

Single Pack DLV5.7CN 220-240V 50Hz / 208-230V 60Hz PM

Single pack code number: **195B4577**

| Position | Title | Code | Amount |
|----------|--|----------|--------|
| 1 | Compressor DLV5.7CN | 102H3698 | 1 |
| 2 | Motor cable (900mm) | 105B4477 | 1 |
| 3 | Electronic unit DLV | 105N4511 | 1 |
| 4 | Cord relief | 103N1010 | 1 |
| 5 | Cover | 103N0492 | 1 |
| 6 | Bolt joint for one compressor M6 ø16mm | 118-1917 | 1 |

Secop GmbH • Lise-Meitner-Straße 29 • 24941 Flensburg, Germany • Tel: +49 461 4941 0 • www.secop.com

Secop accepts no responsibility for possible errors in catalogs, brochures, and other printed material. Secop reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequent changes being necessary to specifications already agreed. All trademarks in this material are the property of the respective companies. Secop and the Secop logotype are trademarks of Secop GmbH. All rights reserved.

DLV5.7CN Variable Speed Drive Compressor R290, 220-240V 50/60Hz - with 105N4410 & 105N4510 Controllers



General

| | |
|---|----------|
| Code number (without electronic unit) | 102H3698 |
| Electronic unit (without PFC) | 105N4410 |
| Approvals: UL 60335-2-34 with Annex AA, CCC | |
| Electronic unit (with PFC) | 105N4510 |
| Approvals: EN 60335-2-34 with Annex AA, CCC | |
| Compressors on pallet | 100 |
| Remarks: PFC = power factor correction according to EN 61000-3-2:2014 | |

Application

| Application | LBP/MBP | | | |
|--|---------|------------|------------|--|
| | Hz | 50 | 60 | |
| Frequency | Hz | 50 | 60 | |
| Evaporating temperature | °C | -35 to 7.2 | -35 to 7.2 | |
| Voltage range / frequency | V/Hz | 180 - 270 | 180 - 270 | |
| Max. condensing temperature continuous (short) | °C | 60 (65) | 60 (65) | |
| Max. winding temperature continuous (short) | °C | 125 (135) | 125 (135) | |

Cooling requirements

| Frequency | Hz | 50 | | | 60 | | |
|-----------|----|----------------|----------------|-----|----------------|----------------|-----|
| | | 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 | - |

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 | 3.1 |
| Resistance, all 3 windings (25°C) | Ω | 4.1 |

Design

| | | |
|-------------------------------------|-----------------|-------------------|
| Displacement | cm ³ | 5.70 |
| Oil quantity (type) | cm ³ | 230 (polyolester) |
| Maximum refrigerant charge | g | 150 |
| Free gas volume in compressor | cm ³ | 1390 |
| Weight - Compressor/Electronic unit | kg | 7.8 / 0.5 |

Dimensions

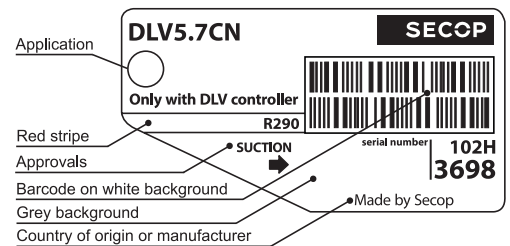
| | | | |
|---------------------|--------------------------|--------------------|----------------------|
| Height | mm | A | 175 |
| | | B | 169 |
| Suction connector | location/I.D. mm angle | C | 8.2 18° |
| | | material comment | Copper Rubber plug |
| Process connector | location/I.D. mm angle | D | 6.2 61° |
| | | material comment | Copper Rubber plug |
| Discharge connector | location/I.D. mm angle | E | 6.2 25° |
| | | material comment | Copper Rubber plug |
| Connector tolerance | I.D. mm | | ±0.09 |

Accessories

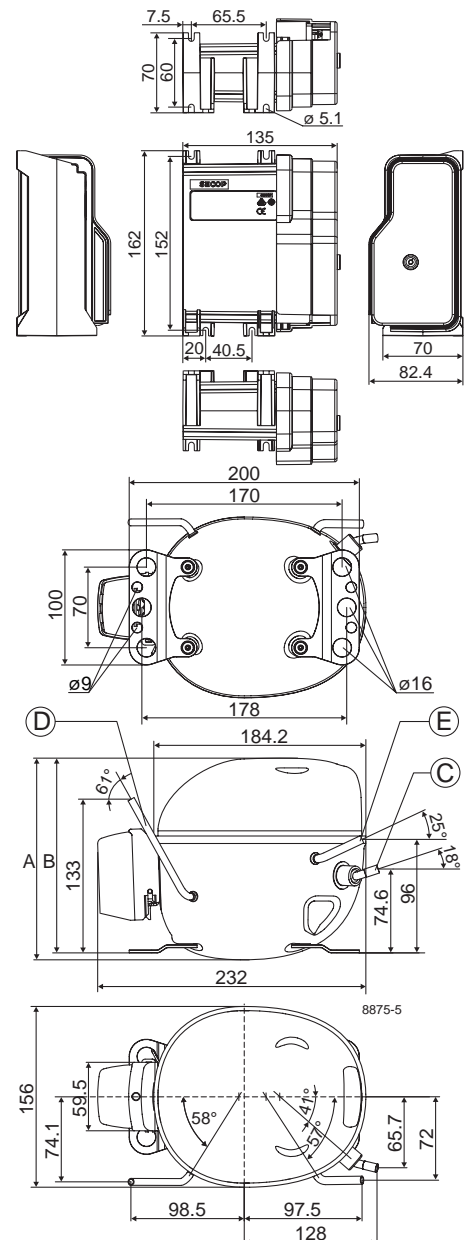
| | Code number |
|------------------------------------|-------------|
| Cover | 103N0492 |
| Cord relief | 103N1010 |
| Motor cable 900 mm cable length | 105B4477 |

Mounting accessories

| | | |
|-------------------------------|----------|----------|
| Bolt joint for one compressor | Ø: 16 mm | 118-1917 |
| Bolt joint in quantities | Ø: 16 mm | 118-1918 |
| Snap-on in quantities | Ø: 16 mm | 118-1919 |



- S = Static cooling normally sufficient
- O = Oil cooling
- F₁ = Fan cooling 1.5 m/s (compressor compartment temp. equal to ambient temperature)
- F₂ = Fan cooling 3.0 m/s necessary
- SG = Suction gas cooling normally sufficient
- = not applicable in this area



LBP: ASHRAE 230V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [W] | 185 | 212 | 239 | 266 | 293 | 346 | 400 | 448 |
| Capacity [BTU/h] | 631 | 724 | 817 | 909 | 1000 | 1183 | 1366 | 1530 |
| Power cons. [W] | 113 | 127 | 142 | 156 | 171 | 201 | 231 | 266 |
| Current cons. [A] | 0.55 | 0.61 | 0.66 | 0.73 | 0.79 | 0.92 | 1.05 | 1.19 |
| COP [W/W] | 1.64 | 1.67 | 1.69 | 1.70 | 1.71 | 1.72 | 1.73 | 1.69 |
| EER [BTU/Wh] | 5.61 | 5.70 | 5.77 | 5.81 | 5.84 | 5.89 | 5.92 | 5.75 |

Test conditions

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

LBP: CECOMAF 230V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [W] | 138 | 158 | 178 | 199 | 219 | 260 | 301 | 337 |
| Capacity [BTU/h] | 470 | 539 | 608 | 678 | 748 | 887 | 1026 | 1150 |
| Power cons. [W] | 108 | 122 | 136 | 151 | 165 | 194 | 224 | 258 |
| Current cons. [A] | 0.53 | 0.58 | 0.64 | 0.70 | 0.77 | 0.89 | 1.02 | 1.15 |
| COP [W/W] | 1.27 | 1.29 | 1.31 | 1.32 | 1.33 | 1.34 | 1.35 | 1.31 |
| EER [BTU/Wh] | 4.34 | 4.41 | 4.47 | 4.50 | 4.52 | 4.56 | 4.59 | 4.46 |

Test conditions

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

LBP: EN12900 230V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [W] | 103 | 118 | 133 | 148 | 167 | 194 | 225 | 252 |
| Capacity [BTU/h] | 351 | 403 | 455 | 507 | 559 | 664 | 768 | 861 |
| Power cons. [W] | 77 | 88 | 99 | 111 | 123 | 147 | 170 | 195 |
| Current cons. [A] | 0.41 | 0.45 | 0.49 | 0.54 | 0.59 | 0.69 | 0.79 | 0.88 |
| COP [W/W] | 1.34 | 1.34 | 1.35 | 1.34 | 1.33 | 1.33 | 1.32 | 1.30 |
| EER [BTU/Wh] | 4.57 | 4.58 | 4.59 | 4.57 | 4.56 | 4.53 | 4.51 | 4.42 |

Test conditions

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

MBP: ASHRAE 230V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [W] | 339 | 389 | 439 | 481 | 523 | 608 | 692 | 775 |
| Capacity [BTU/h] | 1158 | 1329 | 1500 | 1644 | 1788 | 2075 | 2363 | 2647 |
| Power cons. [W] | 154 | 175 | 196 | 215 | 234 | 272 | 311 | 356 |
| Current cons. [A] | 0.71 | 0.81 | 0.91 | 0.99 | 1.07 | 1.24 | 1.40 | 1.58 |
| COP [W/W] | 2.20 | 2.23 | 2.25 | 2.24 | 2.24 | 2.23 | 2.23 | 2.18 |
| EER [BTU/Wh] | 7.51 | 7.60 | 7.67 | 7.65 | 7.64 | 7.62 | 7.60 | 7.44 |

Test conditions

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

MBP: CECOMAF 230V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [W] | 269 | 308 | 348 | 382 | 416 | 484 | 552 | 619 |
| Capacity [BTU/h] | 917 | 1053 | 1188 | 1304 | 1421 | 1653 | 1886 | 2113 |
| Power cons. [W] | 148 | 167 | 187 | 205 | 224 | 260 | 297 | 341 |
| Current cons. [A] | 0.68 | 0.78 | 0.87 | 0.95 | 1.03 | 1.19 | 1.34 | 1.51 |
| COP [W/W] | 1.82 | 1.84 | 1.86 | 1.86 | 1.86 | 1.86 | 1.86 | 1.82 |
| EER [BTU/Wh] | 6.21 | 6.29 | 6.36 | 6.36 | 6.35 | 6.35 | 6.35 | 6.20 |

Test conditions

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

MBP: EN12900 230V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [W] | 298 | 342 | 386 | 422 | 459 | 533 | 606 | 679 |
| Capacity [BTU/h] | 1017 | 1167 | 1317 | 1442 | 1568 | 1820 | 2071 | 2320 |
| Power cons. [W] | 131 | 149 | 168 | 185 | 203 | 238 | 273 | 311 |
| Current cons. [A] | 0.62 | 0.71 | 0.79 | 0.87 | 0.94 | 1.09 | 1.24 | 1.38 |
| COP [W/W] | 2.28 | 2.29 | 2.30 | 2.28 | 2.26 | 2.24 | 2.22 | 2.19 |
| EER [BTU/Wh] | 7.78 | 7.81 | 7.84 | 7.78 | 7.73 | 7.65 | 7.59 | 7.46 |

Test conditions

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

Optimization Point 230V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [W] | 184 | 211 | 238 | 264 | 290 | 341 | 393 | 440 |
| Capacity [BTU/h] | 628 | 721 | 814 | 902 | 990 | 1166 | 1343 | 1504 |
| Power cons. [W] | 92 | 105 | 118 | 132 | 147 | 176 | 205 | 233 |
| Current cons. [A] | 0.47 | 0.52 | 0.56 | 0.63 | 0.69 | 0.81 | 0.94 | 1.05 |
| COP [W/W] | 1.99 | 2.01 | 2.02 | 2.00 | 1.97 | 1.94 | 1.92 | 1.89 |
| EER [BTU/Wh] | 6.80 | 6.86 | 6.91 | 6.81 | 6.74 | 6.62 | 6.54 | 6.45 |

Test conditions

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

Optimization Point 230V, 50/60Hz, fan cooling F₂

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [W] | 310 | 356 | 401 | 440 | 478 | 555 | 631 | 707 |
| Capacity [BTU/h] | 1059 | 1215 | 1371 | 1502 | 1632 | 1894 | 2156 | 2415 |
| Power cons. [W] | 131 | 149 | 168 | 185 | 203 | 238 | 273 | 311 |
| Current cons. [A] | 0.62 | 0.71 | 0.79 | 0.87 | 0.94 | 1.09 | 1.24 | 1.38 |
| COP [W/W] | 2.37 | 2.38 | 2.39 | 2.37 | 2.36 | 2.33 | 2.32 | 2.27 |
| EER [BTU/Wh] | 8.1 | 8.13 | 8.16 | 8.1 | 8.05 | 7.96 | 7.9 | 7.77 |

Test conditions

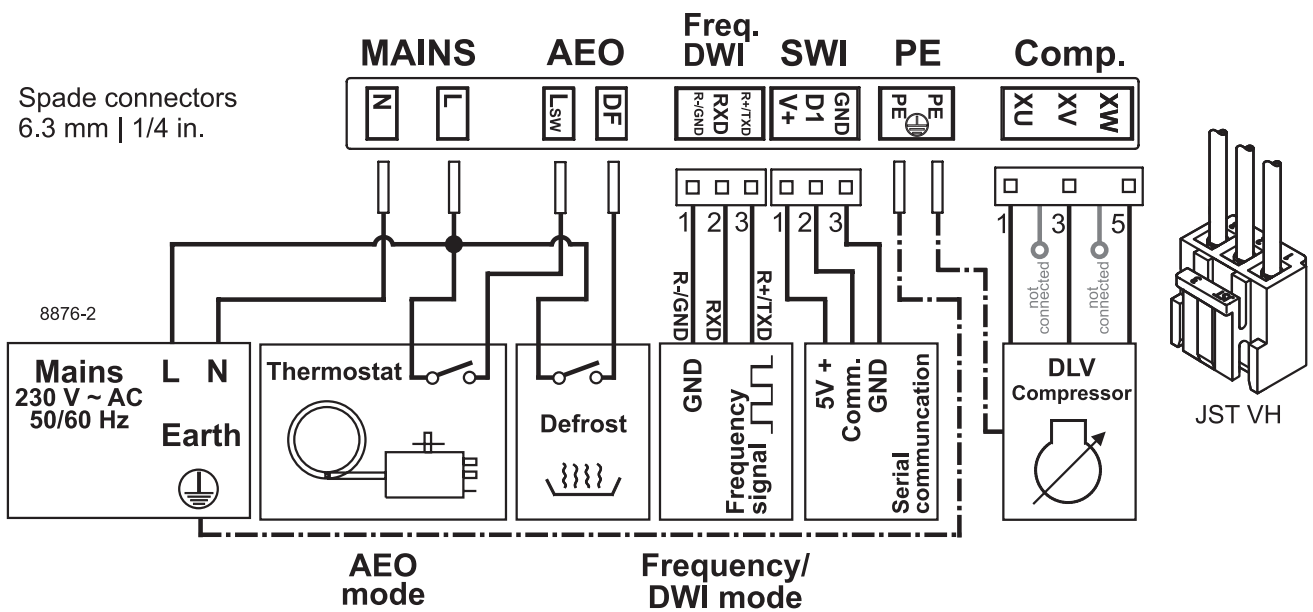
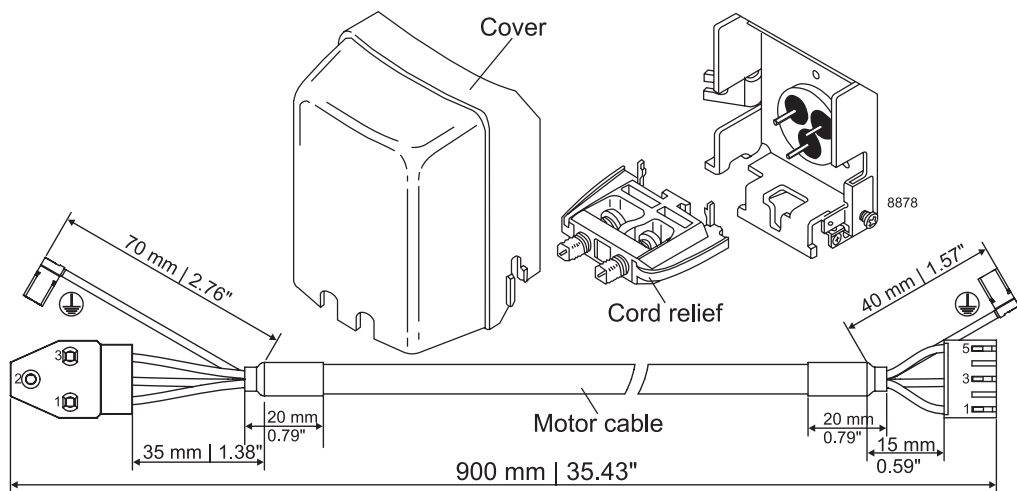
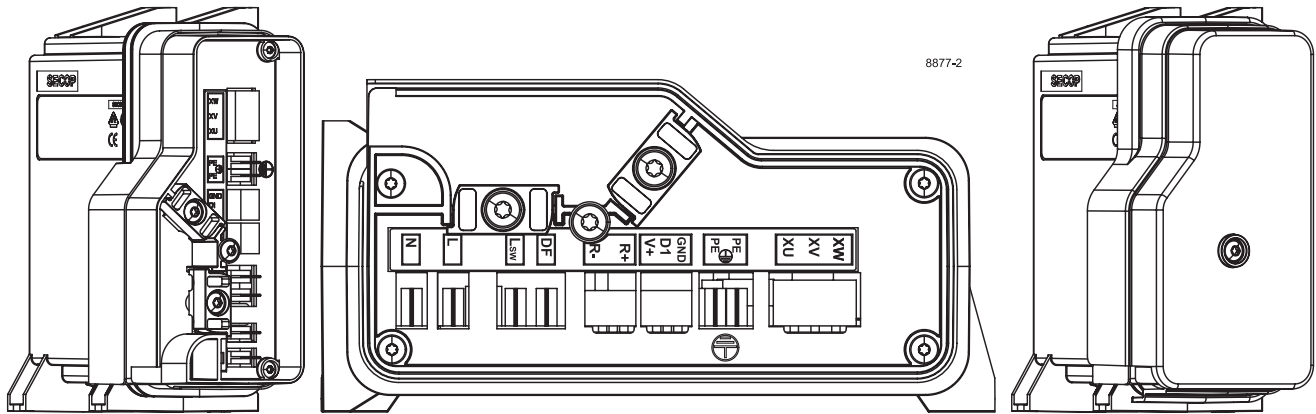
| | | |
|------------------------|-------|-------|
| Evaporation pressure | -10°C | 14°F |
| Condensing pressure | 45°C | 113°F |
| Liquid temperature | 45°C | 113°F |
| Return gas temperature | 32°C | 90°F |

Optimization Point 230V, 50/60Hz, fan cooling F₂

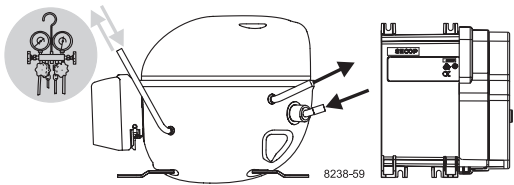
| | | | | | | | | |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Speed (rpm) | 2000 | 2250 | 2500 | 2750 | 3000 | 3500 | 4000 | 4500 |
| Capacity [W] | 533 | 612 | 690 | 754 | 818 | 946 | 1074 | 1203 |
| Capacity [BTU/h] | 1821 | 2090 | 2358 | 2576 | 2794 | 3231 | 3667 | 4107 |
| Power cons. [W] | 150 | 172 | 195 | 216 | 238 | 281 | 324 | 368 |
| Current cons. [A] | 0.69 | 0.80 | 0.90 | 1.00 | 1.09 | 1.27 | 1.46 | 1.63 |
| COP [W/W] | 3.55 | 3.55 | 3.55 | 3.49 | 3.44 | 3.37 | 3.32 | 3.27 |
| EER [BTU/Wh] | 12.12 | 12.12 | 12.12 | 11.92 | 11.76 | 11.51 | 11.32 | 11.16 |

Test conditions

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

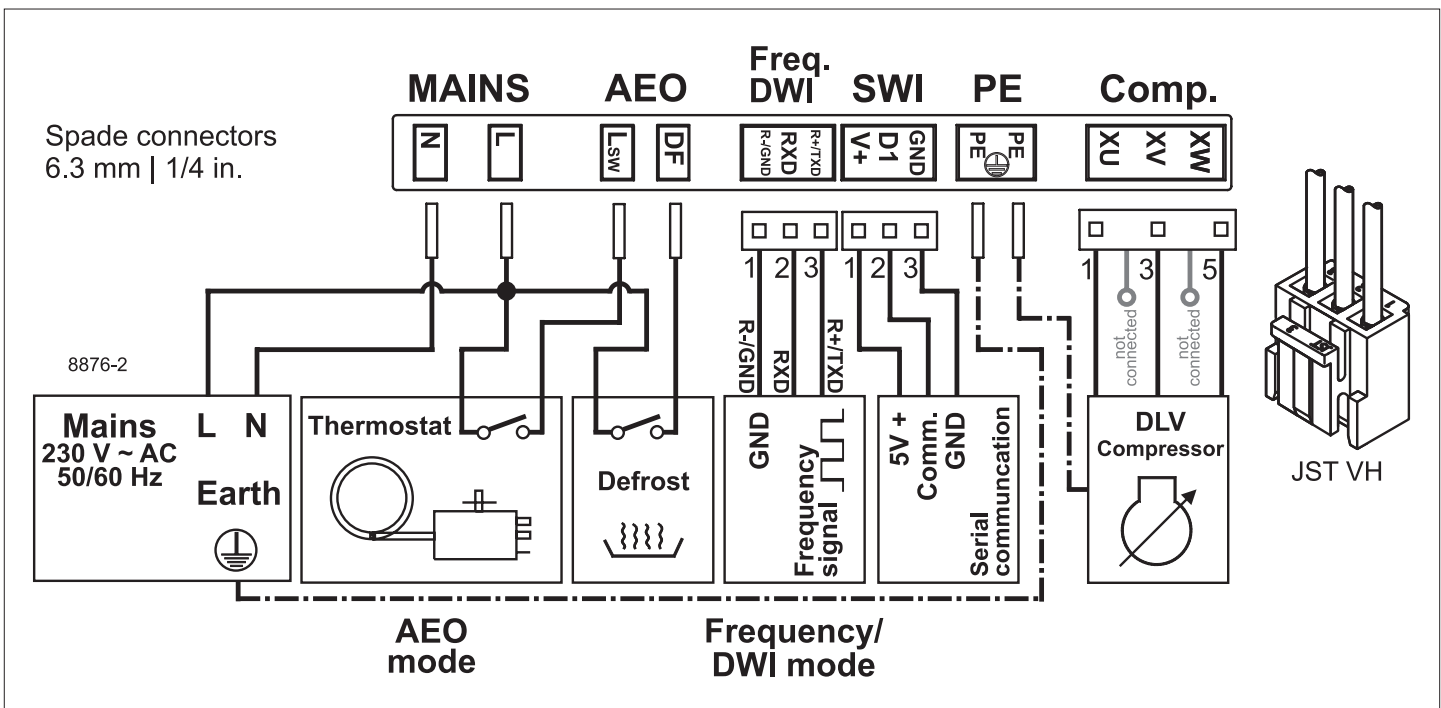
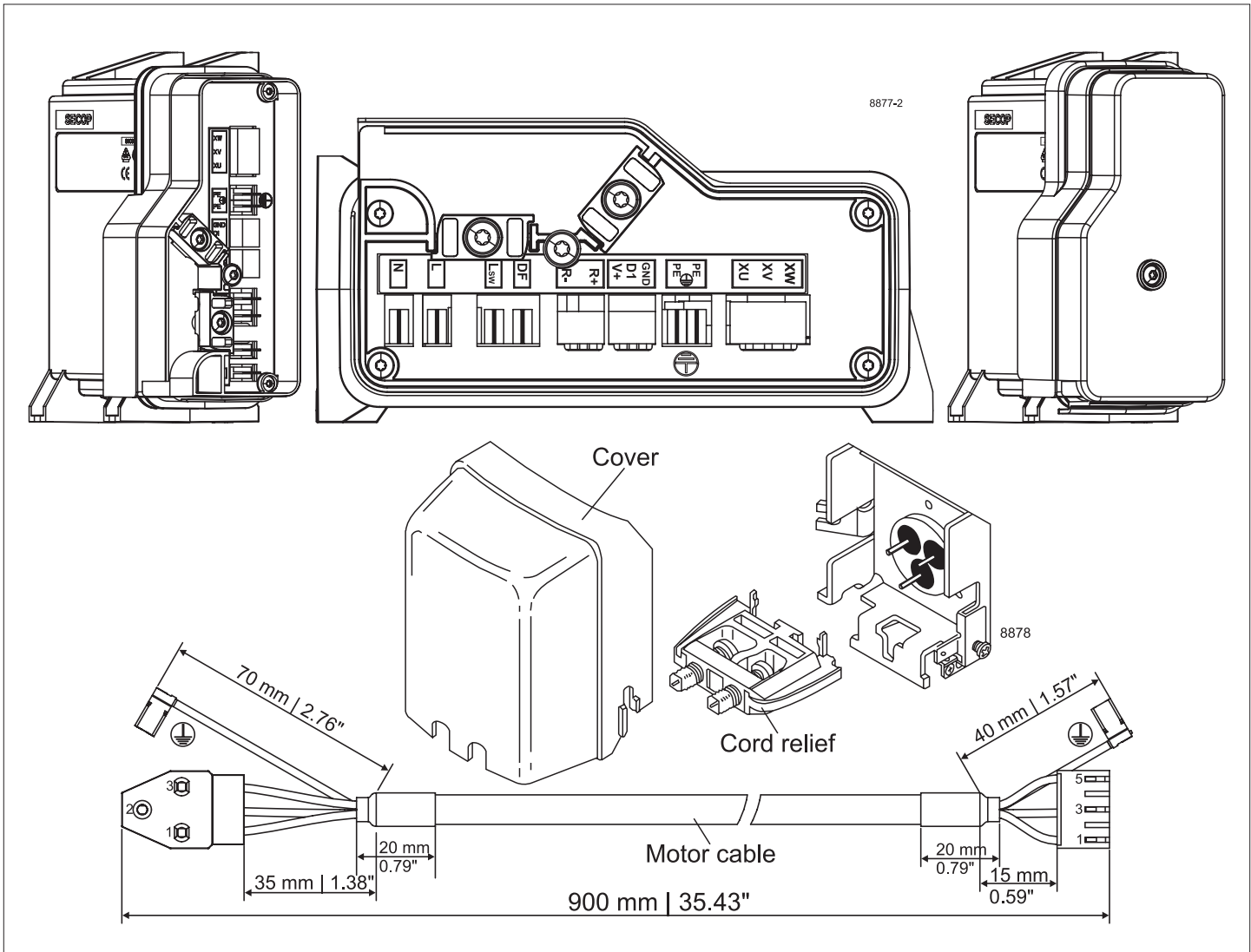
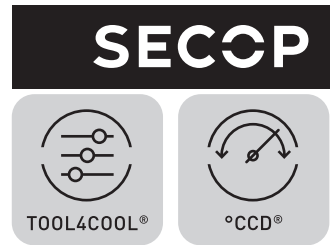


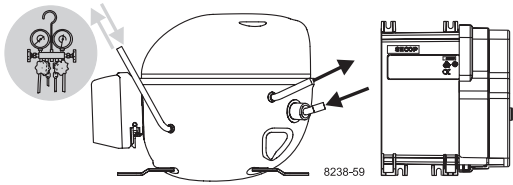
Secop accepts no responsibility for possible errors in catalogs, brochures, and other printed material. Secop reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary to specifications already agreed. All trademarks in this material are the property of the respective companies. Secop and the Secop logotype are trademarks of Secop GmbH. All rights reserved. www.secop.com



Instructions

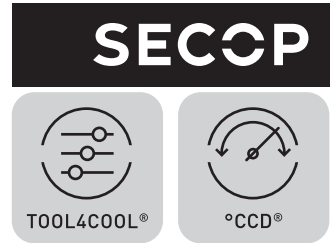
DLV Compressors
220-240V 50/60Hz
105N441x & 105N451x
Series Controllers





Instructions

DLV Compressors
220-240V 50/60Hz
105N441x & 105N451x
Series Controllers



Service/Repair R290

8545

Brazing on Suction Connectors (Direct Intake)

representative image

**! max. 150°C/302°F !
at socket**

brazing solder: phosphor (LP7) or silver

Refer to Product Bulletin: **Brazing on Suction Connectors
(Compressors with Direct Suction Intake)**

8879

| | |
|--|---|
| Airflow | 3 m/s |
| Operating conditions 105N441x, 105N451x | + 5 °C to 43 °C - humidity < 90 % rH non condensing |
| Storage conditions | -25 °C to 70 °C - humidity < 90 % rH non condensing |
| Supply voltage | 220-240 V (± 10 %) |
| Frequency | 50/60 Hz |
| Input power rating | 450 W |

Secop accepts no responsibility for possible errors in catalogs, brochures, and other printed material. Secop reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequent changes being necessary to specifications already agreed. All trademarks in this material are the property of the respective companies. Secop and the Secop logotype are trademarks of Secop GmbH. All rights reserved. www.secop.com