Single
Packs

# Single Pack NLV8.0CN 100-240V 50/60Hz PM

Single pack code number: **195B4849**

| Position | Title | Code | Amount |
|---|---|---|---|
| 1 | Compressor NLV8.0CN | 105H7865 | 1 |
| 2 | Electronic unit NLV | 105N4866 | 1 |
| 3 | Cover | 103N2008 | 1 |
| 4 | Bolt joint for one compressor \| M6 \| ø16mm | 118-1917 | 1 |

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**Model**
**NLV8.0CN**

Sales code:
**105H7865**

## Compressor Data

| | |
|---|---|
| Refrigerant(s) | **R290** |
| Refr. charge - tech. limit | **300g / 10.58oz** |
| Weight | **10.80 kg / 23.81lbs** |
| Displacement | **7.96 cm3 / 0.49cu.in** |
| Compressors on pallet | **80** |




## General – Configurations With NLV8.0CN and Controller

| – | **Conf. 1** | **Conf. 2** | **Conf. 3** | **Conf. 4** |
|---|---|---|---|---|
| Sales code single pack: | 105N4866 | 105N4910 | 105N4960 | 105N4962 |
| Power supply (nominal) | 100-240 V,50/60 Hz | 220-240 V,50/60 Hz | 100-240 V,50/60 Hz | 100-240 V,50/60 Hz |
| Number of phases | 1~AC | 1~AC | 1~AC | 1~AC |
| Approvals | VDE, UL, CCC, CB | VDE, CCC | VDE, UL, CCC, CB | VDE, UL, CCC, CB |
| Starting torque | HST | HST | HST | HST |
| Refrigerant | R290 | R290 | R290 | R290 |
| Application | L+MBP | L+MBP | L+MBP | L+MBP |
| Hot gas defrost | OK | OK | OK | OK |
| Long interval pull down | OK | OK | OK | OK |
| Protection | Mechanic | Mechanic | Mechanic | Mechanic |

## Application Notes

- Provision for PE Grounding is located at the PE Stamp on the compressor
- Direct suction intake with telescope

**Model**
**NLV8.0CN**

Sales code:
**105H7865**

## Compressor Design

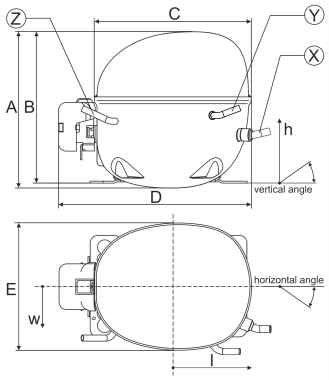
| | | | |
|---|---|---|---|
| Oil type | **POE** | Motor protection | **internal** |
| Oil viscosity | **32cSt** | Max. winding temp. | **125 °C** |
| Oil quantity | **300 / 10.14fl.oz** | Max. discharge temp. | **130°C / 266°F** |
| Free gas volume comp. | **2,360 cm3 / 79.80fl.oz** | | |

## Compressor Dimensions

**Housing**

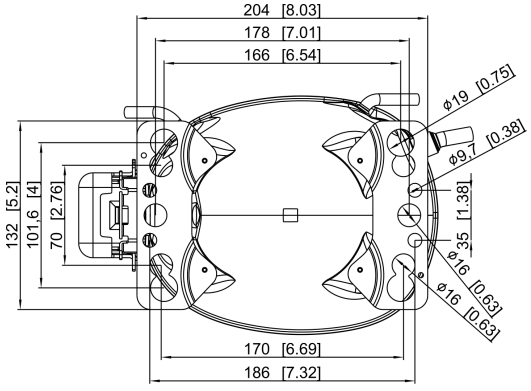
| | |
|---|---|
| A Height | **203mm / 7.99in** |
| B Height | **197mm / 7.76in** |
| C Length shell | **205mm / 8.07in** |
| D Length w. cover | **252mm / 9.92in** |
| E Width | **166mm / 6.54in** |

Find 3D Model here



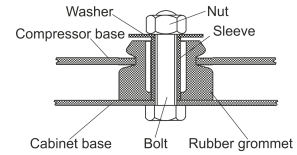

| Connectors | Suction X | Discharge Y | Process Z |
|---|---|---|---|
| Diameter [mm] | øi 8.11–8.29 / 0.32–0.33in | øi 6.11–6.29 / 0.24–0.25in | øi 6.11–6.29 / 0.24–0.25in |
| Material | CU | CU | CU |
| Horizontal angle ±2° | 0° | 0° | 0° |
| Vertical angle ±2° | 15° | 21° | 155° |
| Position l/h/w [mm] | 132/68.5/56.7 / 5.20/2.70/2.23in | 94/101.7/81 / 3.70/4.00/3.19in | -109.3/94.3/72 / -4.30/3.71/2.83in |
| Straight tube l. [mm] | 12 / 0.47in | 12 / 0.47in | 12 / 0.47in |

## Mounting Accessories

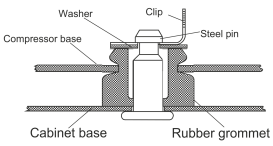



Dimensions in mm [in]

Bolt joint




Snap-on



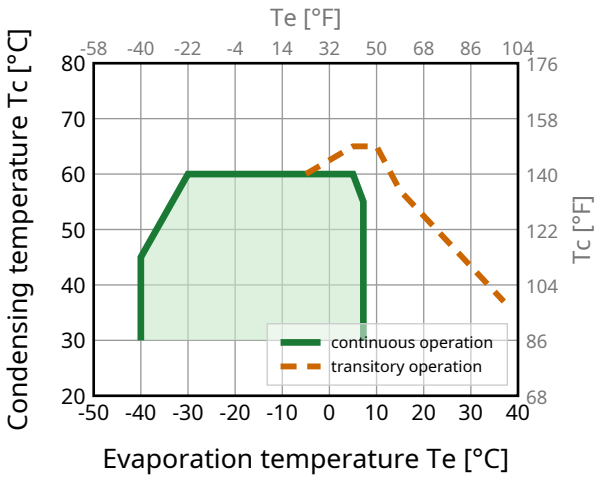

| | one comp. | multi pack |
|---|---|---|
| Bolt joint \| M6 \| ø16mm | 118-1917 | 118-1918 |
| Bolt joint \| ø1/4" \| ø16mm | 118-1946 | – |
| Bolt joint \| ø1/4" \| ø19mm | 118-1949 | – |
| Snap-on \| ø7,3 \| ø16mm | 118-1947 | 118-1919 |

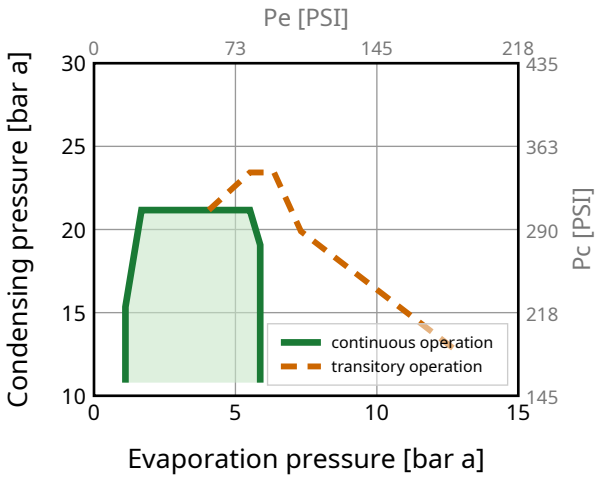
**Model**
**NLV8.0CN** System Design

Sales code:
**105H7865**

## System Design

### Operation Pressure Range R290



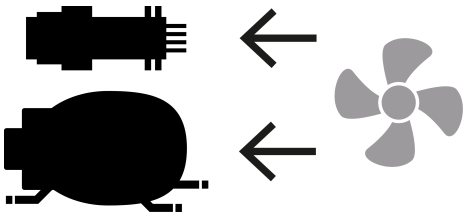




## System Cooling

**Compressor and Controller Cooling:** fan 3m/s

Ensure proper airflow of 3 m/s at both compressor and electronic units.

The airflow for the electronics must be directed to the heat sink.



## Accessories (Compressor + Controller)

| | | |
|---|---|---|
| 103N2008 | plastic cover | 1 pcs |

**Model**

**NLV8.0CN** Controller Overview

Sales code:

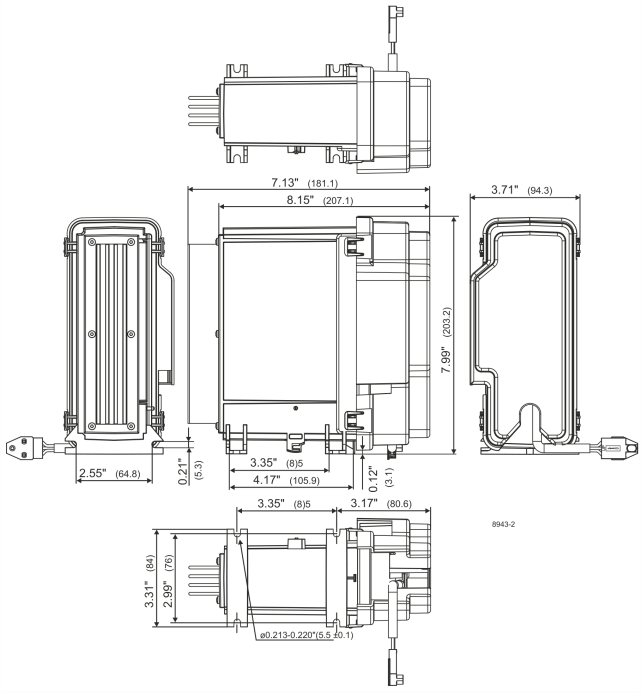
**105H7865**

## Controller Overview

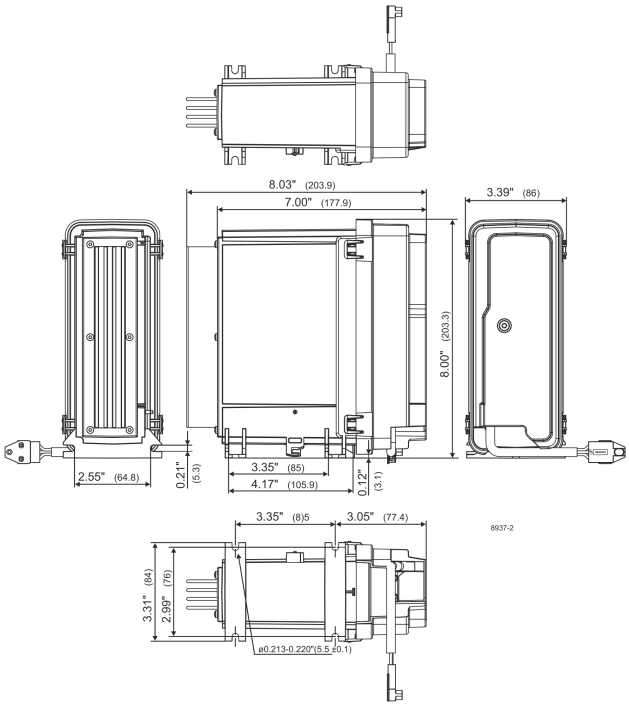
| – | **Conf. 1** | **Conf. 2** | **Conf. 3** | **Conf. 4** |
|---|---|---|---|---|
| Sales code single pack: | 105N4866 | 105N4910 | 105N4960 | 105N4962 |
| Sales code industry pack: | 105N4867 (8) | 105N4911 (8) | 105N4961 (8) | 105N4963 (8) |
| Voltage nom.: | 100-240 V,50/60 Hz | 220-240 V,50/60 Hz | 100-240 V,50/60 Hz | 100-240 V,50/60 Hz |
| Voltage range | 90-150/180-270 V | 180-270 V | 90-150/180-270 V | 90-150/180-270 V |
| Max output power | 1000 W | 1000 W | 1000 W | 1000 W |
| Compressor speed range: | 2000-4500 rpm | 2000-4500 rpm | 2000-4500 rpm | 2000-4500 rpm |
| Cable length: | 680 mm | 680 mm | 680 mm | 915 mm |
| Protection class: | IP43 | IP54 | IP54 | IP54 |
| LRA (Locked Rotor Amperage): | 1,2 A | 1,2 A | 1,2 A | 1,2 A |
| AEO and Defrost pin | – | Yes | Yes | Yes |
| Frequency input | – | Yes | Yes | Yes |
| Modbus input | RS485 | SWI | SWI | SWI |
| Controller Wiring | » Controller Wiring | » Controller Wiring | » Controller Wiring | » Controller Wiring |

## Controller Dimensions

**Conf. 1**




**Conf. 2, 3, 4**




## Operating Instructions

For proper installation and operation of variable-speed compressors and controllers, please refer to the Operating Instructions. The document covers electrical installation, speed control, and technical data for the controller.

» Download Operating Instructions

**Model**
**NLV8.0CN**

Sales code:
**105H7865**

## Standard Conditions — 2000 rpm

**R290**, 240 V/50 Hz, fan 3m/s

| pe | pc | RGT | Tliq | Cooling capacity | | | COP | EER | P | I | ṁ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [°C] [°F] | [°C] [°F] | [°C] [°F] | [°C] [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A] | [kg/h] | |
| -23.3 -10 | 54.4 129.9 | 32.2 90 | 32.2 90 | **260** | 887 | 224 | **1.77** | 6.04 | 147 | 0.71 | 2.64 | **ASHRAE LBP** |
| -25 -13 | 55 131 | 32 89.6 | 55 131 | **192** | 654 | 165 | **1.36** | 4.64 | 141 | 0.69 | 2.40 | **CECOMAF LBP** |
| -35 -31 | 40 104 | 20 68 | 40 104 | **140** | 478 | 120 | **1.42** | 4.85 | 99 | 0.58 | 1.61 | **EN12900 LBP** |
| -6.7 20 | 54.4 129.9 | 35 95 | 46.1 115 | **482** | 1644 | 414 | **2.36** | 8.04 | 204 | 0.91 | 5.52 | **ASHRAE MBP** |
| -10 14 | 55 131 | 32 89.6 | 55 131 | **382** | 1303 | 328 | **1.95** | 6.67 | 196 | 0.88 | 4.86 | **CECOMAF MBP** |
| -10 14 | 45 113 | 20 68 | 45 113 | **421** | 1435 | 362 | **2.41** | 8.22 | 175 | 0.81 | 5.18 | **EN12900 MBP** |

## Performance Tables — 2000 rpm

**R290**, 240 V/50 Hz, fan 3m/s

**pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F**

| pe | | Cooling capacity | | | COP | EER | P | I | ṁ |
|---|---|---|---|---|---|---|---|---|---|
| [°C] | [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A] | [kg/h] |
| -40 | -40 | **92** | 315 | 79 | **1.07** | 3.65 | 86 | 0.56 | 1.04 |
| -30 | -22 | **176** | 599 | 151 | **1.51** | 5.14 | 117 | 0.62 | 1.99 |
| -20 | -4 | **289** | 986 | 249 | **1.95** | 6.66 | 148 | 0.72 | 3.29 |
| -10 | 14 | **437** | 1492 | 376 | **2.50** | 8.54 | 175 | 0.81 | 5.02 |
| 0 | 32 | **626** | 2136 | 538 | **3.27** | 11.15 | 192 | 0.87 | 7.28 |
| 10 | 50 | **860** | 2935 | 740 | **4.46** | 15.20 | 193 | 0.87 | 10.17 |

**pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| -40 | -40 | **68** | 232 | 58 | **0.77** | 2.63 | 88 | 0.56 | 0.84 |
| -30 | -22 | **144** | 491 | 124 | **1.18** | 4.02 | 122 | 0.64 | 1.80 |
| -20 | -4 | **247** | 842 | 212 | **1.54** | 5.27 | 160 | 0.76 | 3.11 |
| -10 | 14 | **382** | 1303 | 328 | **1.95** | 6.67 | 196 | 0.88 | 4.86 |
| 0 | 32 | **554** | 1892 | 477 | **2.48** | 8.45 | 224 | 0.99 | 7.15 |
| 10 | 50 | **770** | 2626 | 662 | **3.21** | 10.96 | 240 | 1.06 | 10.11 |

**Model**
**NLV8.0CN**

Sales code:
**105H7865**

## Standard Conditions — 4500 rpm

**R290**, 240 V/50 Hz, fan 3m/s

| pe | pc | RGT | Tliq | Cooling capacity | | | COP | EER | P | I | ṁ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [°C] [°F] | [°C] [°F] | [°C] [°F] | [°C] [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A] | [kg/h] | |
| -23.3 -10 | 54.4 129.9 | 32.2 90 | 32.2 90 | **622** | 2124 | 535 | **1.83** | 6.23 | 341 | 1.49 | 6.32 | **ASHRAE LBP** |
| -25 -13 | 55 131 | 32 89.6 | 55 131 | **462** | 1578 | 398 | **1.41** | 4.81 | 328 | 1.43 | 5.80 | **CECOMAF LBP** |
| -35 -31 | 40 104 | 20 68 | 40 104 | **340** | 1160 | 292 | **1.48** | 5.06 | 229 | 1.04 | 3.90 | **EN12900 LBP** |
| -6.7 20 | 54.4 129.9 | 35 95 | 46.1 115 | **1098** | 3746 | 944 | **2.34** | 7.97 | 470 | 2.02 | 12.57 | **ASHRAE MBP** |
| -10 14 | 55 131 | 32 89.6 | 55 131 | **878** | 2994 | 755 | **1.95** | 6.66 | 449 | 1.93 | 11.16 | **CECOMAF MBP** |
| -10 14 | 45 113 | 20 68 | 45 113 | **953** | 3251 | 819 | **2.38** | 8.10 | 401 | 1.73 | 11.73 | **EN12900 MBP** |

## Performance Tables — 4500 rpm

**R290**, 240 V/50 Hz, fan 3m/s

**pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F**

| pe | | Cooling capacity | | | COP | EER | P | I | ṁ |
|---|---|---|---|---|---|---|---|---|---|
| [°C] | [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A] | [kg/h] |
| -40 | -40 | **230** | 785 | 198 | **1.14** | 3.89 | 202 | 0.93 | 2.59 |
| -30 | -22 | **423** | 1443 | 364 | **1.56** | 5.32 | 271 | 1.21 | 4.78 |
| -20 | -4 | **671** | 2289 | 577 | **1.97** | 6.72 | 341 | 1.49 | 7.63 |
| -10 | 14 | **990** | 3380 | 852 | **2.47** | 8.42 | 401 | 1.73 | 11.37 |
| 0 | 32 | **1398** | 4770 | 1202 | **3.16** | 10.79 | 442 | 1.90 | 16.25 |
| 10 | 50 | **1909** | 6515 | 1642 | **4.20** | 14.34 | 454 | 1.95 | 22.58 |

**pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| -40 | -40 | **169** | 575 | 145 | **0.81** | 2.76 | 208 | 0.96 | 2.10 |
| -30 | -22 | **354** | 1207 | 304 | **1.24** | 4.22 | 286 | 1.27 | 4.42 |
| -20 | -4 | **585** | 1995 | 503 | **1.58** | 5.39 | 370 | 1.60 | 7.36 |
| -10 | 14 | **878** | 2994 | 755 | **1.95** | 6.66 | 449 | 1.93 | 11.16 |
| 0 | 32 | **1249** | 4261 | 1074 | **2.43** | 8.28 | 515 | 2.21 | 16.10 |
| 10 | 50 | **1715** | 5851 | 1475 | **3.08** | 10.52 | 556 | 2.38 | 22.53 |

**Model**
**NLV8.0CN**

Sales code:
**105H7865**

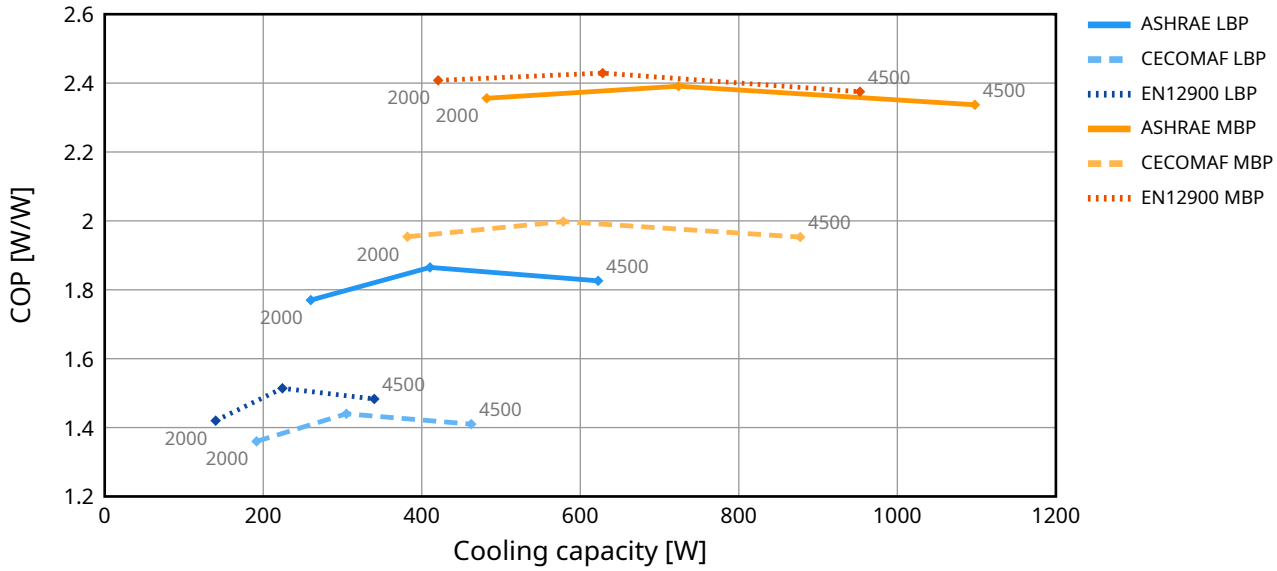
## Optimal Performance

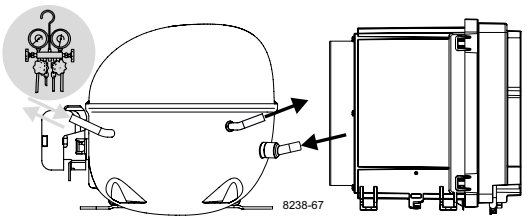
**R290**, 240 V/50 Hz, fan 3m/s
Shows the speed (RPM) that achieves the highest COP at each standard condition.

| pe | pc | RGT | Tliq | Cooling capacity | | | COP | EER | P | RPM | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [°C] [°F] | [°C] [°F] | [°C] [°F] | [°C] [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [rpm] | |
| -23.3 -10 | 54.4 129.9 | 32.2 90 | 32.2 90 | **410** | 1400 | 353 | **1.86** | 6.36 | 220 | **3000** | **ASHRAE LBP** |
| -25 -13 | 55 131 | 32 89.6 | 55 131 | **305** | 1040 | 262 | **1.44** | 4.91 | 212 | **3000** | **CECOMAF LBP** |
| -35 -31 | 40 104 | 20 68 | 40 104 | **224** | 765 | 193 | **1.51** | 5.17 | 148 | **3000** | **EN12900 LBP** |
| -6.7 20 | 54.4 129.9 | 35 95 | 46.1 115 | **724** | 2470 | 623 | **2.39** | 8.16 | 303 | **3000** | **ASHRAE MBP** |
| -10 14 | 55 131 | 32 89.6 | 55 131 | **579** | 1974 | 498 | **2.00** | 6.82 | 290 | **3000** | **CECOMAF MBP** |
| -10 14 | 45 113 | 20 68 | 45 113 | **628** | 2143 | 540 | **2.43** | 8.29 | 259 | **3000** | **EN12900 MBP** |

## Cooling Capacity vs. COP

**R290**, 240 V/50 Hz, fan 3m/s





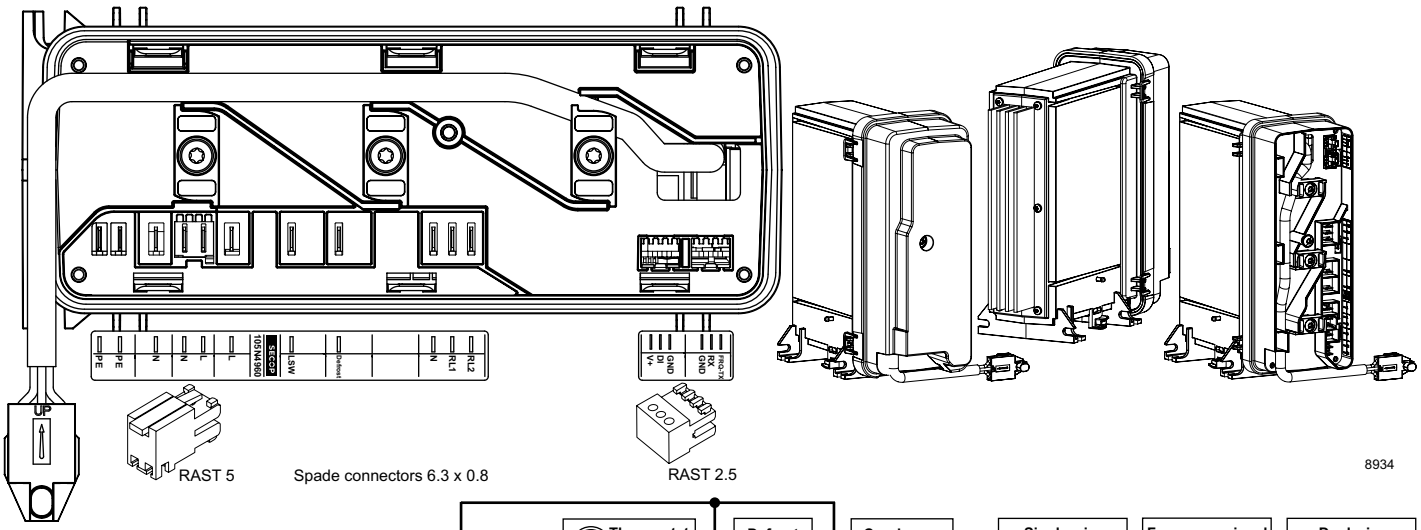

# Instructions

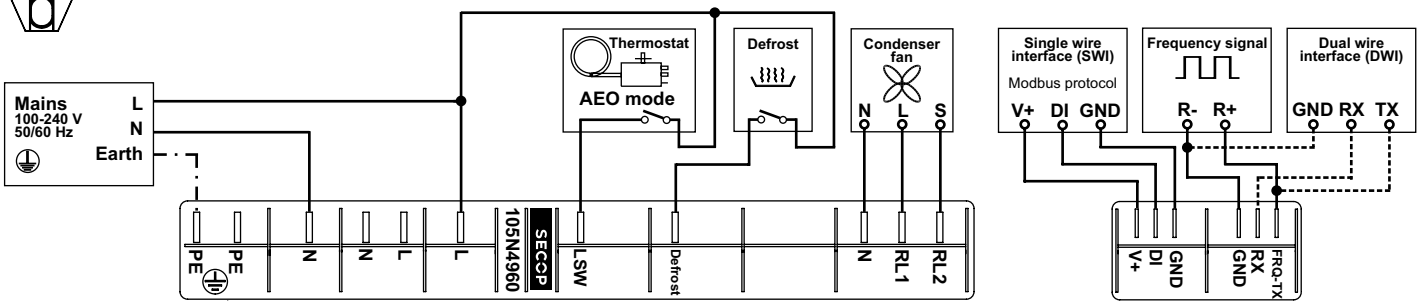
NLV/MN-UV Compressors
100-240 V, 50/60 Hz
105N4960/105N4964
Controllers

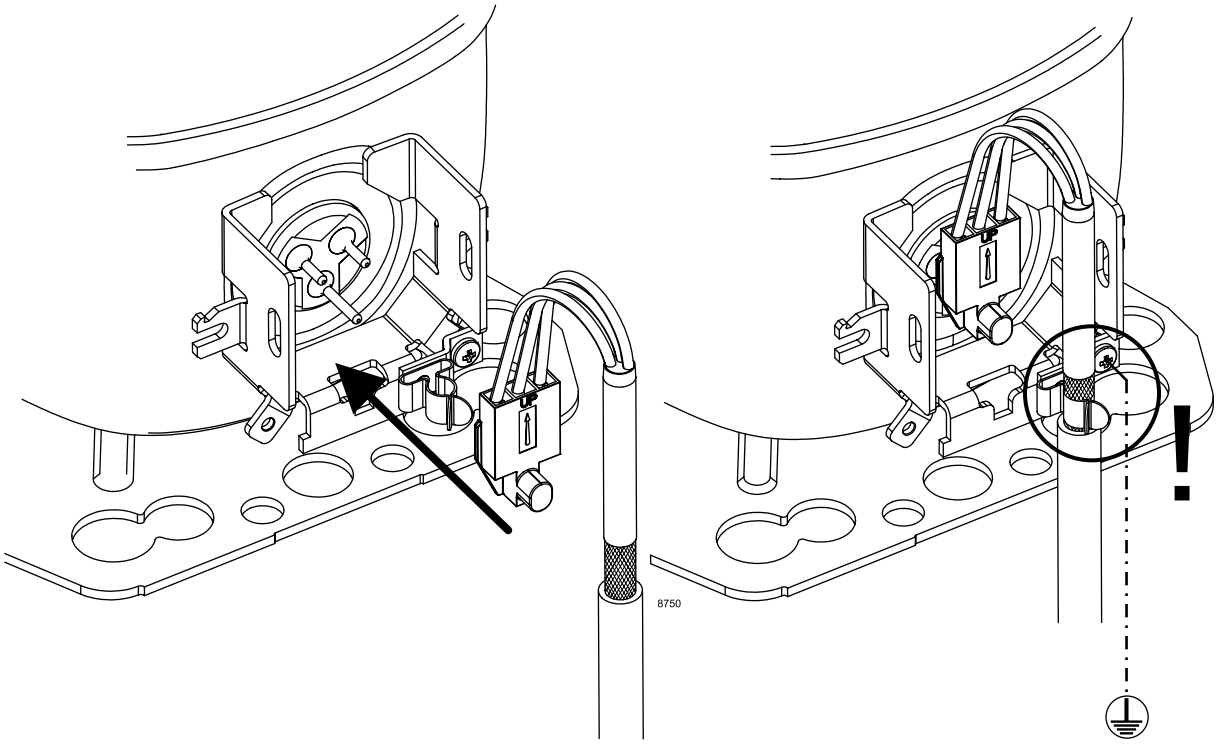
SECOP

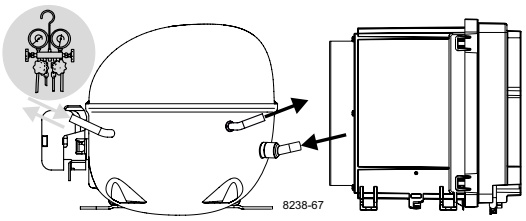
Keep electrical equipment clear from oil, chemicals, and water








# Instructions

NLV/MN-UV Compressors
100-240 V, 50/60 Hz
105N4960/105N4964
Controllers

SECOP

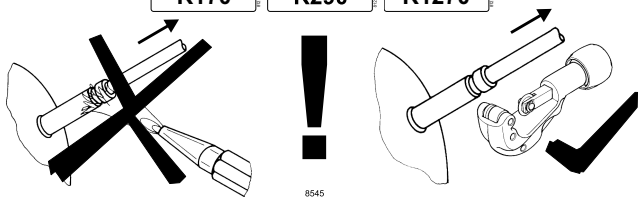
Keep electrical equipment clear from oil, chemicals, and water



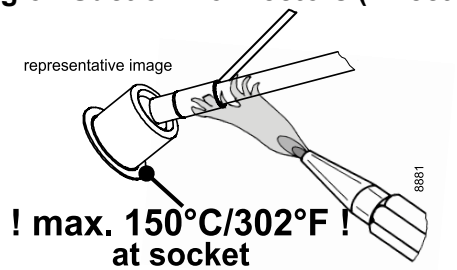
## Service/Repair – R170, R290, R1270

(applies to all flammable refrigerants)



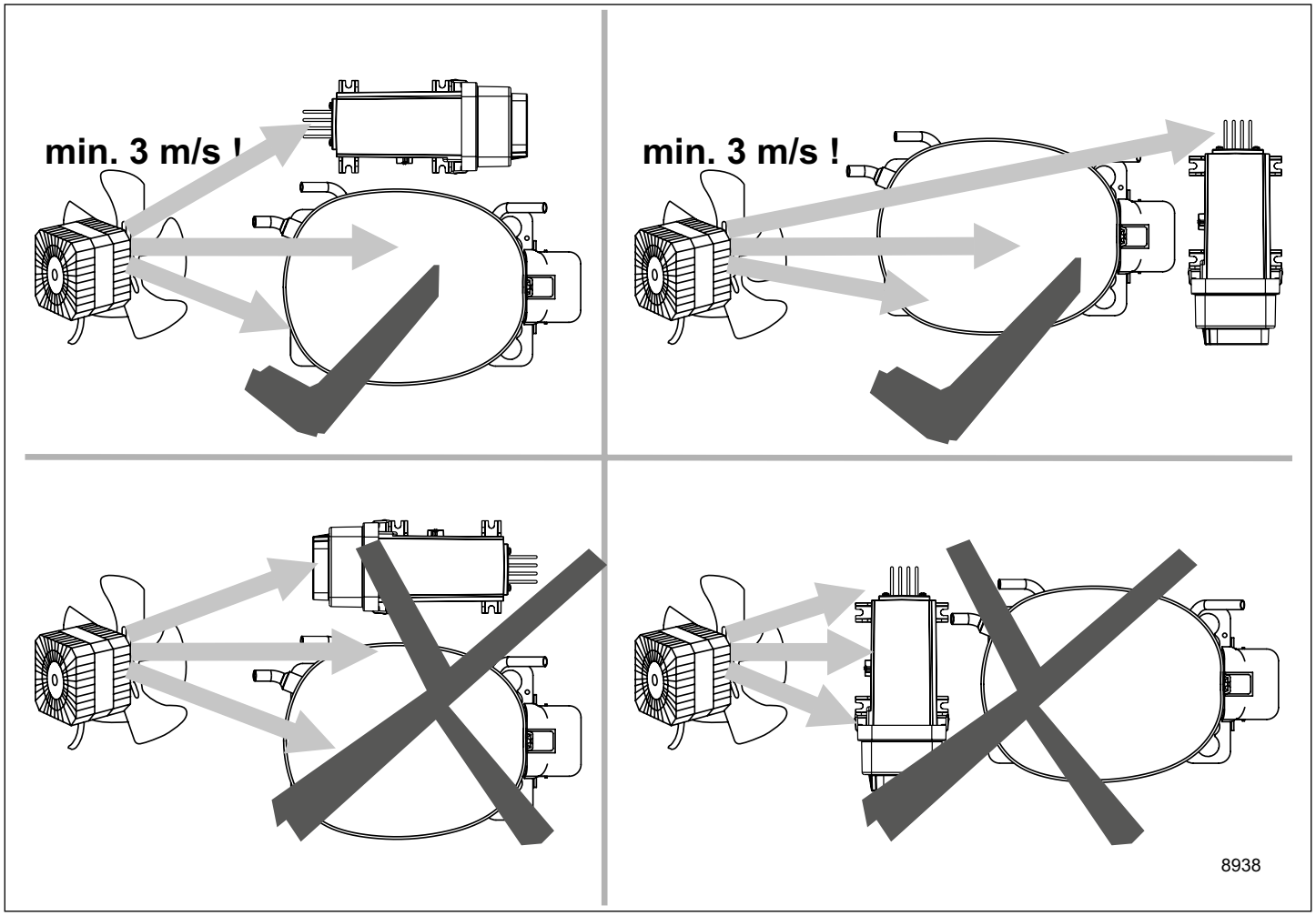

## Brazing on Suction Connectors (Direct Intake)




**! max. 150°C/302°F ! at socket**

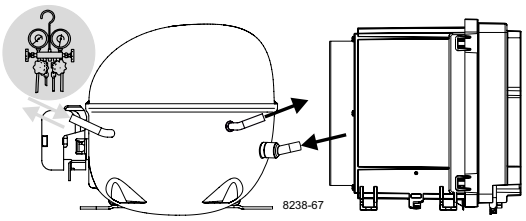
brazing solder: phosphor (LP7) or silver

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




| | |
|---|---|
| **Airflow** | 3 m/s |
| **Operating conditions** | + 5 °C to 43 °C - humidity < 90 % rH non condensing |
| **Storage conditions** | -25 °C to 70 °C - humidity < 90 % rH non condensing |
| **Supply voltage** | 100-240 V (± 10 %) |
| **Frequency** | 50/60 Hz |
| **Input power, max.** | 1000 W |

**Dismantling, recycling, disposal:** At the end of a compressor's lifecycle, proceed by separating and storing components according to their environmental impact. Parts that may cause pollution must be clearly identified and handled separately, ensuring appropriate disposal. Refrigerant gas must not be released into the environment and should be recovered by qualified operators. Compressor oil must also be collected separately. The compressor should be disposed of at specialized disposal centers in accordance with the applicable regulations. **Subject to modifications/alterations. www.secop.com**



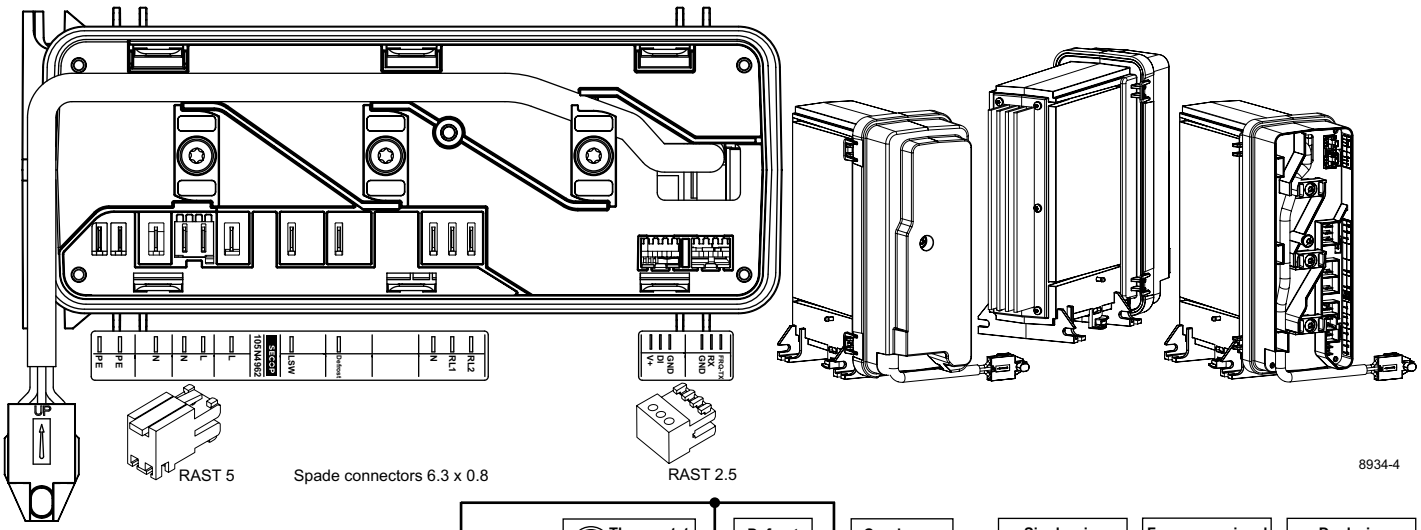

# Instructions

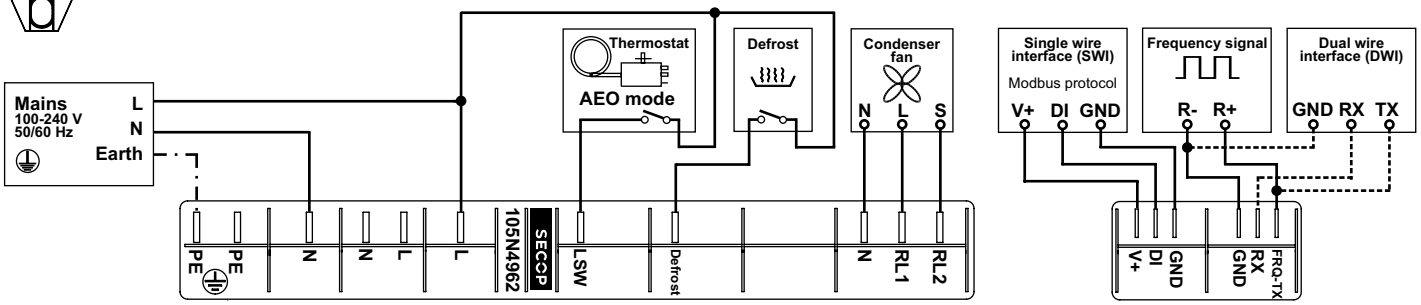
NLV/MN-UV Compressors
100-240 V, 50/60 Hz
105N4962/105N4966/
105N4972 Controllers

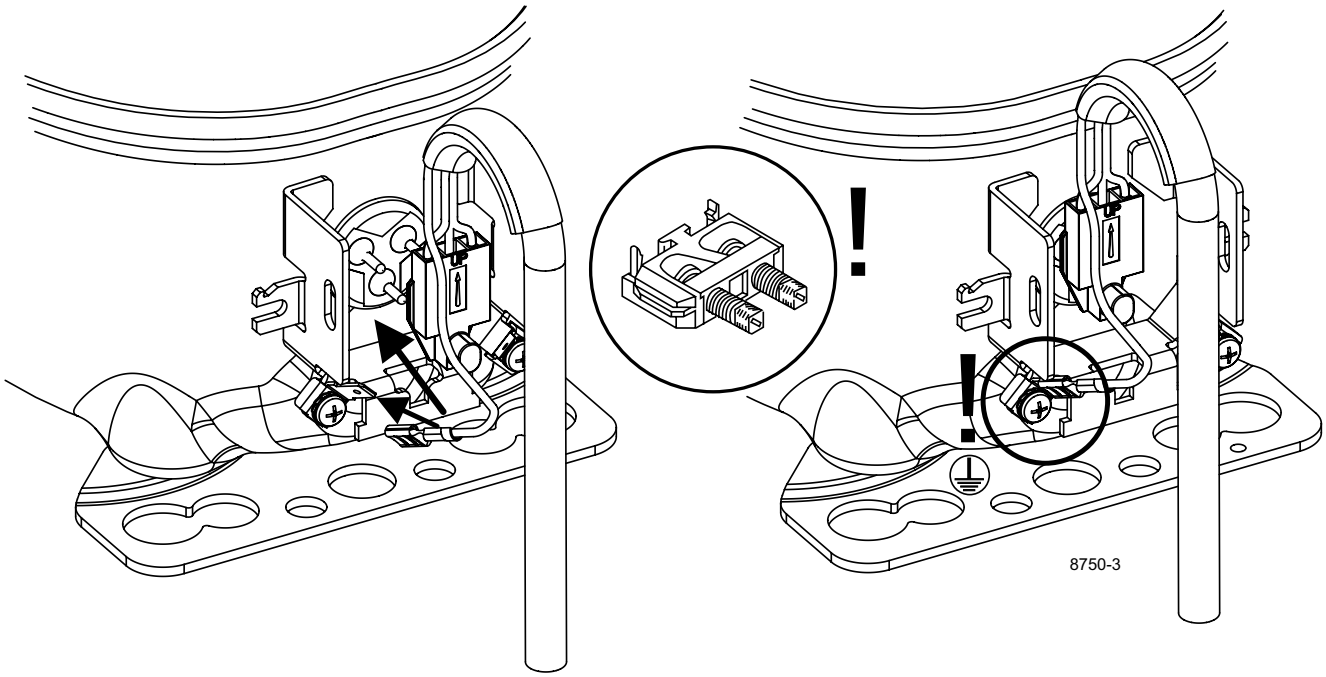
SECOP

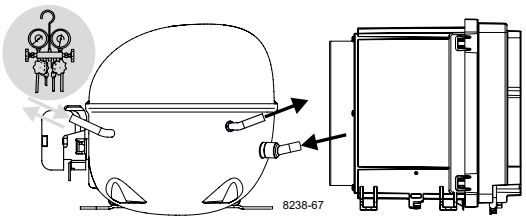
Keep electrical equipment clear from oil, chemicals, and water








# Instructions

NLV/MN-UV Compressors
100-240 V, 50/60 Hz
105N4962/105N4966/
105N4972 Controllers

SECOP

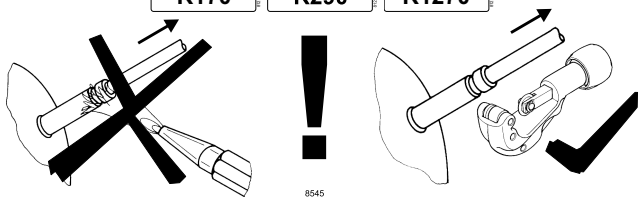
Keep electrical equipment clear from oil, chemicals, and water



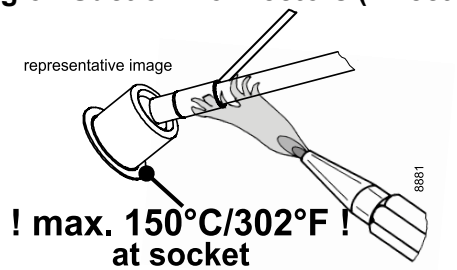
## Service/Repair – R170, R290, R1270

(applies to all flammable refrigerants)



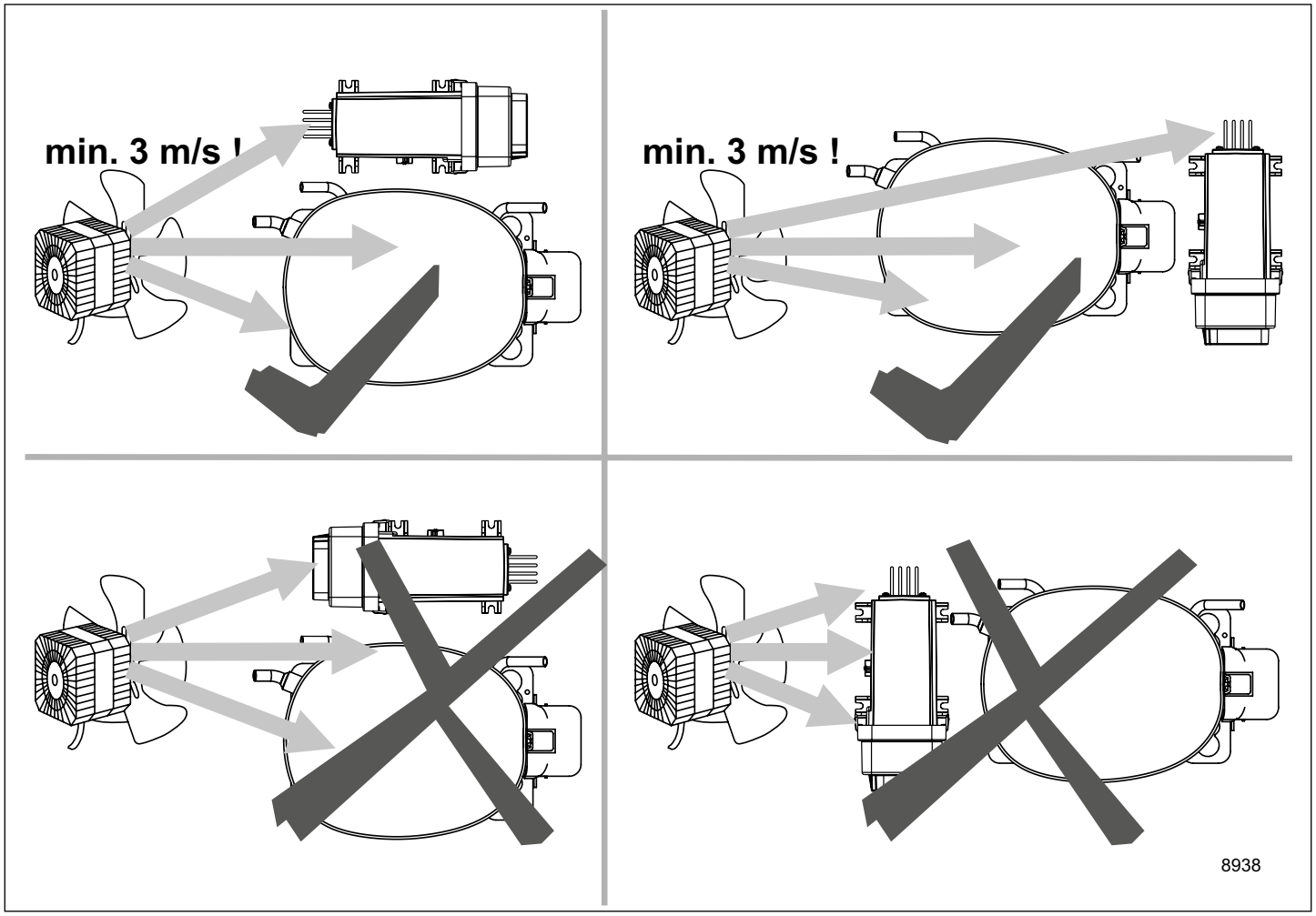

## Brazing on Suction Connectors (Direct Intake)




**! max. 150°C/302°F ! at socket**

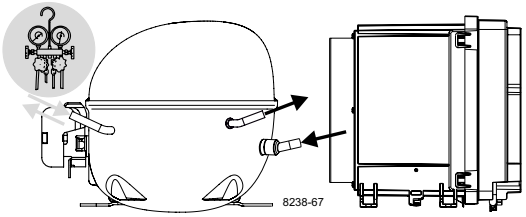
brazing solder: phosphor (LP7) or silver

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




| | |
|---|---|
| **Airflow** | 3 m/s |
| **Operating conditions** | + 5 °C to 43 °C - humidity < 90 % rH non condensing |
| **Storage conditions** | -25 °C to 70 °C - humidity < 90 % rH non condensing |
| **Supply voltage** | 100-240 V (± 10 %) |
| **Frequency** | 50/60 Hz |
| **Input power, max.** | 1000 W |

**Dismantling, recycling, disposal:** At the end of a compressor's lifecycle, proceed by separating and storing components according to their environmental impact. Parts that may cause pollution must be clearly identified and handled separately, ensuring appropriate disposal. Refrigerant gas must not be released into the environment and should be recovered by qualified operators. Compressor oil must also be collected separately. The compressor should be disposed of at specialized disposal centers in accordance with the applicable regulations. **Subject to modifications/alterations. www.secop.com**



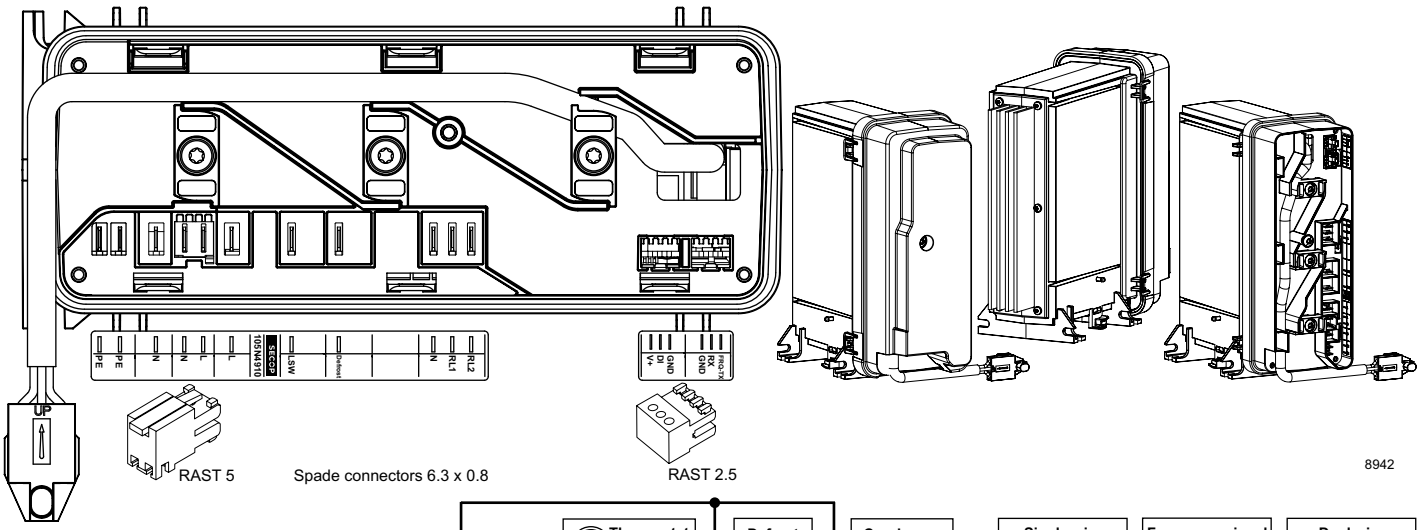

# Instructions

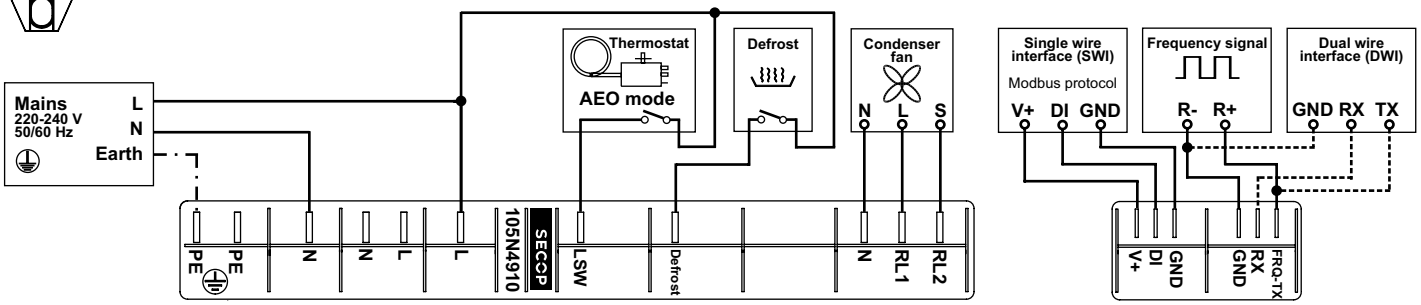
NLV/MN-UV Compressors
220-240 V, 50/60 Hz
105N491x Series
Controllers

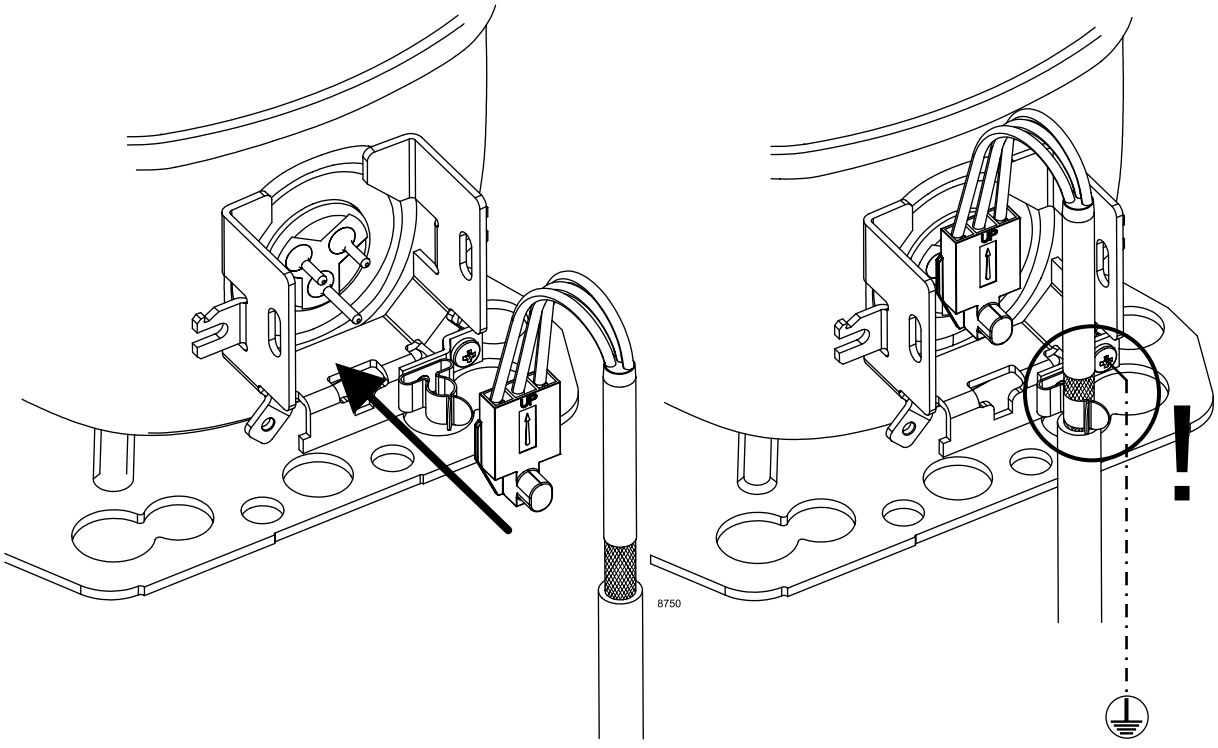
SECOP

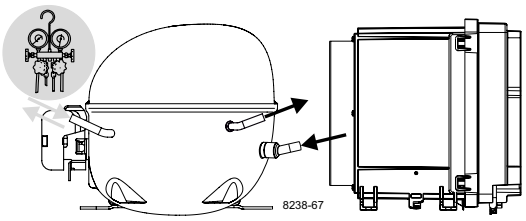
Keep electrical equipment clear from oil, chemicals, and water








# Instructions

NLV/MN-UV Compressors
220-240 V, 50/60 Hz
105N491x Series
Controllers

SECOP

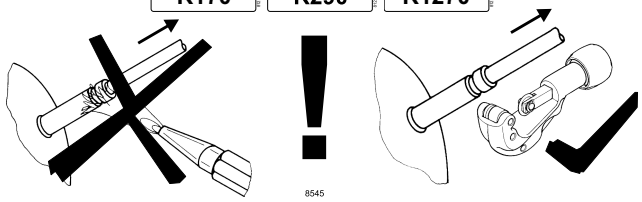
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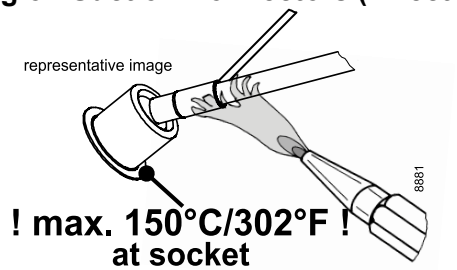
## Service/Repair – R170, R290, R1270

(applies to all flammable refrigerants)



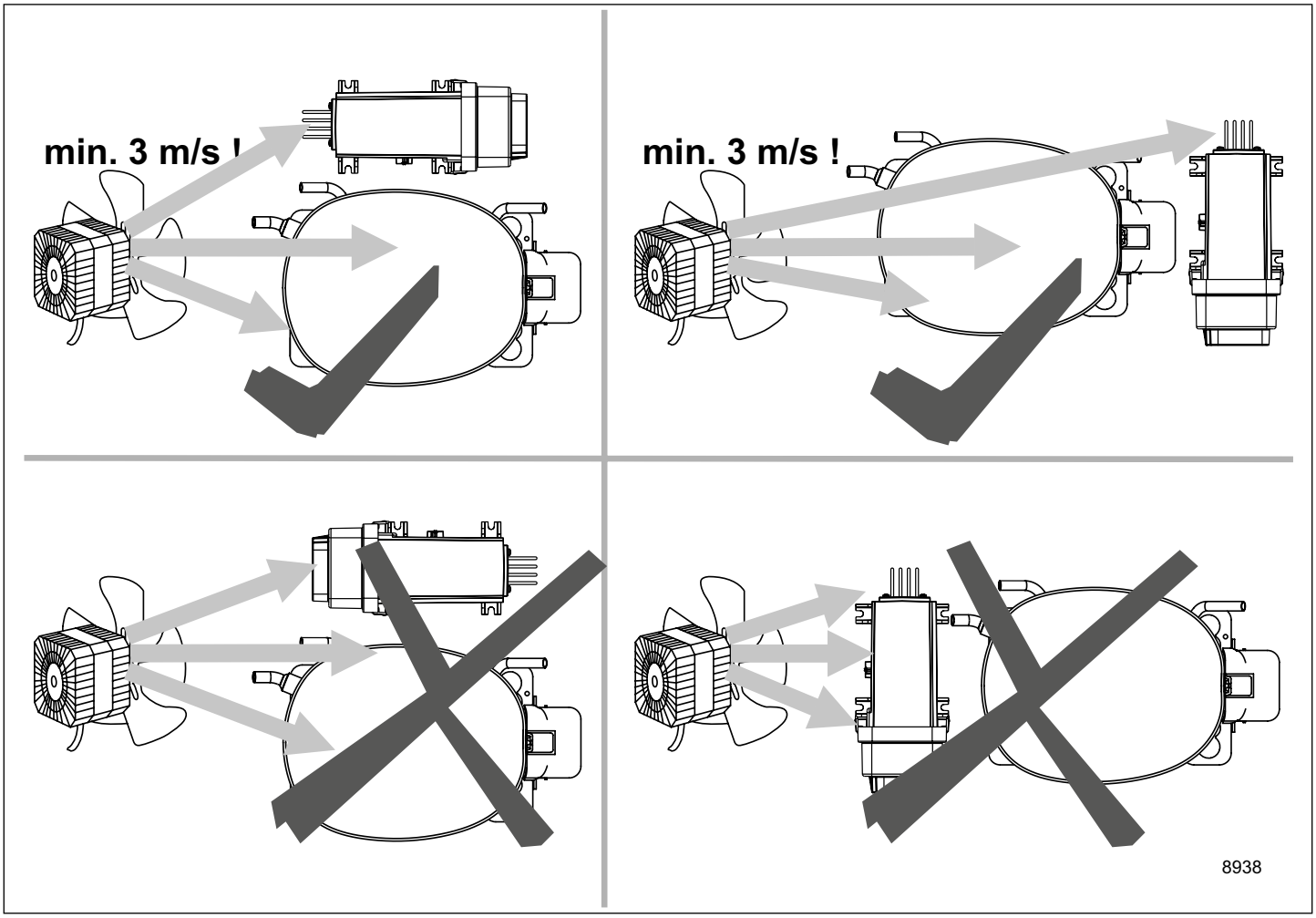

## Brazing on Suction Connectors (Direct Intake)




**! max. 150°C/302°F ! at socket**

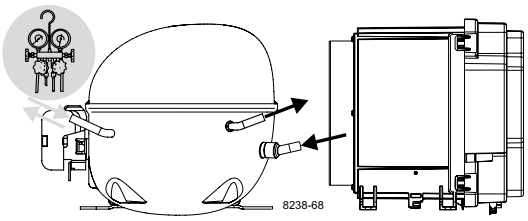
brazing solder: phosphor (LP7) or silver

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




| | |
|---|---|
| **Airflow** | 3 m/s |
| **Operating conditions** | + 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, max.** | 1000 W |

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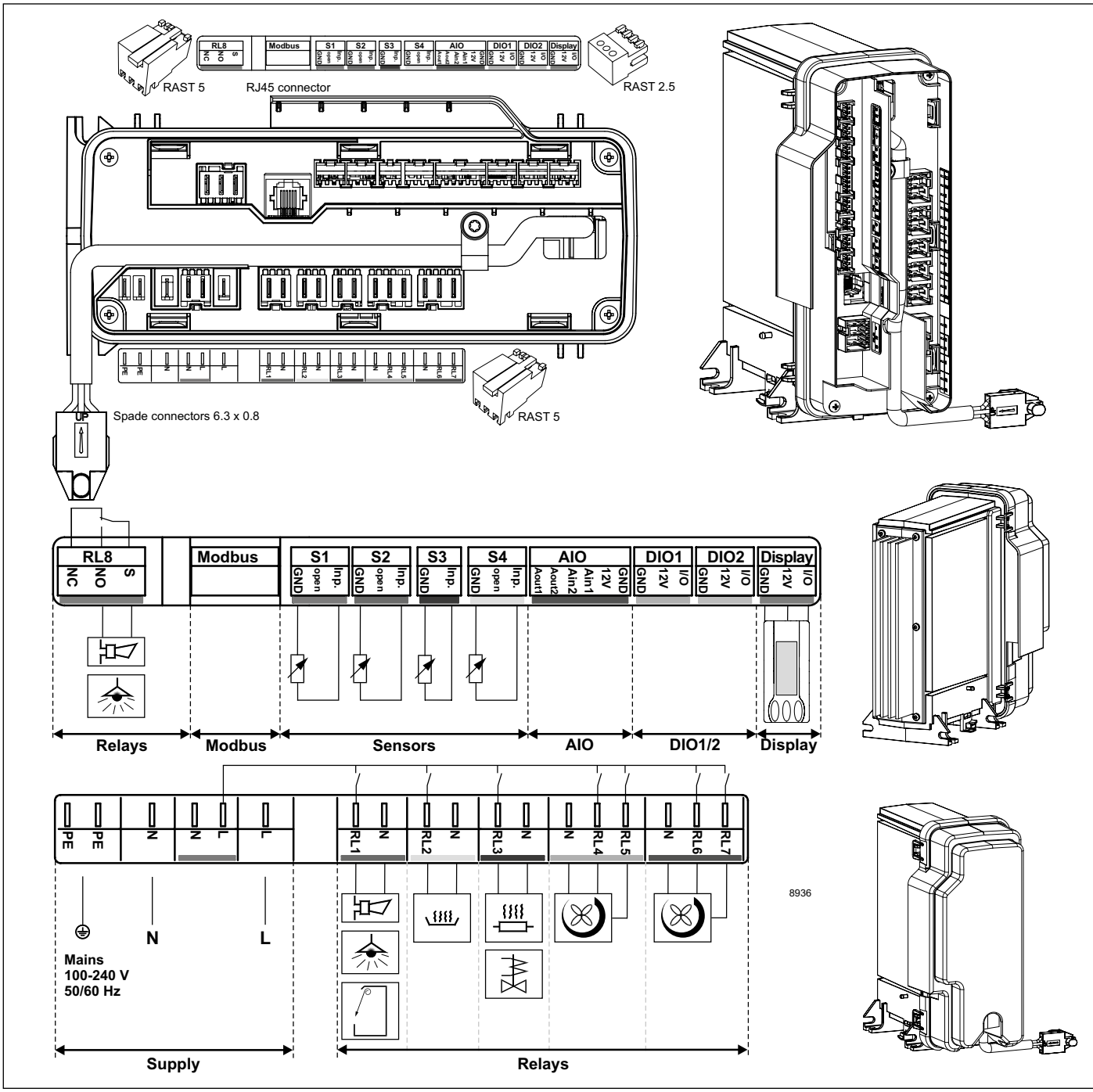

# Instructions

NLV Compressors
100-240 V, 50/60 Hz
105N486x Series
Controllers

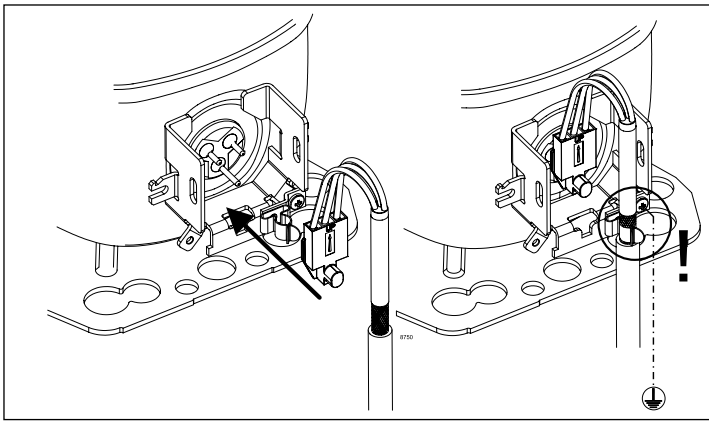
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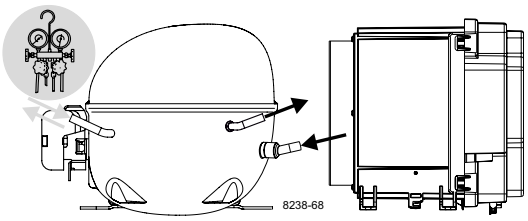
Keep electrical equipment clear from oil, chemicals, and water






| | | | |
|---|---|---|---|
| **Mains** | red | **S1** | red |
| **RL 1** | blue | **S2** | blue |
| **RL 2** | yellow | **S3** | black |
| **RL 3** | black | **S4** | yellow |
| **RL 4, 5** | grey | **AIO** | brown |
| **RL 6, 7** | brown | **DIO1** | grey |
| **RL 8** | green | **DIO2** | pink |
| | | **Display** | green |






# Instructions

NLV Compressors
100-240 V, 50/60 Hz
105N486x Series
Controllers

SECOP

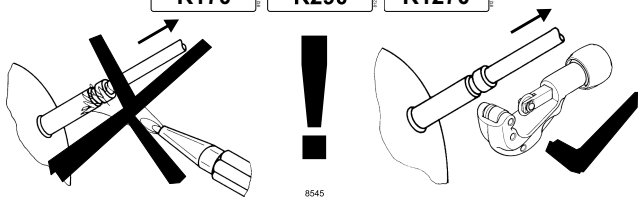
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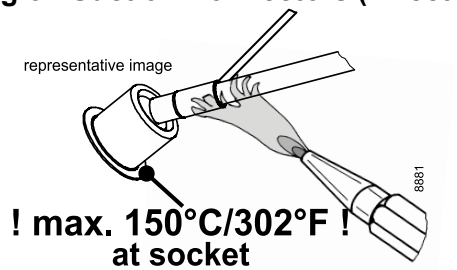
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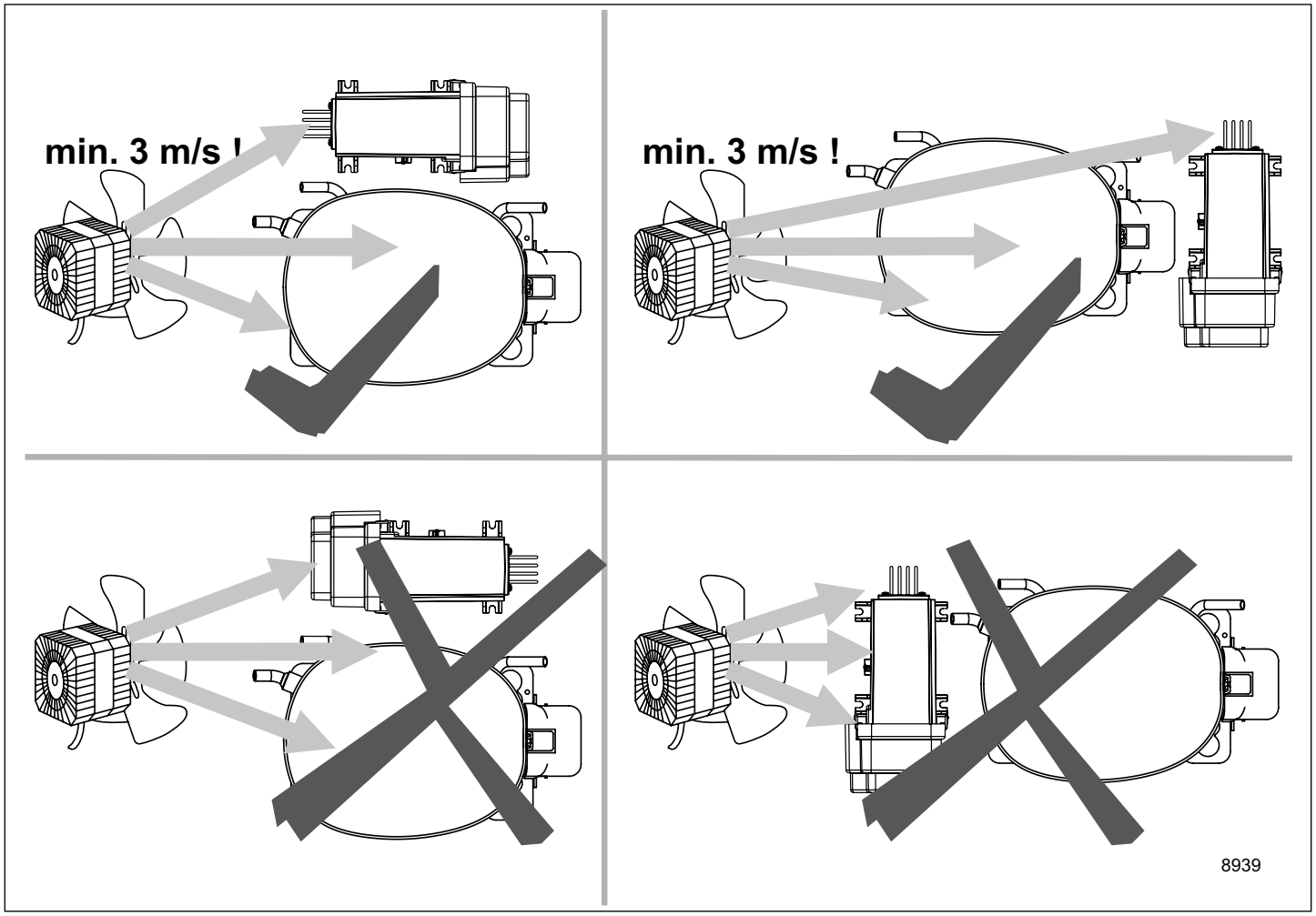

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