

DLV5.7CN Variable Speed Drive Compressor R290, 100-127V 50/60Hz - with 105N4460 Controller



General

| | |
|-----------------------|-----------------------------|
| Code number | 102H4604 |
| Electronic unit | 105N4460 |
| Approvals | UL 60335-2-34 with Annex AA |
| Compressors on pallet | 100 |

Application

| Application | LBP/MBP | | | |
|--|---------|-----------|-----------|--|
| Frequency | Hz | 50 | 60 | |
| Evaporating temperature | °F | -31 to 45 | -31 to 45 | |
| Voltage range | V | 90 - 140 | 90 - 140 | |
| Max. condensing temperature continuous (short) | °F | 140 (149) | 140 (149) | |
| Max. winding temperature continuous (short) | °F | 257 (275) | 257 (275) | |

Cooling requirements

| Frequency | Hz | 50 | | | 60 | | |
|-------------|----|----------------|----------------|-----|----------------|----------------|-----|
| Application | | LBP | MBP | HBP | LBP | MBP | HBP |
| 32°C | | F ₂ | F ₂ | - | F ₂ | F ₂ | - |
| 38°C | | F ₂ | F ₂ | - | F ₂ | F ₂ | - |
| 43°C | | F ₂ | F ₂ | - | F ₂ | F ₂ | - |

Remarks on application:

Features

| | | |
|------------------------------------|-----|-----------------------------|
| Speed range | rpm | 2000 - 4500 |
| Speed control | | AEO, frequency, serial com. |
| Thermostat | | integrated, electronic |
| Protections | | current, speed, temperature |
| Protection class (electronic unit) | | IP54 |

Motor

| | | |
|-----------------------------------|---|--------------------|
| Motor type | | permanent magnet |
| LRA (rated after 4 sec. UL984) | A | electronic cut off |
| Maximum current | A | 6.5 |
| Resistance, all 3 windings (25°C) | Ω | 1.2 |

Design

| | | |
|-------------------------------------|--------|-------------------|
| Displacement | cu.in | 0.35 |
| Oil quantity (type) | fl.oz. | 7.8 (polyolester) |
| Maximum refrigerant charge | oz. | 5.3 |
| Free gas volume in compressor | fl.oz. | 49.5 |
| Weight - Compressor/Electronic unit | lbs. | 17.2 / 1.15 |

Dimensions

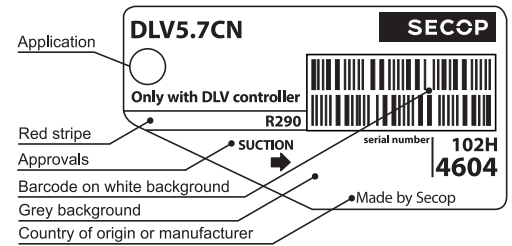
| | | | |
|---------------------|--------------------------|---|----------------------|
| Height | inch | A | 6.89 |
| | | B | 6.65 |
| Suction connector | location/I.D. mm angle | C | 0.320-0.327 18° |
| | material comment | | Copper Rubber plug |
| Process connector | location/O.D. mm angle | D | 0.252-0.259 61° |
| | material comment | | Copper Rubber plug |
| Discharge connector | location/O.D. mm angle | E | 0.252-0.259 25° |
| | material comment | | Copper Rubber plug |

Accessories

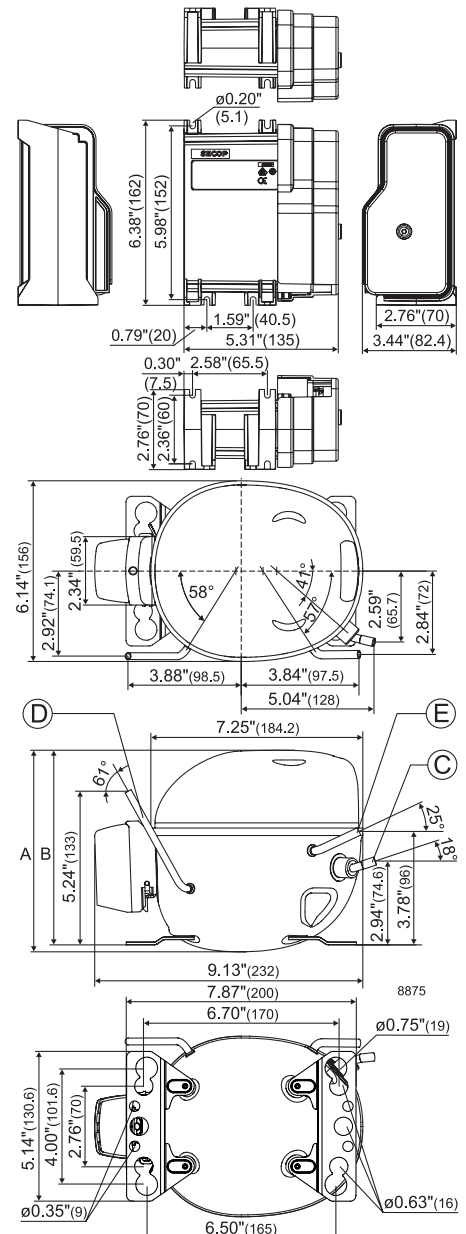
| | Code number |
|-------------|-----------------------------------|
| Cover | 103N0492 |
| Cord relief | 103N1010 |
| Motor cable | 35.4 in. cable length 105B4477 |

Mounting accessories

| | Code number |
|-------------------------------|---------------------|
| Bolt joint for one compressor | Ø: 3/4 in. 118-1949 |
| Bolt joint in quantities | Ø: 5/8 in. 118-1946 |
| Snap-on in quantities | Ø: 5/8 in. 118-1947 |



- 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
- = not applicable in this area



LBP: ASHRAE 115V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [BTU/h] | 664 | 748 | 833 | 917 | 1002 | 1170 | 1339 | 1523 |
| Power cons. [W] | 115 | 130 | 144 | 160 | 176 | 207 | 239 | 277 |
| Current cons. [A] | 1.55 | 1.72 | 1.89 | 2.08 | 2.27 | 2.64 | 3.01 | 3.44 |
| EER [BTU/Wh] | 5.76 | 5.78 | 5.79 | 5.75 | 5.71 | 5.65 | 5.61 | 5.50 |

Test conditions

| | | |
|------------------------|-------|---------|
| Evaporation pressure | -10°F | -23.3°C |
| Condensing pressure | 130°F | 54.4°C |
| Liquid temperature | 90°F | 32.2°C |
| Return gas temperature | 90°F | 32.2°C |

LBP: CECOMAF 115V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [BTU/h] | 497 | 561 | 624 | 687 | 750 | 877 | 1003 | 1141 |
| Power cons. [W] | 111 | 125 | 139 | 154 | 169 | 200 | 230 | 267 |
| Current cons. [A] | 1.49 | 1.66 | 1.83 | 2.01 | 2.19 | 2.54 | 2.90 | 3.32 |
| EER [BTU/Wh] | 4.48 | 4.49 | 4.50 | 4.47 | 4.44 | 4.39 | 4.36 | 4.28 |

Test conditions

| | | |
|------------------------|-------|-------|
| Evaporation pressure | -13°F | -25°C |
| Condensing pressure | 131°F | 55°C |
| Liquid temperature | 131°F | 55°C |
| Return gas temperature | 90°F | 32°C |

LBP: EN12900 115V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [BTU/h] | 388 | 438 | 487 | 537 | 586 | 685 | 784 | 892 |
| Power cons. [W] | 85 | 96 | 106 | 118 | 130 | 153 | 176 | 205 |
| Current cons. [A] | 1.12 | 1.24 | 1.37 | 1.50 | 1.64 | 1.91 | 2.18 | 2.49 |
| EER [BTU/Wh] | 4.57 | 4.58 | 4.59 | 4.55 | 4.52 | 4.48 | 4.45 | 4.36 |

Test conditions

| | | |
|------------------------|-------|-------|
| Evaporation pressure | -31°F | -35°C |
| Condensing pressure | 104°F | 40°C |
| Liquid temperature | 104°F | 40°C |
| Return gas temperature | 68°F | 20°C |

MBP: ASHRAE 115V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [BTU/h] | 1176 | 1326 | 1477 | 1626 | 1776 | 2075 | 2375 | 2700 |
| Power cons. [W] | 157 | 177 | 196 | 218 | 239 | 283 | 326 | 378 |
| Current cons. [A] | 2.11 | 2.35 | 2.58 | 2.84 | 3.04 | 3.60 | 4.11 | 4.70 |
| EER [BTU/Wh] | 7.49 | 7.51 | 7.52 | 7.47 | 7.42 | 7.34 | 7.29 | 7.15 |

Test conditions

| | | |
|------------------------|-------|--------|
| Evaporation pressure | 20°F | -6.7°C |
| Condensing pressure | 130°F | 54.4°C |
| Liquid temperature | 115°F | 46.1°C |
| Return gas temperature | 95°F | 35°C |

MBP: CECOMAF 115V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [BTU/h] | 939 | 1059 | 1179 | 1298 | 1418 | 1656 | 1895 | 2155 |
| Power cons. [W] | 152 | 171 | 190 | 211 | 231 | 273 | 315 | 365 |
| Current cons. [A] | 2.02 | 2.25 | 2.47 | 2.71 | 2.96 | 3.44 | 3.93 | 4.49 |
| EER [BTU/Wh] | 6.19 | 6.20 | 6.22 | 6.17 | 6.13 | 6.07 | 6.02 | 5.91 |

Test conditions

| | | |
|------------------------|-------|-------|
| Evaporation pressure | 14°F | -10°C |
| Condensing pressure | 131°F | 55°C |
| Liquid temperature | 131°F | 55°C |
| Return gas temperature | 90°F | 32°C |

MBP: EN12900 115V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [BTU/h] | 1060 | 1195 | 1331 | 1466 | 1600 | 1870 | 2140 | 2434 |
| Power cons. [W] | 143 | 161 | 179 | 199 | 219 | 258 | 297 | 345 |
| Current cons. [A] | 1.84 | 2.05 | 2.25 | 2.47 | 2.69 | 3.14 | 3.58 | 4.09 |
| EER [BTU/Wh] | 7.39 | 7.41 | 7.43 | 7.37 | 7.32 | 7.25 | 7.20 | 7.06 |

Test conditions

| | | |
|------------------------|-------|-------|
| Evaporation pressure | 14°F | -10°C |
| Condensing pressure | 113°F | 45°C |
| Liquid temperature | 113°F | 45°C |
| Return gas temperature | 68°F | 20°C |

Optimization Point 115V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [BTU/h] | 661 | 745 | 829 | 913 | 997 | 1166 | 1334 | 1517 |
| Power cons. [W] | 97 | 109 | 121 | 134 | 148 | 174 | 201 | 233 |
| Current cons. [A] | 1.31 | 1.46 | 1.61 | 1.76 | 1.92 | 2.24 | 2.55 | 2.92 |
| EER [BTU/Wh] | 6.83 | 6.84 | 6.86 | 6.81 | 6.76 | 6.69 | 6.65 | 6.52 |

Test conditions

| | | |
|------------------------|-------|-------|
| Evaporation pressure | -13°F | -25°C |
| Condensing pressure | 95°F | 35°C |
| Liquid temperature | 95°F | 35°C |
| Return gas temperature | 90°F | 32°C |

Optimization Point 115V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [BTU/h] | 1083 | 1221 | 1360 | 1497 | 1635 | 1911 | 2187 | 2487 |
| Power cons. [W] | 137 | 154 | 171 | 189 | 208 | 246 | 283 | 328 |
| Current cons. [A] | 1.84 | 2.05 | 2.25 | 2.47 | 2.69 | 3.14 | 3.58 | 4.09 |
| EER [BTU/Wh] | 7.93 | 7.96 | 7.97 | 7.91 | 7.86 | 7.78 | 7.72 | 7.57 |

Test conditions

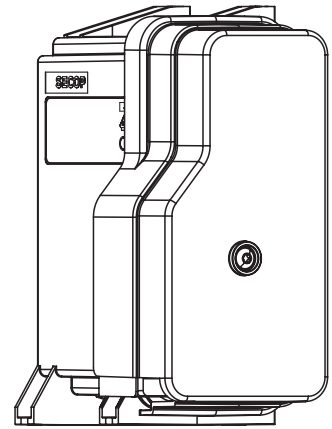
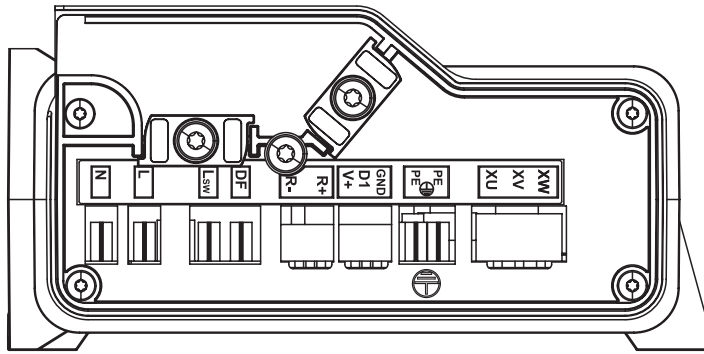
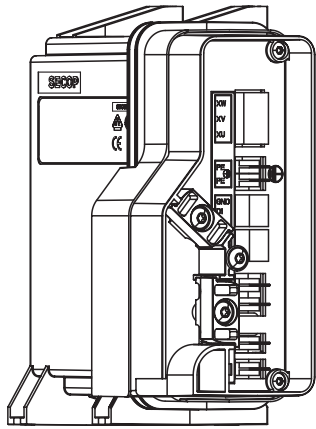
| | | |
|------------------------|-------|-------|
| Evaporation pressure | 14°F | -10°C |
| Condensing pressure | 113°F | 45°C |
| Liquid temperature | 113°F | 45°C |
| Return gas temperature | 90°F | 32°C |

Optimization Point 115V, 50/60Hz, fan cooling F₂

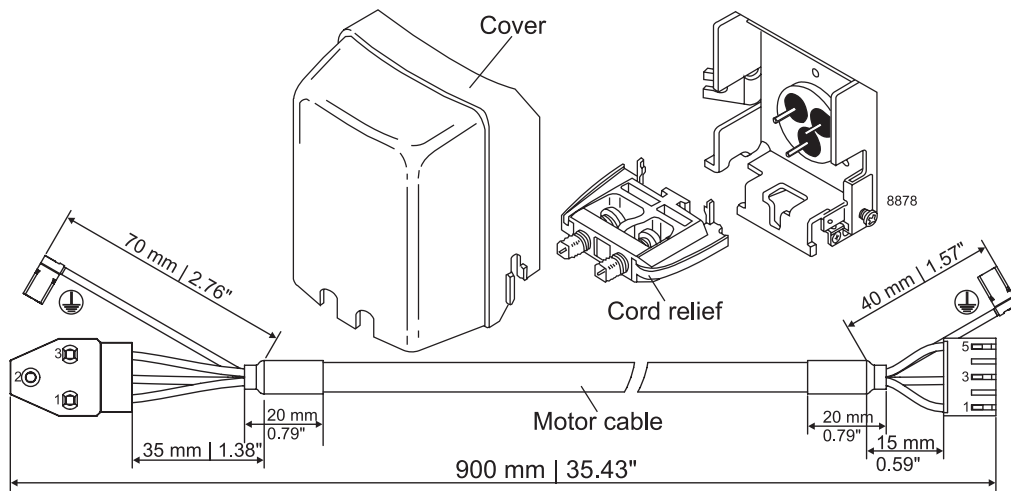
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|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [BTU/h] | 1857 | 2094 | 2331 | 2567 | 2803 | 3275 | 3748 | 4262 |
| Power cons. [W] | 158 | 177 | 197 | 219 | 240 | 284 | 327 | 379 |
| Current cons. [A] | 3.45 | 3.46 | 3.47 | 3.44 | 3.42 | 3.58 | 3.36 | 3.30 |
| EER [BTU/Wh] | 11.78 | 11.81 | 11.83 | 11.74 | 11.67 | 11.55 | 11.47 | 11.24 |

Test conditions

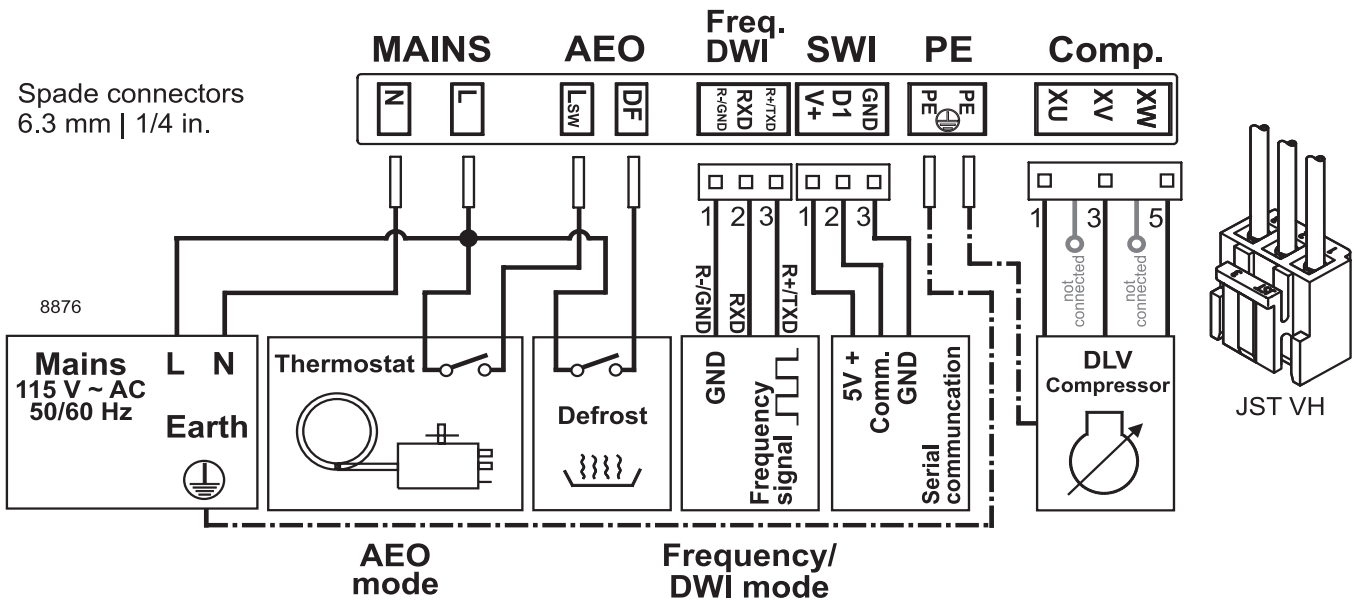
| | | |
|------------------------|-------|------|
| Evaporation pressure | 41°F | 5°C |
| Condensing pressure | 113°F | 45°C |
| Liquid temperature | 113°F | 45°C |
| Return gas temperature | 90°F | 32°C |



8877-2



Spade connectors
6.3 mm | 1/4 in.



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