

## Model

Designation	<b>NLV10CN</b>	Sales code:	<b>105H7013</b>
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## Compressor design

Oil type	Polyolester	Refrigerant(s)	<b>R290</b>
Oil viscosity	32cST	Displacement	10,09cm <sup>3</sup> / 0,62cu.in
Oil quantity	298cm <sup>3</sup> / 10,1fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	200g / 7,1oz		
Free gas volume comp.	2360cm <sup>3</sup> / 79,8fl.oz		
Weight	10,8kg / 23,8lbs		
Motor protection	2# internal		
Winding resist. ph. to ph.	5,3Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	130°C / 266°F		



## General - Configurations and Applications with NLV10CN and Controller

	<b>Conf. 1</b>
Sales code single pack:	105N4120
Sales code industry pack:	105N4121
Power supply (nominal)	220-240V 50/60Hz
Approvals	CCC
Refrigerant	R290
Number of phases	1~ AC
Application	LBP+MBP
Starting torque	HST
Hot gas defrost	OK
Long interval pull down	OK
System cooling	fan 3m/s
Note	- / -

## Controller functions

	<b>Conf. 1</b>
Protection	Mechanic
Max output power	1000 W
No of relays	0
Hot gas defrost	yes
AEO speed setting	yes
Serial speed setting	yes
DWI / Frequency input	yes
Note	

## Model

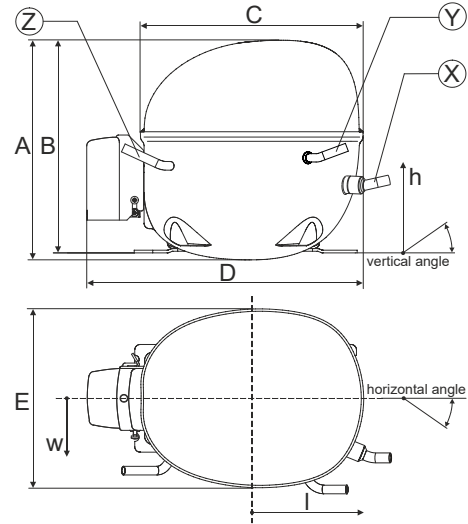
Designation **NLV10CN**

Sales code: **105H7013**

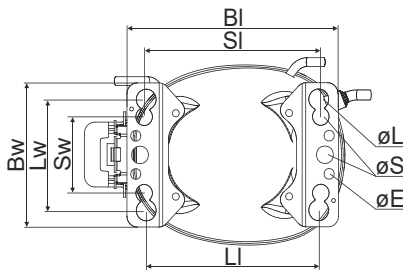
## Compressor dimensions

<b>Housing</b>	A Height	218,5mm / 8,6in
	B Height	212,5mm / 8,37in
	C Length shell	205mm / 8,07in
	D Length w. cover	252mm / 9,92in
	E Width	166mm / 6,54in

Connectors	Suction	Discharge	Process
	X	Y	Z
Diameter [mm]	øi 8,11-8,29	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside) [in]	øi 0,32-0,33	øi 0,24-0,25	øi 0,24-0,25
Material	copper	copper	copper
Horizontal angle ±2°	0°	0°	0°
Vertical angle ±2°	15°	21°	155°
Position l/h/w [mm]	132/69/56	94/99/86	-111/92/72
[in]	5,2/2,7/2,2	3,7/3,9/3,4	-4,4/3,6/2,8
Straight tube l.	[mm]	12	12
	[in]	0,5	0,5



## Compressor fixation



Baseplate	[mm]	[inch]
BI	204	8.03
Bw	132	5.2
øE	ø 9.7	ø 0.38

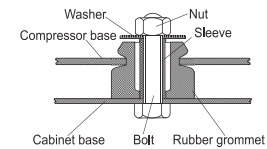
  

Large holes	[mm]	[inch]
LI	165	6.5
LW	101.6	4
øL	ø 19	ø 0.75

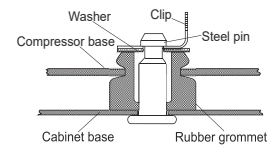
  

Small holes	[mm]	[inch]
SI	170	6.7
SW	70	2.76
øS	ø 16	ø 0.63

### Bolt joint



### Snap-on



Mounting accessories	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

## Application notes

Operation possible until tilted up to 3 degrees

Provision for PE Grounding is located at the PE Stamp on the compressor

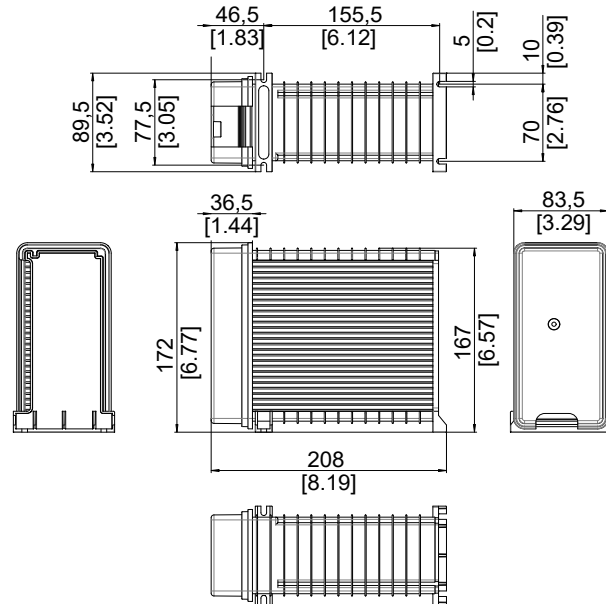
### Model

Designation **NLV10CN** **220-240V 50/60Hz** **Conf. 1** Sales code: **105H7013**

**Controller** **NLV Basic 230V** **105N4120**

Sales code single pack: 105N4120 (1 units)  
 Sales code industry pack: 105N4121 (8 units)  
 Adaption to compressor: detached  
 Protection class: IP31  
 Weight: 1 kg / 2.2 lbs  
 Voltage nom.: 220-240V 50/60Hz  
 Voltage range: 198-264 V  
 Max, current: 8A  
 LRA (Locked Rotor Amperage) 1,3 A  
 Cable length: 680 mm  
 Compressor speed range: 2000-4500 rpm

### Controller dimensions:



QR Code and Hyperlink leads to the [Operating Instructions.](#)

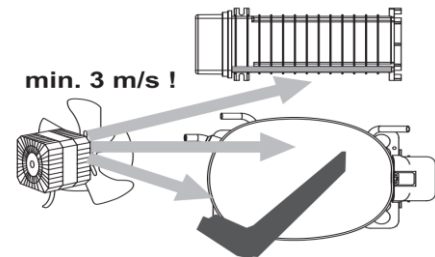
### Operation Limits

### System cooling

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.

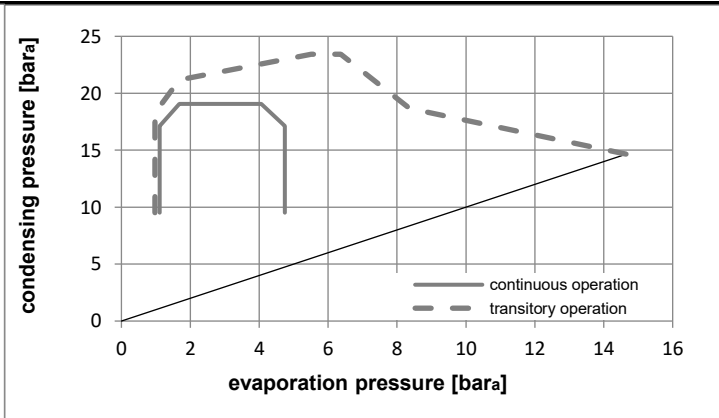
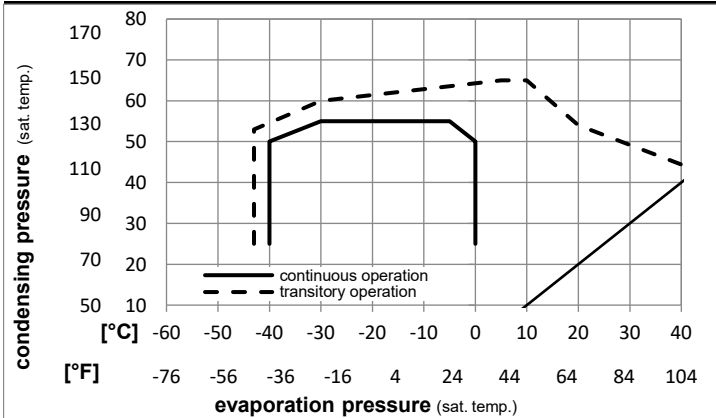
### Ambient/ machineroom temperatures minimum /maximum

Ambient temperature range: 10 - 43°C / 50 - 110°F  
 Machine room temperature range compressor: 10 - 48°C / 50 - 119°F  
 Machine room temperature range controller: 10 - 50°C / 50 - 122°F



### Operation pressure range

R290

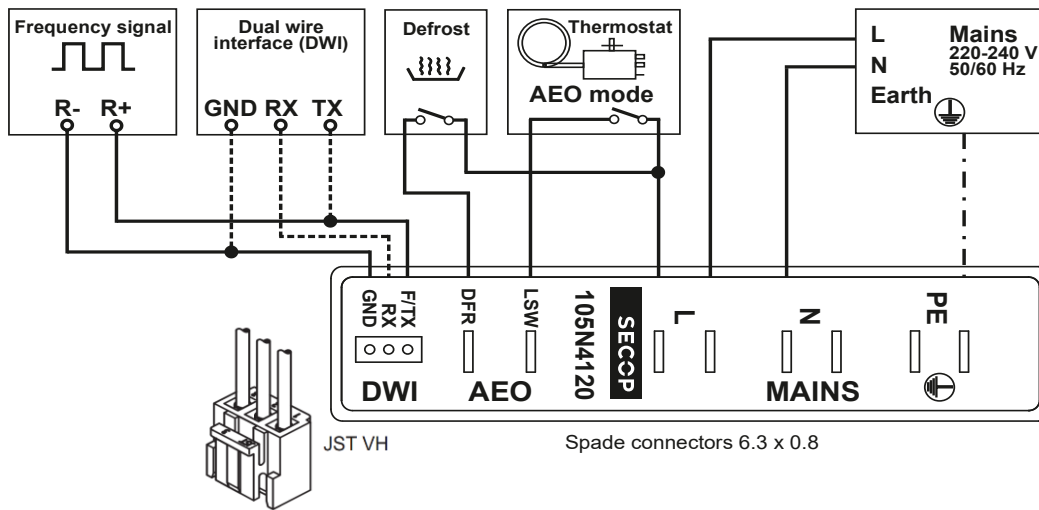
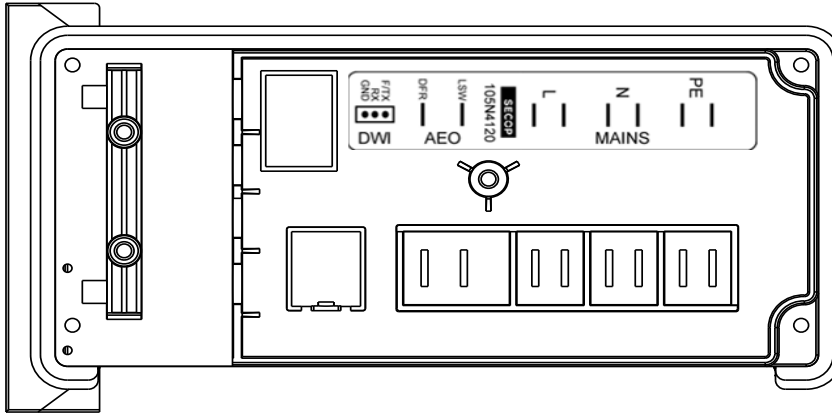


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**Controller** **NLV Basic 230V** **105N4120**

### Controller connections



### Accessories (Compressor + Controller) - check operation manual for details

103N2008	plastic cover	1 pcs
103N9110	plastic cover (MP of 103N2008)	80 pcs

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Controller	<b>NLV Basic 230V</b>				<b>105N4120</b>

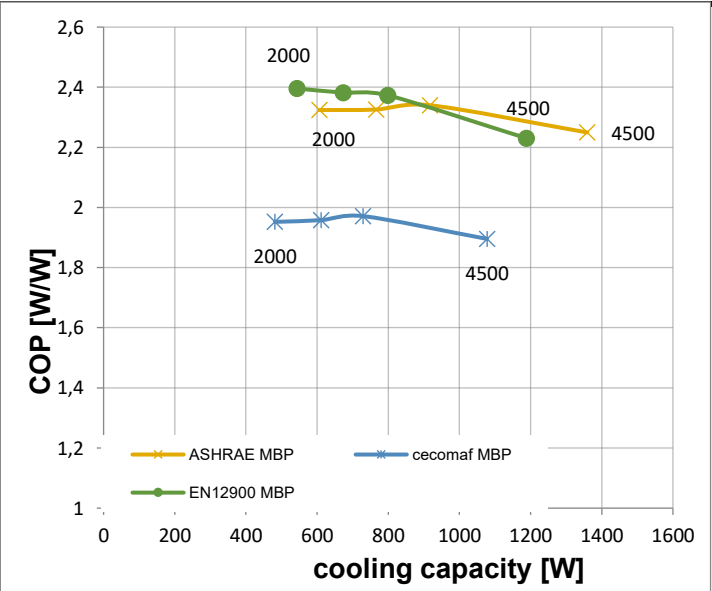
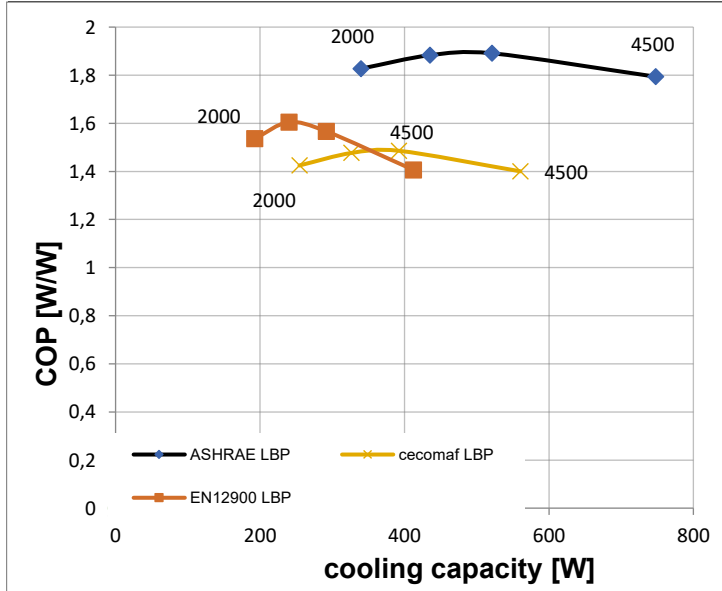
### Optimization + standard conditions

R290, 220V, 50Hz, Rpm\_N 4500, fan 3m/s

	Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)			Return gas temp.			Liquid temp.			Cooling capacity			COP	EER	Power consumption			
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	P1	I	ṁ	[W]	[A]	[kg/h]						
[°C]	-23	54	32	32	747,9	2554	643,7	1,79	6,13	1,54	417,0	2,70	7,57								ASHRAE LBP	
[°F]	-10	130	90	90																		cecomaf LBP
[°C]	-25	55	32	55	560,5	1914	482,4	1,40	4,78	1,21	400,2	2,61	6,98									ASHRAE LBP
[°F]	-13	131	90	131																		cecomaf LBP
[°C]	-35	40	20	40	412,3	1408	354,9	1,41	4,80	1,21	293,2	1,98	4,71									EN12900 LBP
[°F]	-31	104	68	104																		EN12900 LBP
[°C]	-7	54	35	46	1359,1	4641	1169,6	2,25	7,68	1,94	604,1	3,80	15,50									ASHRAE MBP
[°F]	20	130	95	115																		ASHRAE MBP
[°C]	-10	55	32	55	1077,4	3680	927,2	1,90	6,47	1,63	568,4	3,59	13,63									cecomaf MBP
[°F]	14	131	90	131																		cecomaf MBP
[°C]	-10	45	20	45	1187,8	4057	1022,3	2,23	7,62	1,92	532,5	3,38	14,58									EN12900 MBP
[°F]	14	113	68	113																		EN12900 MBP

### Standard conditions with different RPM

R290, 220V, 50Hz, Rpm\_N 4500, fan 3m/s



Test conditions:	pe [°C]	pc [°C]	Tliq [°C]	Tsuc [°C]	pe [°C]	pc [°C]	Tliq [°C]	Tsuc [°C]	
ASHRAE LBP	-23,33	54,44	32,22	32,22	ASHRAE MBP	-6,66	54,44	46,11	35
cecomaf LBP	-25	55	55	32	cecomaf MBP	-10	55	55	32
EN12900 LBP	-35	40	40	20	EN12900 MBP	-10	45	45	20