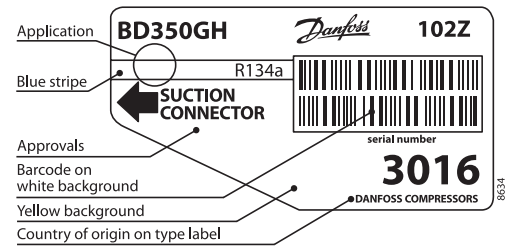


BD350GH

Direct Current Compressor

R134a

24V - with 101N07xx Series Controllers



General

Code number (without electronic units)	102Z3016
Electronic unit	single: 101N0715, 36 pcs: 101N0714
Approvals	-
Compressors on pallet	125

Application

Application		LBP/MBP/HBP
Evaporating temperature	°C	-25 to 15
Voltage range	VDC	19.6-31.5
Max. condensing temperature continuous (short)	°C	60 (70)
Max. winding temperature continuous (short)	°C	125 (135)

- 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

Cooling requirements

Application	LBP	MBP	HBP
32°C	F ₁	F ₁	F ₁
38°C	F ₁	F ₁	F ₁
43°C	F ₁	F ₁	F ₁
Remarks on application:	<ul style="list-style-type: none"> • each fan max. 60W • starting ability: LST (low starting torque) only 		

Motor

Motor type	Variable speed
Resistance, all 3 windings (25°C)	Ω 0.1

Design

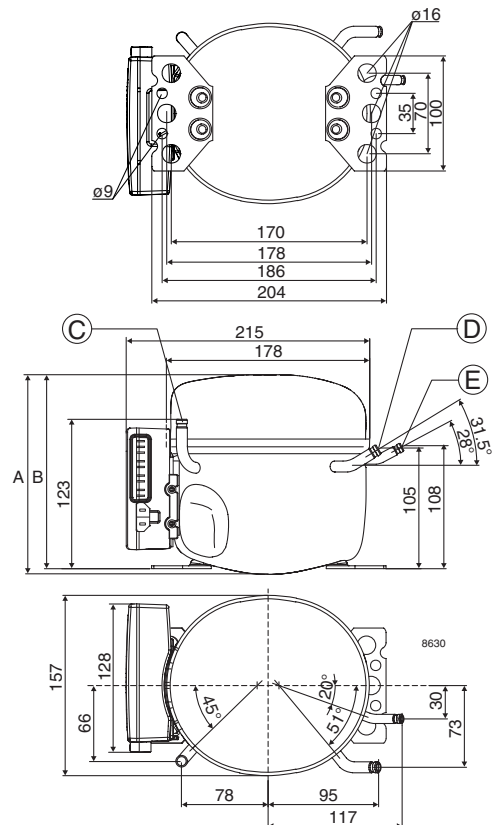
Displacement	cm ³	5.08
Oil quantity (type)	cm ³	280 (polyolester)
Maximum refrigerant charge	g	400
Free gas volume in compressor	cm ³	1690
Weight - Compressor/Electronic unit	kg	7.9/0.3

Battery protection settings

Voltage	Min. value	Default	Max. value
Cut out (0.1 steps)	VDC 19.0	21.1	27.0
Cut in diff. (0.1 steps)	VDC 0.5	3.9	10.0

Dimensions

Height	mm	A	173
		B	169
		B1	-
		B2	-
Suction connector	location/I.D. mm angle	C	6.2 90°
	material comment		Cu-plated steel Al caps
Process connector	location/I.D. mm angle	D	6.2 31.5°
	material comment		Cu-plated steel Al caps
Discharge connector	location/I.D. mm angle	E	5.0 28°
	material comment		Cu-plated steel Al caps
Connector tolerance	I.D. mm		±0.09, on 5.0 +0.12/+0.20
Remarks			



Capacity (EN 12900 Household/CECOMAF) 24V DC, fan cooling F₁ watt

rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	84.7	93.7	113	147	188	219	236	292	358	390	434	520
3,000	101	112	136	176	225	262	283	351	430	468	521	625
3,500	114	126	152	198	254	296	319	396	485	528	588	706
4,000	126	139	169	220	282	329	355	440	540	588	654	786

Capacity (ASHRAE LBP) 24V DC, fan cooling F₁ watt

rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	105	116	140	182	233	271	292	363	445	485	539	648
3,000	126	139	168	219	279	325	351	435	534	582	648	779
3,500	141	156	188	246	314	366	395	491	602	656	731	879
4,000	156	173	209	273	349	407	440	546	670	731	814	979

Power consumption 24V DC, fan cooling F₁ watt

rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	77.4	81.8	90.8	105	120	130	136	152	168	175	184	200
3,000	95.5	101	112	129	148	160	167	186	206	215	226	245
3,500	109	115	128	149	171	186	194	217	241	251	264	288
4,000	122	129	144	169	194	212	221	248	276	288	303	330

Current consumption 24V DC, fan cooling F₁ A

rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	3.23	3.41	3.78	4.38	5.01	5.43	5.66	6.32	7.00	7.29	7.67	8.33
3,000	3.98	4.20	4.66	5.39	6.15	6.67	6.95	7.76	8.58	8.94	9.40	10.21
3,500	4.52	4.79	5.34	6.21	7.12	7.75	8.08	9.05	10.03	10.46	11.01	11.98
4,000	5.07	5.38	6.02	7.03	8.10	8.82	9.20	10.34	11.48	11.99	12.63	13.75

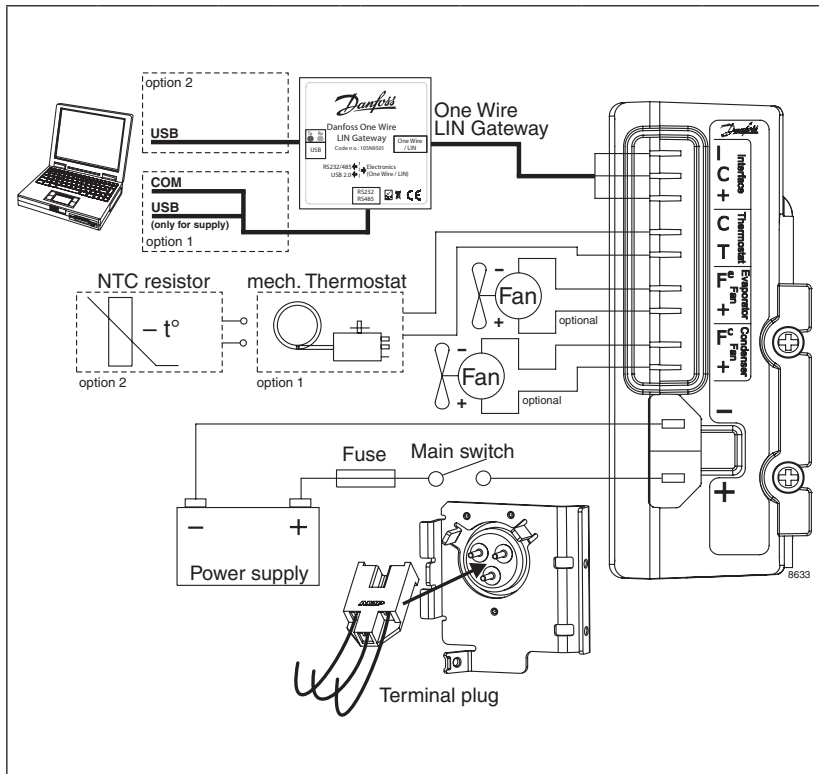
COP (EN 12900 Household/CECOMAF) 24V DC, fan cooling F₁ W/W

rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	1.09	1.15	1.25	1.40	1.56	1.68	1.74	1.93	2.13	2.23	2.36	2.60
3,000	1.06	1.11	1.21	1.37	1.53	1.64	1.70	1.88	2.09	2.18	2.31	2.55
3,500	1.05	1.09	1.19	1.33	1.48	1.59	1.65	1.82	2.01	2.10	2.22	2.45
4,000	1.03	1.08	1.17	1.31	1.45	1.55	1.61	1.77	1.96	2.05	2.16	2.38

COP (ASHRAE LBP) 24V DC, fan cooling F₁ W/W

rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	1.36	1.42	1.55	1.74	1.95	2.09	2.17	2.40	2.67	2.79	2.95	3.27
3,000	1.32	1.38	1.51	1.70	1.90	2.04	2.12	2.35	2.61	2.73	2.89	3.20
3,500	1.30	1.36	1.48	1.66	1.85	1.98	2.05	2.27	2.52	2.63	2.79	3.08
4,000	1.28	1.34	1.45	1.62	1.81	1.93	2.00	2.22	2.45	2.56	2.71	2.99

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



Operational errors

Error code	Error type
	Can be read out in the software TOOL4COOL®
6	Thermostat failure (If the NTC thermistor is short-circuit or has no connection, the electronic unit will enter manual mode).
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).
2	Fan over-current cut-out (The fan loads the electronic unit with more than 1.8A _{peak}).
1	Battery protection cut-out (The voltage is outside the cut-out setting).

Accessories for BD350GH

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

Electrical (cables, sensors, etc.)	Code number	
	Single pack	I - Pack
DC line cord, 900 mm	105N9542	105N9543, 36 pcs.
DC line cord, 2000 mm	105N9540	105N9541, 36 pcs.
DC line cord, 5000 mm	105N9538	105N9539, 36 pcs.
Temperature sensor 470 mm	105N9612	105N9613, 200 pcs.
Temperature sensor 1000 mm	105N9614	105N9615, 100 pcs.
Temperature sensor 1500 mm	105N9616	105N9617, 100 pcs.
One Wire/LIN gateway	105N9501	-
Bluetooth® gateway	105N9502	-
Communication cable	105N9525	-
Comm. cable, 1500 mm	-	105N9545, 100 pcs.
Comm. cable, 3000 mm	-	105N9547, 50 pcs.

Not deliverable from Danfoss

Standard automobile fuse	DIN 7258	24V: 30A
Main switch		rated to min. 50A

Further Information

For detailed installation and operation instructions, please refer to other literature, currently available from Danfoss Compressors (compressor.danfoss.com).

Title	Literature Number
Tool4Cool® Operating Instructions Tool4Cool® Bedienungsanleitung	DEHC.PI.300.B__02 DEHC.PI.300.B__03
BD350GH Controller BD350GH Controller	Operation Instructions DEHC.PI.100.I__02 DEHC.PI.100.I__03
BD350GH with Tool4Cool® LabEdition BD350GH mit Tool4Cool® LabEdition	Quick Start Guide DEHC.PI.100.J__02 DEHC.PI.100.J__03
Danfoss Bluetooth® Gateway with Tool4Cool® LabEdition	Operation Instructions DEHC.PS.300.D__02
Danfoss One Wire/LIN Gateway 105N9501	Instructions DEHC.PI.100.K__02
Electronic Unit for BD350GH Compressor 101N0715 24 V DC	Instructions DEHC.EI.100.Z__02
DC Line Cord for BD350GH Electronic Unit 24V	Instructions DEHC.PI.100.E__02
Temperature Sensors for BD350GH Electronic Unit	Instructions DEHC.PI.100.G__02
Communication Cable	Instructions DEHC.PI.100.H__02

"__" = version number

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