BD350/350GH
Direct Current Twin Compressor
R134a
12V - with 101N08xx Series Controllers

General
Code number (without electronic units) 102Z3018
Compressor module 101N0800, 30 pcs: 101N0801
Application module 101N0820, 24 pcs: 101N0821
Approvals –
Compressors on pallet 50

Application
Application LBP/MBP/HBP
Evaporating temperature °C -25 to 15
Voltage range VDC 9.6 - 17
Max. condensing temperature continuous (short) °C 60 (70)
Max. winding temperature continuous (short) °C 125 (135)

Cooling requirements
Application LBP MBP HBP
32°C F1 F1 F1
38°C F1 F1 F1
43°C F1 F1 F1

Remarks on application:
- evaporator fan max. 200W
- condenser fan max. 100W
- starting ability: LST (low starting torque) only

Motor
Motor type variable speed
Resistance, all 3 windings (25°C) Ω 0.1

Design
Displacement cm³ 2 x 5.08
Oil quantity (type) cm³ 560 (polyolester)
Maximum refrigerant charge g 800
Free gas volume in compressor cm³ 2 x 1690
Weight - Compressor/Electronic unit kg 15.8/2 × 0.33, 1 × 0.28

Battery protection settings
Voltage Min. value Default Max. value
Cut out (0.1 steps) VDC 9.6 10.4 17
Cut in diff. (0.1 steps) VDC 0.5 1.3 10

Dimensions
Height mm A 173
B 169
B1 –
B2 –
Suction connector location/l. D. mm | angle C 6.2 | 90°
material | comment Cu-plated steel | Al cap
Process connector location/l. D. mm | angle D 6.2 | 31.5°
material | comment Cu-plated steel | Al cap
Discharge connector location/l. D. mm | angle E 5.0 | 28°
material | comment Cu-plated steel | Al cap
Connector tolerance l. D. mm ±0.09, on 5.0 +0.12/+0.20
Remarks
S = Static cooling normally sufficient
O = Oil cooling
F1 = Fan cooling 1.5 m/s
(compressor compartment temperature equal to ambient temperature)
F2 = Fan cooling 3.0 m/s necessary
SG = Suction gas cooling normally sufficient
– = not applicable in this area
Operational errors

<table>
<thead>
<tr>
<th>Error code</th>
<th>Error type</th>
<th>Can be read out in the software TOOL4COOL®</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Thermostat failure</td>
<td>(If the NTC thermistor is short-circuit or has no connection, the electronic unit will enter manual mode).</td>
</tr>
<tr>
<td>5</td>
<td>Thermal cut-out of electronic unit</td>
<td>(If the refrigeration system has been too heavily loaded, or if the ambient temperature is high, the electronic unit will run too hot).</td>
</tr>
<tr>
<td>4</td>
<td>Minimum motor speed error</td>
<td>(If the refrigeration system is too heavily loaded, the motor cannot maintain minimum speed at approximately 1,650 rpm).</td>
</tr>
<tr>
<td>3</td>
<td>Motor start error</td>
<td>(The rotor is blocked or the differential pressure in the refrigeration system is too high).</td>
</tr>
<tr>
<td>2</td>
<td>Fan over-current cut-out</td>
<td>(The fan loads the electronic unit with too high current).</td>
</tr>
<tr>
<td>1</td>
<td>Battery protection cut-out</td>
<td>(The voltage is outside the cut-out setting).</td>
</tr>
</tbody>
</table>

Accessories for BD350/350GH

<table>
<thead>
<tr>
<th>Mounting</th>
<th>Code number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolt joint for one compressor Ø: 16 mm</td>
<td>118-1917</td>
</tr>
<tr>
<td>Bolt joint in quantities Ø: 16 mm</td>
<td>118-1918</td>
</tr>
<tr>
<td>Snap-on in quantities Ø: 16 mm</td>
<td>118-1919</td>
</tr>
</tbody>
</table>

Electrical (cables, sensors, etc.)

<table>
<thead>
<tr>
<th>Code number</th>
<th>Single pack</th>
<th>I - Pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Wire/LIN gateway communication cable</td>
<td>105N9501</td>
<td>–</td>
</tr>
<tr>
<td>Bluetooth® gateway communication cable</td>
<td>105N9502</td>
<td>–</td>
</tr>
<tr>
<td>Temperature sensor 470 mm</td>
<td>105N9611</td>
<td>105N9613, 200 pcs</td>
</tr>
<tr>
<td>Temperature sensor 1000 mm</td>
<td>105N9614</td>
<td>105N9615, 100 pcs</td>
</tr>
<tr>
<td>Temperature sensor 1500 mm</td>
<td>105N9616</td>
<td>105N9617, 100 pcs</td>
</tr>
<tr>
<td>Twin comm. cable, 800 mm</td>
<td>–</td>
<td>105N9561, 65 pcs</td>
</tr>
<tr>
<td>Twin comm. cable, 1500 mm</td>
<td>–</td>
<td>105N9555, 65 pcs</td>
</tr>
<tr>
<td>Twin comm. cable, 3000 mm</td>
<td>–</td>
<td>105N9560, 40 pcs</td>
</tr>
<tr>
<td>Display cable, 1500 mm</td>
<td>–</td>
<td>105N9567, 65 pcs</td>
</tr>
<tr>
<td>Display cable, 3000 mm</td>
<td>–</td>
<td>105N9558, 35 pcs</td>
</tr>
</tbody>
</table>

Test conditions

- Condensing temperature 55°C
- Ambient temperature 32°C
- Suction gas temperature 32°C
- Liquid temperature no subcooling 32°C

Legend

- Mounting screws
- Battery
- Fuse
- Main switch
- Evaporator fan
- Condenser fan
- Mechanical thermostat
- NTC temperature sensor (electrical thermostat), alternative: mechanical thermostat
- NTC auxiliary temperature sensor
- Compressor(s)
- One Wire/LIN gateway communication interface
- Modbus-compatible device
- Bluetooth® gateway communication interface

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