

Datasheets

# NL7.3MF Standard Compressor

## R134a, 220-240V 50Hz & 208-230V 60Hz

**General**

|                       |                      |
|-----------------------|----------------------|
| Code number           | 105G6772             |
| Approvals             | EN 60335-2-34, UL984 |
| Compressors on pallet | 80                   |

**Application**

| Application                                    | MBP |           |            |  |
|--|-----|-----------|------------|--|
|  | Hz  | 50        | 60         |  |
| Frequency                                      | Hz  | 50        | 60         |  |
| Evaporating temperature                        | °C  | -20 to 15 | -35 to 7.2 |  |
| Voltage range                                  | V   | 187 - 254 | 198 - 254  |  |
| Max. condensing temperature continuous (short) | °C  | 60 (70)   | 60 (70)    |  |
| 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 <sub>1</sub> | F <sub>1</sub> | F <sub>1</sub> | F <sub>1</sub> | -   |
| 38°C      |    | -   | F <sub>1</sub> | F <sub>1</sub> | F <sub>1</sub> | F <sub>1</sub> | -   |
| 43°C      |    | -   | F <sub>1</sub> | F <sub>1</sub> | F <sub>1</sub> | F <sub>1</sub> | -   |

Remarks on application: F<sub>2</sub> for 230-240V 50Hz nominal below -12°C evaporating temp. CSIR strongly recommended for 60Hz

**Motor**

| Motor type                                | RSIR/CSIR |      |      |
|---|-----------|------|------|
| LRA (rated after 4 sec. UL984), HST   LST | A         | 11.3 | 8.8  |
| Cut in Current, HST   LST                 | A         | 11.3 | 12.9 |
| Resistance, main   start winding (25°C)   | Ω         | 8.3  | 17.0 |

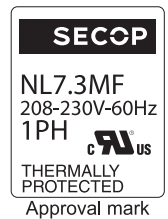
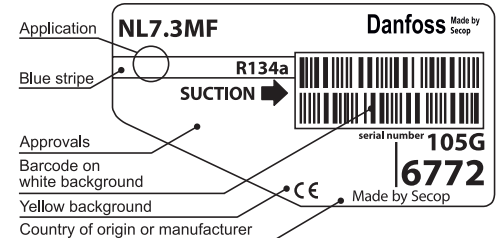
**Design**

|                                     |                 |                   |
|-------------------------------------|-----------------|-------------------|
| Displacement                        | cm <sup>3</sup> | 7.27              |
| Oil quantity (type)                 | cm <sup>3</sup> | 320 (polyolester) |
| Maximum refrigerant charge          | g               | 600               |
| Free gas volume in compressor       | cm <sup>3</sup> | 2360              |
| Weight without electrical equipment | kg              | 10.5              |

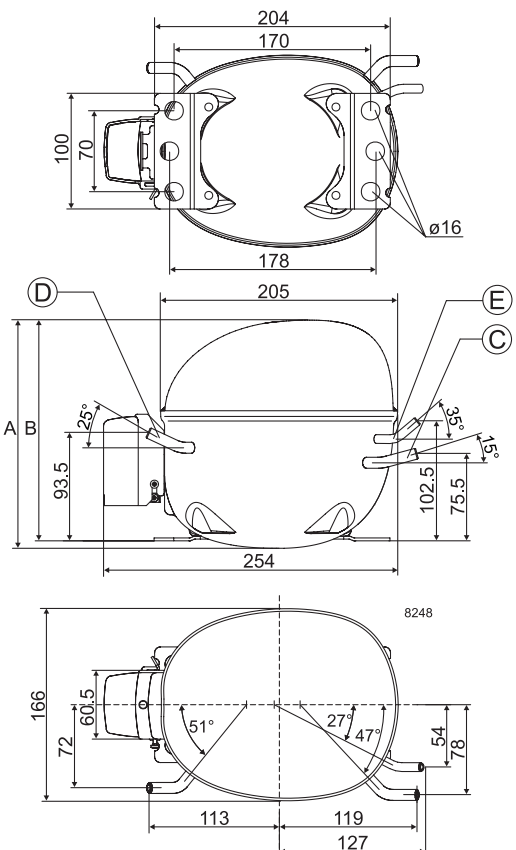
**Dimensions**

| Height               | mm                       | A  | 197                  |
|----------------------|--------------------------|----|----------------------|
|                      |                          | B  | 191                  |
|                      |                          | B1 | -                    |
|                      |                          | B2 | -                    |
| Suction connector    | location/I.D. mm   angle | C  | 8.2   15°            |
|                      | material   comment       |    | Copper   Rubber plug |
| Process connector    | location/I.D. mm   angle | D  | 6.2   25°            |
|                      | material   comment       |    | Copper   Rubber plug |
| Discharge connector  | location/I.D. mm   angle | E  | 6.2   35°            |
|                      | material   comment       |    | Copper   Rubber plug |
| Oil cooler connector | location/I.D. mm   angle | F  | -                    |
|                      | material   comment       |    | -                    |
| Connector tolerance  | I.D. mm                  |    | ±0.09                |

Remarks:



- S = Static cooling normally sufficient
- O = Oil cooling
- F<sub>1</sub> = Fan cooling 1.5 m/s (compressor compartment temperature equal to ambient temperature)
- F<sub>2</sub> = Fan cooling 3.0 m/s necessary
- SG = Suction gas cooling normally sufficient
- = not applicable in this area



**EN 12900 Household (CECOMAF)** 220V, 50Hz, fan cooling F<sub>1</sub>

|                    |     |     |     |     |     |       |      |      |      |      |      |      |      |      |      |      |    |
|--------------------|-----|-----|-----|-----|-----|-------|------|------|------|------|------|------|------|------|------|------|----|
| Evap. temp. in °C  | -45 | -40 | -35 | -30 | -25 | -23.3 | -20  | -15  | -10  | -6.7 | -5   | 0    | 5    | 7.2  | 10   | 15   | 20 |
| Capacity in W      |     |     |     |     |     |       | 179  | 236  | 304  | 356  | 385  | 480  | 591  | 645  | 719  | 867  |    |
| Power cons. in W   |     |     |     |     |     |       | 181  | 204  | 227  | 242  | 250  | 274  | 298  | 310  | 325  | 352  |    |
| Current cons. in A |     |     |     |     |     |       | 1.57 | 1.61 | 1.67 | 1.71 | 1.74 | 1.82 | 1.91 | 1.96 | 2.02 | 2.14 |    |
| COP in W/W         |     |     |     |     |     |       | 0.99 | 1.16 | 1.34 | 1.47 | 1.54 | 1.75 | 1.98 | 2.08 | 2.21 | 2.46 |    |

**EN 12900 Household (CECOMAF)** 220V, 60Hz, fan cooling F<sub>1</sub>

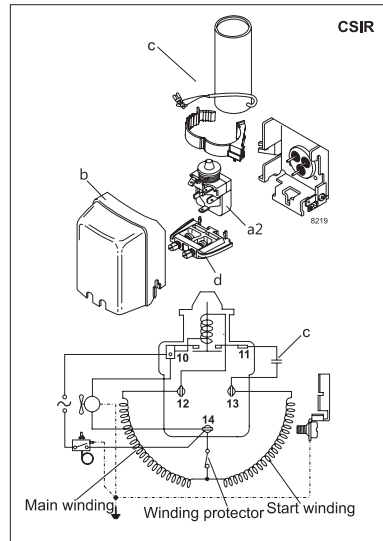
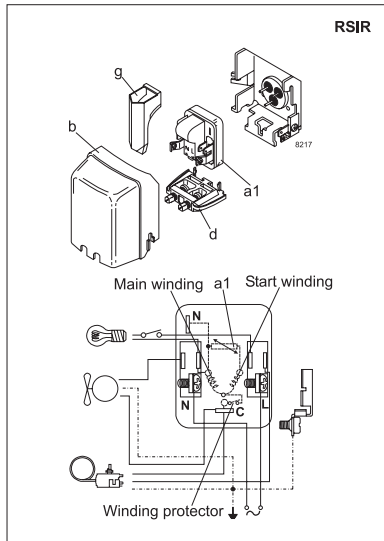
|                    |     |     |      |      |      |       |      |      |      |      |      |      |      |      |    |    |    |
|--------------------|-----|-----|------|------|------|-------|------|------|------|------|------|------|------|------|----|----|----|
| Evap. temp. in °C  | -45 | -40 | -35  | -30  | -25  | -23.3 | -20  | -15  | -10  | -6.7 | -5   | 0    | 5    | 7.2  | 10 | 15 | 20 |
| Capacity in W      |     |     | 73   | 113  | 159  | 177   | 216  | 283  | 363  | 424  | 458  | 570  | 700  | 763  |    |    |    |
| Power cons. in W   |     |     | 110  | 141  | 174  | 185   | 207  | 241  | 275  | 298  | 310  | 344  | 379  | 394  |    |    |    |
| Current cons. in A |     |     | 1.11 | 1.20 | 1.30 | 1.34  | 1.41 | 1.53 | 1.66 | 1.75 | 1.80 | 1.94 | 2.09 | 2.16 |    |    |    |
| COP in W/W         |     |     | 0.67 | 0.80 | 0.92 | 0.96  | 1.04 | 1.17 | 1.32 | 1.42 | 1.48 | 1.65 | 1.85 | 1.93 |    |    |    |

**ASHRAE MBP** 220V, 50Hz, fan cooling F<sub>1</sub>

|                    |     |     |     |     |     |       |      |      |      |      |      |      |      |      |      |      |    |
|--------------------|-----|-----|-----|-----|-----|-------|------|------|------|------|------|------|------|------|------|------|----|
| Evap. temp. in °C  | -45 | -40 | -35 | -30 | -25 | -23.3 | -20  | -15  | -10  | -6.7 | -5   | 0    | 5    | 7.2  | 10   | 15   | 20 |
| Capacity in W      |     |     |     |     |     |       | 198  | 261  | 336  | 393  | 425  | 530  | 652  | 712  | 794  | 958  |    |
| Power cons. in W   |     |     |     |     |     |       | 181  | 204  | 226  | 241  | 249  | 273  | 297  | 308  | 323  | 351  |    |
| Current cons. in A |     |     |     |     |     |       | 1.57 | 1.61 | 1.67 | 1.71 | 1.74 | 1.82 | 1.91 | 1.95 | 2.02 | 2.14 |    |
| COP in W/W         |     |     |     |     |     |       | 1.09 | 1.28 | 1.49 | 1.63 | 1.71 | 1.94 | 2.19 | 2.31 | 2.46 | 2.73 |    |

**ASHRAE MBP** 220V, 60Hz, fan cooling F<sub>1</sub>

|                    |     |     |      |      |      |       |      |      |      |      |      |      |      |      |    |    |    |
|--------------------|-----|-----|------|------|------|-------|------|------|------|------|------|------|------|------|----|----|----|
| Evap. temp. in °C  | -45 | -40 | -35  | -30  | -25  | -23.3 | -20  | -15  | -10  | -6.7 | -5   | 0    | 5    | 7.2  | 10 | 15 | 20 |
| Capacity in W      |     |     | 82   | 125  | 177  | 197   | 239  | 313  | 402  | 469  | 506  | 630  | 773  | 844  |    |    |    |
| Power cons. in W   |     |     | 111  | 142  | 174  | 185   | 207  | 240  | 274  | 297  | 308  | 343  | 377  | 392  |    |    |    |
| Current cons. in A |     |     | 1.11 | 1.20 | 1.30 | 1.34  | 1.41 | 1.53 | 1.66 | 1.74 | 1.79 | 1.93 | 2.09 | 2.15 |    |    |    |
| COP in W/W         |     |     | 0.74 | 0.88 | 1.02 | 1.06  | 1.15 | 1.30 | 1.47 | 1.58 | 1.64 | 1.84 | 2.05 | 2.15 |    |    |    |



| Accessories for           | NL7.3MF                 | Figure | Code number |
|---------------------------|-------------------------|--------|-------------|
| PTC starting device       | 6.3 mm spade connectors | a1     | 103N0011    |
|                           | 4.8 mm spade connectors |        | 103N0018    |
| Starting relay            | 6.3 mm spade connectors | a2     | 117U6016    |
| Start. capacitor 80 µF    | 6.3 mm spade connectors | c      | 117U5015    |
| Cover                     |                         | b      | 103N2011    |
| Cord relief               |                         | d      | 103N1010    |
| Protection screen for PTC |                         | g      | 103N0476    |

| Test conditions         | EN 12900/CECOMAF | ASHRAE |
|-------------------------|------------------|--------|
| Condensing temperature  | 55°C             | 54.4°C |
| Ambient temperature     | 32°C             | 35°C   |
| Suction gas temperature | 32°C             | 35°C   |
| Liquid temperature      | no subcooling    | 46.1°C |

| Mounting accessories     | Code number |          |
|--------------------------|-------------|----------|
| Bolt joint for one comp. | Ø: 16 mm    | 118-1917 |
| Bolt joint in quantities | Ø: 16 mm    | 118-1918 |
| Snap-on in quantities    | Ø: 16 mm    | 118-1919 |

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss 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 in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.