

Capacity (ASHRAE LBP)

rpm \ °F	-20	-13	-10	0	10	14	20	30	40	41	45	50
2,000	95	126	142	201	273	308	359	458	571	583	632*	697*
2,500	119	157	176	247	335	375	442	570	723*	740	809*	
3,000	142	189	211	297	402	450	529	682*	863*			
3,500	167	220	245	343	464	518*	612*	790*				

Capacity (EN 12900 Household/CECOMAF)

rpm \ °F	-20	-13	-10	0	10	14	20	30	40	41	45	50
2,000	22.6	30.0	33.6	47.7	64.9	72.6	85.2	109	135	138*	150*	165*
2,500	28.2	37.3	41.7	58.5	79.3	88.9	105	135	171*	175*	191*	
3,000	33.7	44.8	50.1	70.4	95.2	107	125	161*	204*			
3,500	39.8	52.2	58.2	81.3	110	123*	145*	187*				

Power consumption

rpm \ °F	-20	-13	-10	0	10	14	20	30	40	41	45	50
2,000	27.4	32.5	34.6	41.7	49.0	52.6	56.8	65.4	75.1	76.9*	80.4*	86.2*
2,500	34.3	41.4	44.3	54.0	63.4	67.7	73.0	82.8	93.1*	94.9*	98.6*	
3,000	41.4	50.1	53.7	65.2	76.2	81.3	87.4	98.9*	111*			
3,500	49.6	58.8	62.6	75.5	88.7	95.0*	103*	119*				

Current consumption (for 24V applications the following must be halved)

rpm \ °F	-20	-13	-10	0	10	14	20	30	40	41	45	50
2,000	2.28	2.69	2.87	3.50	4.18	4.49	4.90	5.65	6.45	6.58*	6.87*	7.29*
2,500	2.86	3.41	3.65	4.45	5.26	5.61	6.10	6.94	7.81*	7.94*	8.25*	
3,000	3.52	4.16	4.43	5.37	6.33	6.75	7.31	8.32	9.34*			
3,500	4.20	4.88	5.18	6.24	7.39	7.90*	8.61*	9.91*				

COP (ASHRAE LBP)

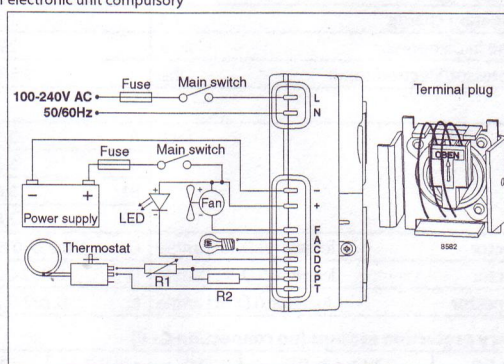
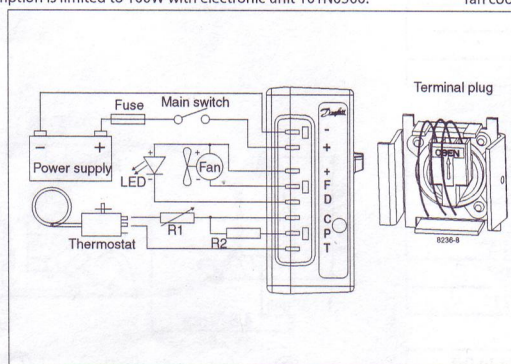
rpm \ °F	-20	-13	-10	0	10	14	20	30	40	41	45	50
2,000	3.49	3.89	4.09	4.81	5.57	5.83	6.32	7.00	7.60	7.63*	7.86*	8.09*
2,500	3.47	3.81	3.97	4.58	5.28	5.52	6.05	6.89	7.76*	7.77*	8.21*	
3,000	3.43	3.77	3.93	4.55	5.27	5.52	6.05	6.89	7.76*			
3,500	3.37	3.74	3.91	4.54	5.23	5.46*	5.94*	6.66*				

COP (EN 12900 Household/CECOMAF)

rpm \ °F	-20	-13	-10	0	10	14	20	30	40	41	45	50
2,000	0.82	0.92	0.96	1.13	1.31	1.38	1.48	1.64	1.78	1.79*	1.84*	1.90*
2,500	0.82	0.90	0.94	1.08	1.24	1.31	1.42	1.62	1.82	1.89*	1.93*	
3,000	0.81	0.89	0.93	1.07	1.24	1.31	1.42	1.62	1.82*			
3,500	0.80	0.88	0.92	1.07	1.23	1.30*	1.40*	1.56*				

Power consumption is limited to 100W with electronic unit 101N0500.

* fan cooling of electronic unit compulsory



Operational errors shown by LED (optional)

Number of flashes	Error type
5	Thermal cut-out of electronic unit (If the refrigeration system has been too heavily loaded, or if the ambient temperature is high, the electronic unit will run too hot).
4	Minimum motor speed error (If the refrigeration system is too heavily loaded, the motor cannot maintain minimum speed at approximately 1,850 rpm).
3	Motor start error (The rotor is blocked or the differential pressure in the refrigeration system is too high (>5 bar)).
2	Fan over-current cut-out (The fan loads the electronic unit with more than 1A _{peak}).
1	Battery protection cut-out (The voltage is outside the cut-out setting).

Wire Dimensions DC

Size	Cross section	Max. length* 12V operation	Max. length* 24V operation
AWG	[mm²]	[ft.]	[m]
12	2.5	8	2.5
12	4	13	4
10	6	20	6
8	10	33	10

*Length between battery and electronic unit

Wire dimensions AC

Cross section min. AWG 18 or 0.75 mm²

Compressor speed

Electronit unit Code number	Resistor (R1) [Ω]	Motor speed [rpm]	Control circuit current [mA]
101N0210 101N0220 101N0500	0	2,000	5
	277	2,500	4
	692	3,000	3
	1523	3,500	2
101N0300 with AEO	0	AEO	6
	173	2,000	5
	450	2,500	4
	865	3,000	3
	1696	3,500	2

In AEO (Adaptive Energy Optimizing) speed mode the BD compressor will always adapt its speed to the actual cooling demand.

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	BD50F	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
Remote kit (without cable)		105N9210
AC line cord (UL approved/VDE approved)		105N9520/30
DC usage: Std. automobile fuse 12V: 15A / 24V: 7.5A Main switch: rated to min. 20A		Not deliverable from Danfoss
AC usage: Fuse 100-240V: 4A / Main switch: min. 6A		