

Datasheets

NLE10CN Energy-optimized LBP/MBP R290 220-240V 50Hz

General

Code number	105H6175
Approvals	EN 60335-2-34 w. Annex AA
Compressors on pallet	80

Application

Application	LBP/MBP			
	Hz	50	60	
Frequency	Hz	50	60	
Evaporating temperature	°C	-35 to 10	-	
Voltage range	V	198 to 254	-	
Max. condensing temperature continuous (short)	°C	55 (65)	-	
Max. winding temperature continuous (short)	°C	125 (135)	-	

Cooling requirements

Frequency	Hz	50			60		
		LBP	MBP	HBP	LBP	MBP	HBP
32°C		F ₂	F ₂	-	-	-	-
38°C		F ₂	F ₂	-	-	-	-
43°C		F ₂	F ₂	-	-	-	-
Remarks on application:							

Motor

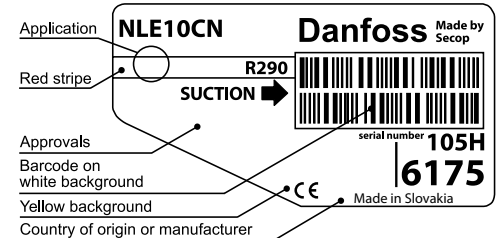
Motor type	CSIR/RSIR/RSCR		
LRA (rated after 4 sec. UL984), HST LST	A	12.0	10.9
Cut in Current, HST LST	A	12.0	15.8
Resistance, main start winding (25°C)	Ω	8.0	18.0

Design

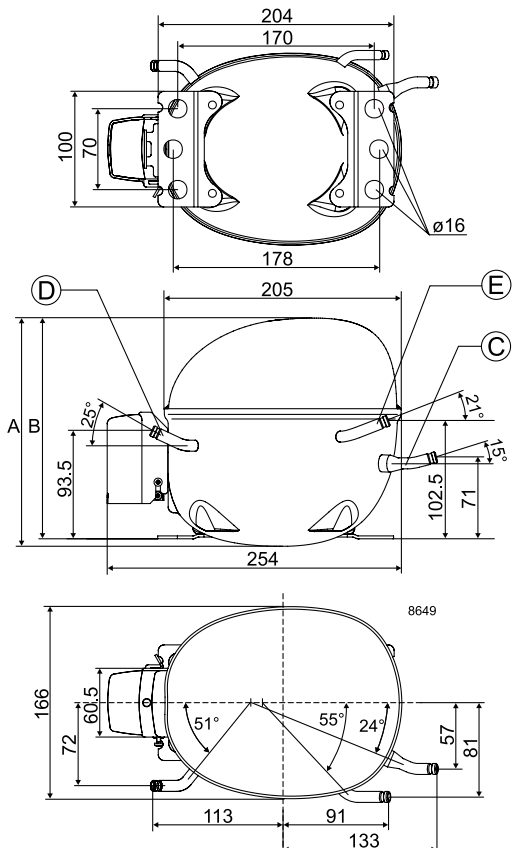
Displacement	cm ³	10.09
Oil quantity (type)	cm ³	320 (polyolester)
Maximum refrigerant charge	g	150
Free gas volume in compressor	cm ³	2360
Weight without electrical equipment	kg	12.1

Dimensions

Height	mm	A	203
		B	197
		B1	-
		B2	-
Suction connector	location/l.D. mm angle	C	8.2 15°
	material comment		Cu-plated steel Al cap
Process connector	location/l.D. mm angle	D	6.2 25°
	material comment		Cu-plated steel Al cap
Discharge connector	location/l.D. mm angle	E	6.2 21°
	material comment		Cu-plated steel Al cap
Oil cooler connector	location/l.D. mm angle	F	-
	material comment		-
Connector tolerance	I.D. mm		±0.09
Remarks:			



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



EN 12900 LBP 220V, 50Hz, fan cooling F₂

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			289	364	455	491	565	695	845	956	1017	1212	1431	1535	1675		
Power cons. in W			242	275	308	320	341	372	400	416	424	444	459	463	467		
Current cons. in A			1.87	1.95	2.04	2.08	2.14	2.24	2.33	2.38	2.41	2.47	2.52	2.53	2.54		
COP in W/W			1.20	1.32	1.48	1.54	1.66	1.87	2.11	2.30	2.40	2.73	3.12	3.31	3.59		

EN 12900 MBP 220V, 50Hz, fan cooling F₂

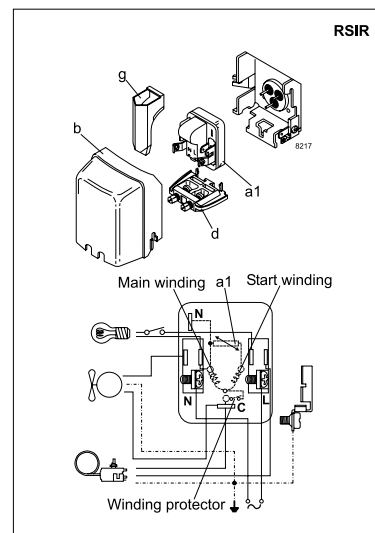
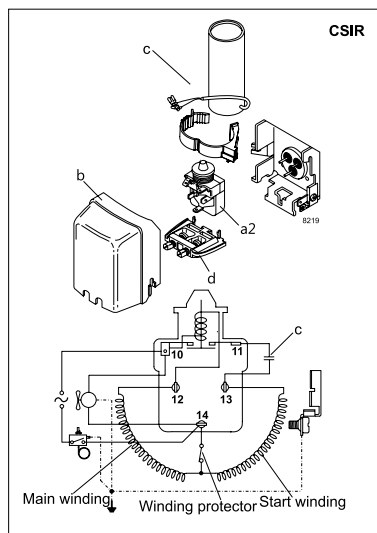
Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W			268	339	427	461	532	654	796	900	957	1140	1345	1443	1574		
Power cons. in W			246	281	316	328	351	385	418	438	448	474	495	503	511		
Current cons. in A			1.89	1.97	2.06	2.10	2.17	2.28	2.39	2.45	2.49	2.58	2.65	2.68	2.70		
COP in W/W			1.09	1.21	1.35	1.41	1.51	1.70	1.90	2.06	2.14	2.41	2.72	2.87	3.08		

ASHRAE LBP 220V, 50Hz, fan cooling F₂

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			267	350	449	486	565	702	859	974	1037	1240	1467	1575	1721		
Power cons. in W			244	280	318	331	357	397	437	462	475	510	543	556	571		
Current cons. in A			1.91	2.00	2.11	2.15	2.24	2.37	2.52	2.62	2.67	2.81	2.94	3.00	3.06		
COP in W/W			1.09	1.25	1.41	1.47	1.58	1.77	1.97	2.11	2.19	2.43	2.70	2.83	3.01		

ASHRAE MBP/HBP 220V, 50Hz, fan cooling F₂

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			239	312	401	434	505	626	766	868	924	1104	1304	1400	1528		
Power cons. in W			242	277	315	328	354	393	432	457	469	504	536	549	564		
Current cons. in A			1.91	2.00	2.11	2.15	2.24	2.37	2.52	2.62	2.67	2.81	2.94	3.00	3.06		
COP in W/W			0.99	1.13	1.27	1.32	1.43	1.59	1.77	1.90	1.97	2.19	2.43	2.55	2.71		



Accessories for	NLE10CN	Figure	Code number
ePTC starting device	6.3 mm spade connectors	a1	-
	4.8 mm spade connectors		103N0050
Starting relay	6.3 mm spade connectors	a2	117U7002
Start. capacitor 80 µF	6.3 mm spade connectors	c	117U5015
Cover		b	103N2010
Cord relief		d	103N1010
Protection screen for PTC		g	-

Test conditions	EN 12900		ASHRAE	
	LBP	MBP	LBP	MBP
Condensing temperature	40°C	45°C	54.4°C	54.4°C
Ambient temperature	32°C	32°C	32.2°C	35°C
Suction gas temperature	20°C	20°C	32.2°C	35°C
Liquid temperature	no subcooling		32.2°C	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

EN 12900 LBP 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F₂

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			292	367	460	496	571	702	854	966	1028	1224	1445	1550	1691		
Power cons. in W			237	267	298	308	328	356	383	398	406	425	439	443	447		
Current cons. in A			1.43	1.58	1.71	1.75	1.83	1.94	2.03	2.08	2.10	2.16	2.20	2.21	2.22		
COP in W/W			1.23	1.37	1.54	1.61	1.74	1.97	2.23	2.43	2.53	2.88	3.29	3.50	3.78		

EN 12900 MBP 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F₂

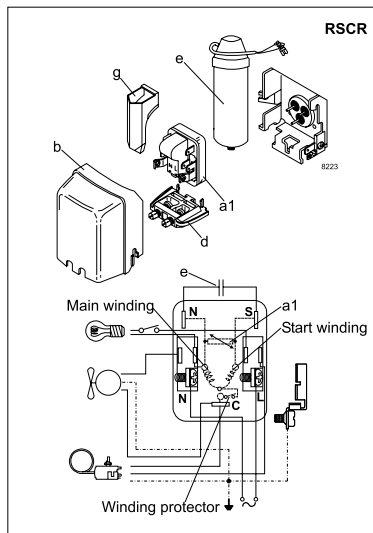
Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W			270	343	431	465	537	661	804	909	967	1152	1359	1458	1590		
Power cons. in W			242	274	307	318	340	372	403	422	431	456	477	484	492		
Current cons. in A			1.46	1.60	1.72	1.76	1.83	1.94	2.03	2.09	2.12	2.19	2.24	2.27	2.29		
COP in W/W			1.12	1.25	1.41	1.46	1.58	1.78	2.00	2.16	2.24	2.53	2.85	3.01	3.23		

ASHRAE LBP 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F₂

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			270	353	453	491	571	709	867	984	1048	1252	1482	1591	1738		
Power cons. in W			236	270	307	319	344	382	419	443	455	488	518	530	544		
Current cons. in A			1.59	1.71	1.84	1.88	1.96	2.09	2.21	2.29	2.33	2.45	2.57	2.62	2.68		
COP in W/W			1.14	1.31	1.48	1.54	1.66	1.86	2.07	2.22	2.30	2.57	2.86	3.00	3.20		

ASHRAE MBP/HBP 220V, 50Hz, RC 4 µF, ePTC consumption incl., fan cooling F₂

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			241	316	405	439	510	633	773	877	934	1115	1318	1414	1543		
Power cons. in W			234	268	304	316	341	378	415	438	450	482	512	523	537		
Current cons. in A			1.59	1.71	1.84	1.88	1.96	2.09	2.21	2.29	2.33	2.45	2.57	2.62	2.68		
COP in W/W			1.03	1.18	1.33	1.39	1.50	1.67	1.87	2.00	2.08	2.31	2.57	2.70	2.88		



Accessories for	NLE10CN	Figure	Code number
ePTC starting device	6.3 mm spade connectors	a1	-
	4.8 mm spade connectors		103N0050
Run capacitor 4 µF (optional)	4.8 mm spade connectors	e	117-7119
Cover		b	103N2010
Cord relief		d	103N1010
Protection screen for PTC		g	-

Test conditions	EN 12900		ASHRAE	
	LBP	MBP	LBP	MBP
Condensing temperature	40°C	45°C	54.4°C	54.4°C
Ambient temperature	32°C	32°C	32.2°C	35°C
Suction gas temperature	20°C	20°C	32.2°C	35°C
Liquid temperature	no subcooling		32.2°C	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 consequential 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.