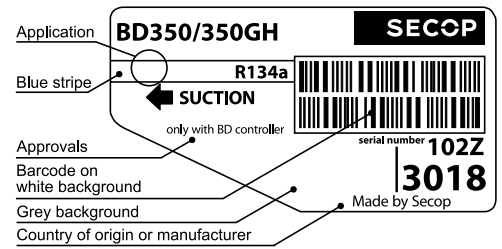


# BD350/350GH

## Direct Current Twin Compressor

### R134a

### 12V - with 101N08xx Series Controllers



#### General

Code number (without electronic units)	102Z3018
Compressor module	101N0800, 30 pcs: 101N0801
Application module	101N0820, 24 pcs: 101N0821
Approvals	-
Compressors on pallet	50

#### Application

Application	LBP/MBP/HBP	
Evaporating temperature	°C	-25 to 15
Voltage range	VDC	9.6 - 17
Max. condensing temperature continuous (short)	°C	60 (70)
Max. winding temperature continuous (short)	°C	125 (135)

#### Cooling requirements

Application	LBP	MBP	HBP
32°C	F <sub>1</sub>	F <sub>1</sub>	F <sub>1</sub>
38°C	F <sub>1</sub>	F <sub>1</sub>	F <sub>1</sub>
43°C	F <sub>1</sub>	F <sub>1</sub>	F <sub>1</sub>

Remarks on application:  
 - evaporator fan max. 200W  
 - condenser fan max. 100W  
 - starting ability: LST (low starting torque) only

#### Motor

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

#### Design

Displacement	cm <sup>3</sup>	2 x 5.08
Oil quantity (type)	cm <sup>3</sup>	560 (polyolester)
Maximum refrigerant charge	g	800
Free gas volume in compressor	cm <sup>3</sup>	2 x 1690
Weight - Compressor/Electronic unit	kg	15.8/2 x 0.33, 1 x 0.28

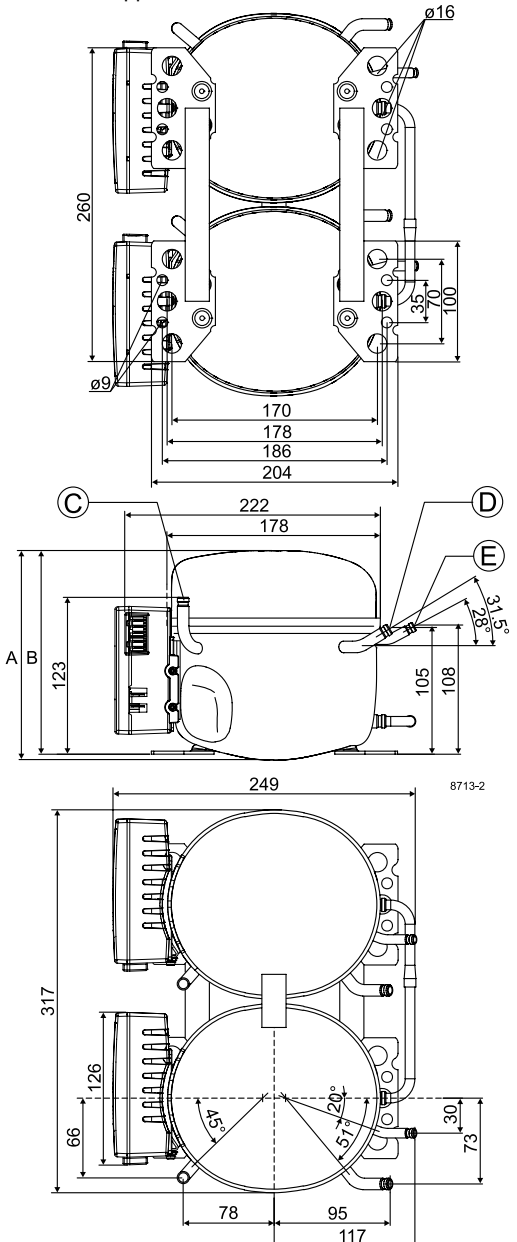
#### Battery protection settings

Voltage	Min. value	Default	Max. value
Cut out (0.1 steps)	VDC 9.6	10.4	17
Cut in diff. (0.1 steps)	VDC 0.5	1.3	10

#### 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 cap
Process connector	location/I.D. mm   angle	D	6.2   31.5°
	material   comment		Cu-plated steel   Al cap
Discharge connector	location/I.D. mm   angle	E	5.0   28°
	material   comment		Cu-plated steel   Al cap
Connector tolerance	I.D. mm		±0.09, on 5.0 +0.12/+0.20
Remarks			

- S = Static cooling normally sufficient
- O = Oil cooling
- F<sub>1</sub> = Fan cooling 1.5 m/s  
(compressor compartment temperature equal to ambient temperature)
- F<sub>2</sub> = Fan cooling 3.0 m/s necessary
- SG = Suction gas cooling normally sufficient
- = not applicable in this area



Capacity (EN 12900 Household/CECOMAF)												
12V DC, fan cooling F <sub>1</sub> watt												
rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	175	194	234	304	388	452	488	604	740	806	896	1076
3,000	203	225	271	353	450	524	566	702	860	936	1042	1250
3,500	227	252	304	396	508	592	638	792	970	1056	1176	1412
4,000	251	279	337	440	564	658	710	880	1080	1176	1308	1572

Capacity (ASHRAE LBP)												
12V DC, fan cooling F <sub>1</sub> watt												
rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	216	240	290	376	480	560	604	750	918	1002	1114	1340
3,000	252	278	336	438	558	650	702	870	1068	1164	1296	1556
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												
12V DC, fan cooling F <sub>1</sub> watt												
rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	181	191	212	246	280	304	312	354	392	408	430	466
3,000	216	228	254	296	338	368	384	430	476	496	522	568
3,500	244	260	292	340	394	428	448	504	560	584	616	670
4,000	280	298	336	394	456	498	518	584	650	680	716	782

Current consumption												
12V DC, fan cooling F <sub>1</sub> A												
rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	15.42	16.30	18.06	20.90	23.86	25.90	26.96	30.12	33.30	34.72	36.50	39.64
3,000	17.98	19.04	21.20	24.64	28.24	30.70	32.00	35.84	39.72	41.42	43.58	47.40
3,500	20.92	22.2	24.78	28.94	33.3	36.26	37.82	42.46	47.14	49.20	51.80	56.42
4,000	23.40	24.92	27.96	32.82	37.94	41.44	43.26	48.70	54.20	56.62	59.68	65.10

COP (EN 12900 Household/CECOMAF)												
12V DC, fan cooling F <sub>1</sub> W/W												
rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	0.97	1.01	1.10	1.24	1.38	1.48	1.54	1.71	1.89	1.97	2.09	2.30
3,000	0.94	0.98	1.07	1.20	1.33	1.43	1.48	1.63	1.81	1.89	1.99	2.20
3,500	0.93	0.97	1.04	1.16	1.29	1.38	1.43	1.57	1.73	1.81	1.91	2.10
4,000	0.90	0.93	1.01	1.12	1.24	1.32	1.37	1.51	1.66	1.73	1.83	2.01

COP (ASHRAE LBP)												
12V DC, fan cooling F <sub>1</sub> W/W												
rpm \ °C	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15
2,500	1.20	1.26	1.37	1.54	1.72	1.85	1.92	2.13	2.36	2.47	2.61	2.89
3,000	1.17	1.22	1.33	1.49	1.66	1.78	1.84	2.04	2.26	2.36	2.50	2.76
3,500	1.15	1.20	1.30	1.45	1.61	1.72	1.78	1.96	2.17	2.26	2.39	2.64
4,000	1.11	1.16	1.25	1.39	1.54	1.65	1.70	1.88	2.08	2.17	2.29	2.53

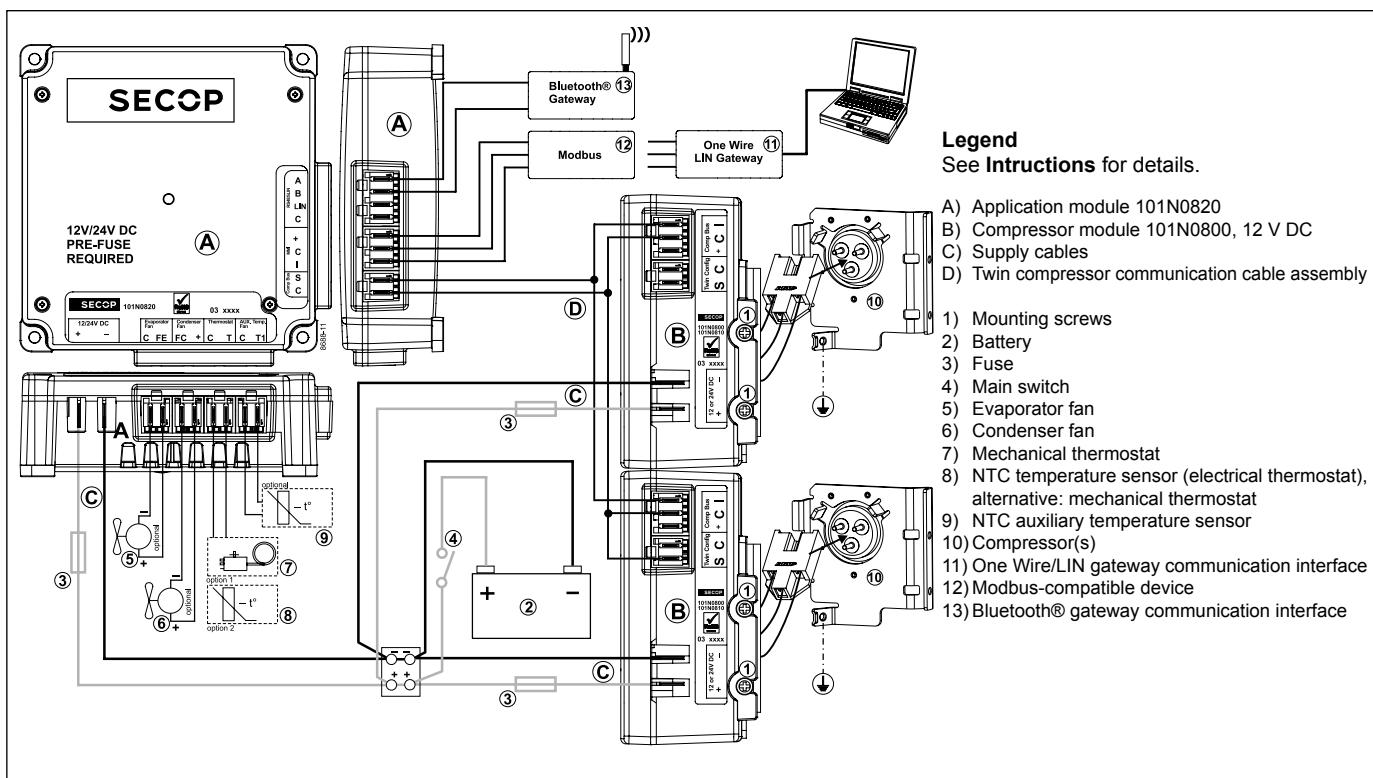
Test conditions	EN 12900/CECOMAF	ASHRAE LBP
Condensing temperature	55°C	54.4°C
Ambient temperature	32°C	32°C
Suction gas temperature	32°C	32°C
Liquid temperature	no subcooling	32°C

Operational errors	
Error code	Error type
	Can be read out in the software TOOL4COOL®
6	<b>Thermostat failure</b> (If the NTC thermistor is short-circuit or has no connection, the electronic unit will enter manual mode).
5	<b>Thermal cut-out of electronic unit</b> (If the refrigeration system has been too heavily loaded, or if the ambient temperature is high, the electronic unit will run too hot).
4	<b>Minimum motor speed error</b> (If the refrigeration system is too heavily loaded, the motor cannot maintain minimum speed at approximately 1,850 rpm).
3	<b>Motor start error</b> (The rotor is blocked or the differential pressure in the refrigeration system is too high).
2	<b>Fan over-current cut-out</b> (The fan loads the electronic unit with too high current).
1	<b>Battery protection cut-out</b> (The voltage is outside the cut-out setting).

Accessories for BD350/350GH		
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
One Wire/LIN gateway communication cable	105N9501	-
Bluetooth® gateway communication cable	105N9502	-
Temperature sensor 470 mm	105N9612	105N9613, 200 pcs.
Temperature sensor 1000 mm	105N9614	105N9615, 100 pcs.
Temperature sensor 1500 mm	105N9616	105N9617, 100 pcs.
Twin comm. cable, 800 mm	-	105N9561, 65 pcs.
Twin comm. cable, 1500 mm	-	105N9555, 65 pcs.
Twin comm. cable, 3000 mm	-	105N9556, 40 pcs.
Display cable, 1500 mm	-	105N9557, 65 pcs.
Display cable, 3000 mm	-	105N9558, 35 pcs.

Not deliverable from Secop	
Slow-blow fuse compressor modules	2 x 60A
Slow-blow fuse application module	30A
Main switch	rated to min. 160A



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