

# NLV6.1F Variable Speed Drive Compressor R134a 115-127V 50-60Hz



## General

Code number compressor (without electronic unit)	105G5660
Code number electronic unit	105N4212
Approvals	UL984
Compressors on pallet	80

## Application

Application	Hz	LBP/MBP		
		50	60	
Frequency	Hz	50	60	
Evaporating temperature	°F	-31 to 45	-31 to 45	
Voltage range	V	80 - 140	80 - 140	
Max. condensing temperature continuous (short)	°F	140 (158)	140 (158)	
Max. winding temperature continuous (short)	°F	257 (275)	257 (275)	

## Cooling requirements

Application	Hz	50			60		
		LBP	MBP	HBP	LBP	MBP	HBP
90°F		F <sub>2</sub>	F <sub>2</sub>	-	F <sub>2</sub>	F <sub>2</sub>	-
100°F		F <sub>2</sub>	F <sub>2</sub>	-	F <sub>2</sub>	F <sub>2</sub>	-
110°F		F <sub>2</sub>	F <sub>2</sub>	-	F <sub>2</sub>	F <sub>2</sub>	-

Remarks on application:

## Features

Speed range	rpm	2000 - 4000
Control modes with integrated speed control AEO*)		- mech. thermostat 115V ON/OFF - 5V DC ON/OFF
External speed control		- 5V DC 200-400Hz
Protections		- current - speed - temperature

\*)AEO - Adaptive Energy Optimizer

## Motor

Motor type		permanent magnet
LRA (rated after 4 sec. UL984), HST	A	electronic cut-off
Cut in Current, HST	A	6
Resistance, all 3 windings (77°F)	Ω	2.0

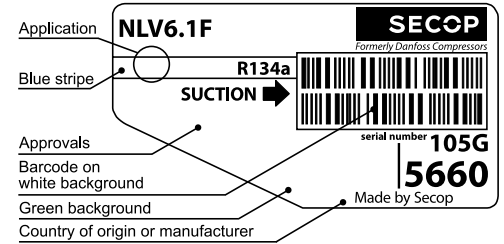
## Design

Displacement	cu.in	0.37
Oil quantity (type)	fl.oz.	10.8 (polyolester)
Maximum refrigerant charge	oz.	14.0
Free gas volume in compressor	fl.oz.	79.7
Weight: Compressor / Electronic unit	lbs.	23.8 / 1.3

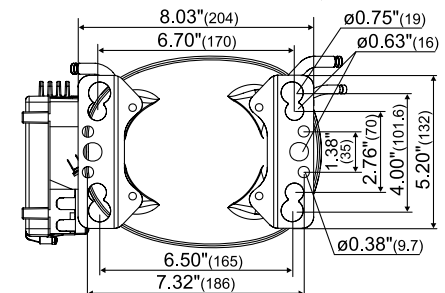
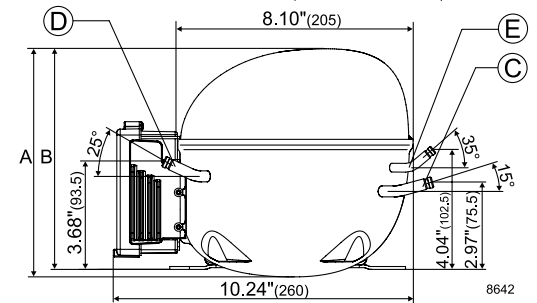
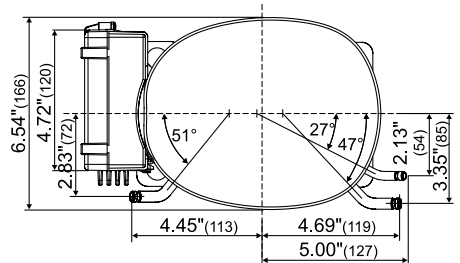
## Dimensions

Height	inch	A	7.99
		B	7.76
		B1	-
		B2	-
Suction connector	location, I.D. in.   angle	C	0.320-0.327   15°
	material   comment		Copper   Rubber plug
Process connector	location, I.D. in.   angle	D	0.252-0.259   25°
	material   comment		Copper   Rubber plug
Discharge connector	location, I.D. in.   angle	E	0.252-0.259   35°
	material   comment		Copper   Rubber plug
Oil cooler connector	location, I.D. in.   angle	F	-
	material   comment		-

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



**Capacity (ASHRAE)**

**Btu/h**

rpm \ °F	-49	-40	-30	-20	-13	-10	0	10	14	20	30	40	41	45	50	59	68
2,000			190	292	378	419	577	771	859	1006	1288	1622	1658	1810			
3,000			307	453	577	636	863	1142	1270	1481	1887	2367	2420	2638			
3,500			388	560	706	776	1045	1376	1527	1777	2257	2826	2889	3147			
4,000			409	603	767	846	1148	1519	1689	1970	2509	3148	3218	3508			

**Capacity (EN 12900 Household/CECOMAF)**

**watt**

rpm \ °F	-49	-40	-30	-20	-13	-10	0	10	14	20	30	40	41	45	50	59	68
2,000			45	69	89	99	137	182	204	238	305	383	392	428			
3,000			73	107	137	151	205	271	301	351	447	560	572	623			
3,500			92	133	167	184	248	326	362	421	534	668	683	744			
4,000			97	143	182	200	272	360	400	467	594	744	761	829			

**Power consumption**

**watt**

rpm \ °F	-49	-40	-30	-20	-13	-10	0	10	14	20	30	40	41	45	50	59	68
2,000			56	68	77	81	94	108	114	122	135	148	149	154			
3,000			87	106	119	125	145	165	173	185	206	227	229	238			
3,500			108	132	150	157	182	207	218	233	260	288	291	303			
4,000			123	151	170	179	207	236	248	266	296	326	329	341			

**Current consumption**

**A**

rpm \ °F	-49	-40	-30	-20	-13	-10	0	10	14	20	30	40	41	45	50	59	68
2,000			0.88	1.06	1.18	1.23	1.40	1.56	1.63	1.73	1.88	2.04	2.05	2.11			
3,000			1.26	1.51	1.69	1.76	2.02	2.28	2.38	2.54	2.80	3.06	3.08	3.19			
3,500			1.49	1.79	2.00	2.09	2.40	2.71	2.84	3.03	3.35	3.68	3.71	3.84			
4,000			1.66	2.02	2.27	2.37	2.73	3.08	3.23	3.44	3.80	4.16	4.19	4.33			

**EER (ASHRAE)**

**Btu/Wh**

rpm \ °F	-49	-40	-30	-20	-13	-10	0	10	14	20	30	40	41	45	50	59	68
2,000			3.38	4.28	4.90	5.17	6.10	7.12	7.55	8.24	9.51	10.96	11.11	11.76			
3,000			3.54	4.28	4.83	5.08	5.96	6.94	7.35	8.01	9.17	10.43	10.57	11.10			
3,500			3.60	4.23	4.71	4.94	5.74	6.64	7.02	7.61	8.67	9.80	9.91	10.38			
4,000			3.32	4.00	4.51	4.74	5.54	6.43	6.81	7.41	8.48	9.65	9.77	10.27			

**COP (EN 12900 Household/CECOMAF)**

**W/W**

rpm \ °F	-49	-40	-30	-20	-13	-10	0	10	14	20	30	40	41	45	50	59	68
2,000			0.80	1.01	1.16	1.22	1.44	1.68	1.78	1.94	2.24	2.57	2.61	2.76			
3,000			0.84	1.01	1.14	1.20	1.41	1.64	1.74	1.89	2.16	2.45	2.48	2.61			
3,500			0.86	1.00	1.12	1.17	1.36	1.57	1.66	1.80	2.04	2.31	2.33	2.44			
4,000			0.79	0.95	1.07	1.12	1.31	1.52	1.61	1.75	2.00	2.27	2.30	2.41			

**Legend**

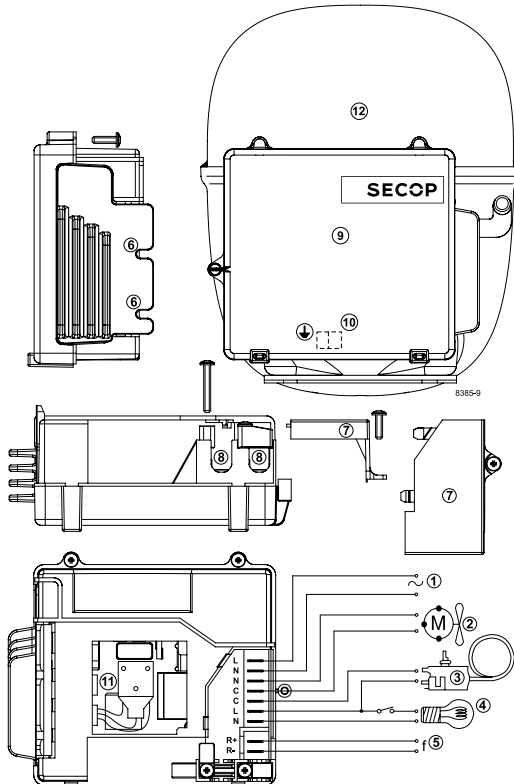
- | Number | Description                |
|--------|----------------------------|
| 1:     | Power supply               |
| 2:     | Fan connection             |
| 3:     | Thermostat connection      |
| 4:     | Light connection           |
| 5:     | Signal input               |
| 6:     | Mounting recesses          |
| 7:     | Cover                      |
| 8:     | Cord relief                |
| 9:     | Electronic unit            |
| 10:    | Earth connection           |
| 11:    | Connector                  |
| 12:    | Compressor                 |
| 13:    | Screw 3.5 x 12 mm (3 pcs.) |
| 14:    | Screw 3.5 x 25 mm (2 pcs.) |

For further descriptions on connecting the electronic unit and the compressor, refer to *Instructions DES.I.300.B "Electronic Unit Type 105N4210 & 105N4212, 80-140V 50-60Hz for NLV Compressors"*.

Test conditions	ASHRAE	EN 12900/CECOMAF
Condensing temperature	130°F	131°F
Ambient temperature	90°F	90°F
Suction gas temperature	90°F	90°F
Liquid temperature	90°F	no subcooling

Accessories for	NLV6.1F	Code number
Bolt joint for one compressor	Ø: 5/8 in.	118-1917
Bolt joint in quantities	Ø: 5/8 in.	118-1918
Snap-on in quantities	Ø: 5/8 in.	118-1919



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