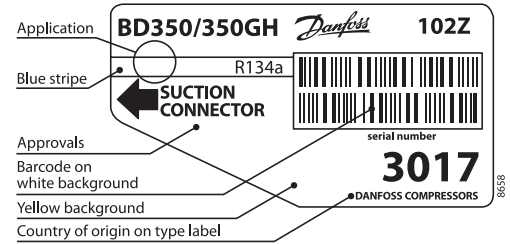


BD350/350GH

Direct Current Twin Compressor

R134a

24V - with 101N07xx Series Controllers



General

Code number (without electronic units)	102Z3017
Electronic unit (2 pcs. required)	single: 101N0715, 36 pcs: 101N0714
Approvals	-
Compressors on pallet	50

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	S	S	S
38°C	S	S	S
43°C	S	S	S
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

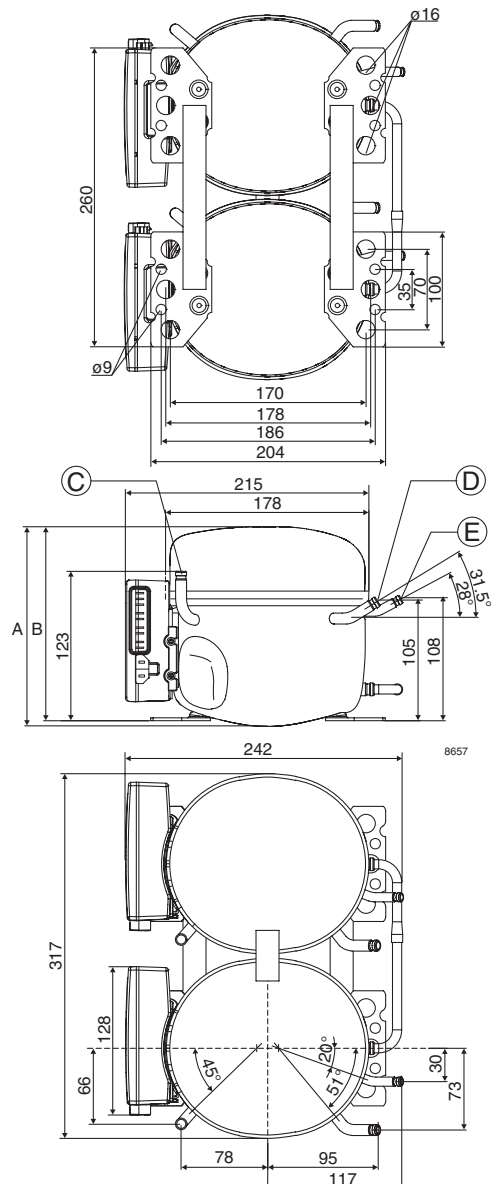
Displacement	cm ³	2 x 5.08
Oil quantity (type)	cm ³	560 (polyolester)
Maximum refrigerant charge	g	800
Free gas volume in compressor	cm ³	2 x 1690
Weight - Compressor/Electronic unit	kg	15.8/2 x 0.3

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	169.4	187.4	226	294	376	438	472	584	716	780	868	1040
3,000	202	224	272	352	450	524	566	702	860	936	1042	1250
3,500	228	252	304	396	508	592	638	792	970	1056	1176	1412
4,000	252	278	338	440	564	658	710	880	1080	1176	1308	1572

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	210	232	280	364	466	542	584	726	890	970	1078	1296
3,000	252	278	336	438	558	650	702	870	1068	1164	1296	1558
3,500	282	312	376	492	628	732	790	982	1204	1312	1462	1758
4,000	312	346	418	546	698	814	880	1092	1340	1462	1628	1958

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	154.8	163.6	181.6	210	240	260	272	304	336	350	368	400
3,000	191	202	224	258	296	320	334	372	412	430	452	490
3,500	218	230	256	298	342	372	388	434	482	502	528	576
4,000	244	258	288	338	388	424	442	496	552	576	606	660

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	6.46	6.82	7.56	8.76	10.02	10.86	11.32	12.64	14.00	14.58	15.34	16.66
3,000	7.96	8.40	9.32	10.78	12.30	13.34	13.90	15.52	17.16	17.88	18.80	20.42
3,500	9.04	9.58	10.68	12.42	14.24	15.50	16.16	18.10	20.06	20.92	22.02	23.96
4,000	10.14	10.76	12.04	14.06	16.20	17.64	18.40	20.68	22.96	23.98	25.26	27.50

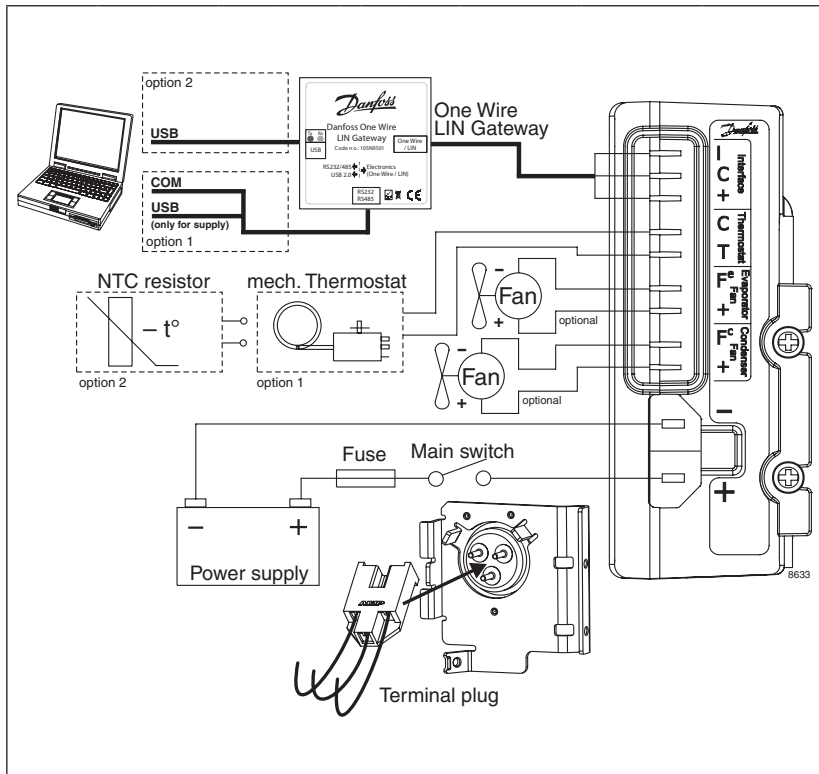
COP (EN 12900 Household/CECOMAF) 24V DC, fan cooling F₁ W/W

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 one 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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