Code number corresponds to a number of LED flashes, followed by a pause and then repeated. TRIP and ALERT LEDs flashing at same time means control circuit voltage is too low for operation |