

BD35K.2 Direct Current Compressor R600a 12/24V DC

General

Code number (without electronic units)	101Z0711
Electronic unit 12/24V DC	101N0226, 30 pcs: 101N0227
Compressors on pallet	150

Approvals

UL pending



Application

Application	LBP/MBP
Evaporating temperature °C	-30 to 0 (10)
Voltage range VDC	9.6 - 17 / 21.3 - 31.5
Max. condensing temperature continuous (short) °C	60 (70)
Max. winding temperature continuous (short) °C	125 (135)

Cooling requirements

Application	LBP	MBP	HBP
32°C	S	S	–
38°C	S	S	–
43°C	S	S	–
Remarks on application:			

Motor

Motor type	variable speed
Resistance, all 3 windings (25°C) Ω	0.12

Design

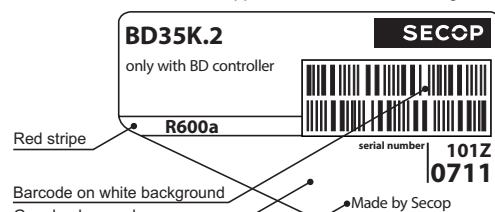
Displacement cm³	3.00
Oil quantity (type) cm³	150 (polyolester)
Maximum refrigerant charge g	120
Free gas volume in compressor cm³	870
Weight - Compressor/Electronic unit kg	4.05 / 0.14

Standard battery protection settings (refer to electronic unit Instructions for optional settings)

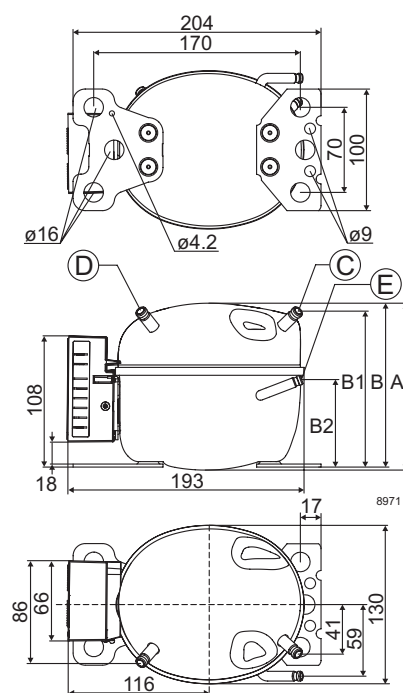
Voltage	12V	24V
Cut out VDC	10.4	22.8
Cut in VDC	11.7	24.2

Dimensions

Height	mm	A	137
		B	135
		B1	128
		B2	73
Suction connector	location/I.D. mm angle	C	6.2 40°
	material comment	Cu-plated steel Al cap	
Process connector	location/I.D. mm angle	D	6.2 45°
	material comment	Cu-plated steel Al cap	
Discharge connector	location/I.D. mm angle	E	5.0 21°
	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
- 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



Compressor speed		
Electronit unit	Resistor (R1) [Ω]	Motor speed
Code number	calculated values	[rpm]
101N0226	0	2,000
	277	2,500
	692	3,000
	1523	3,500

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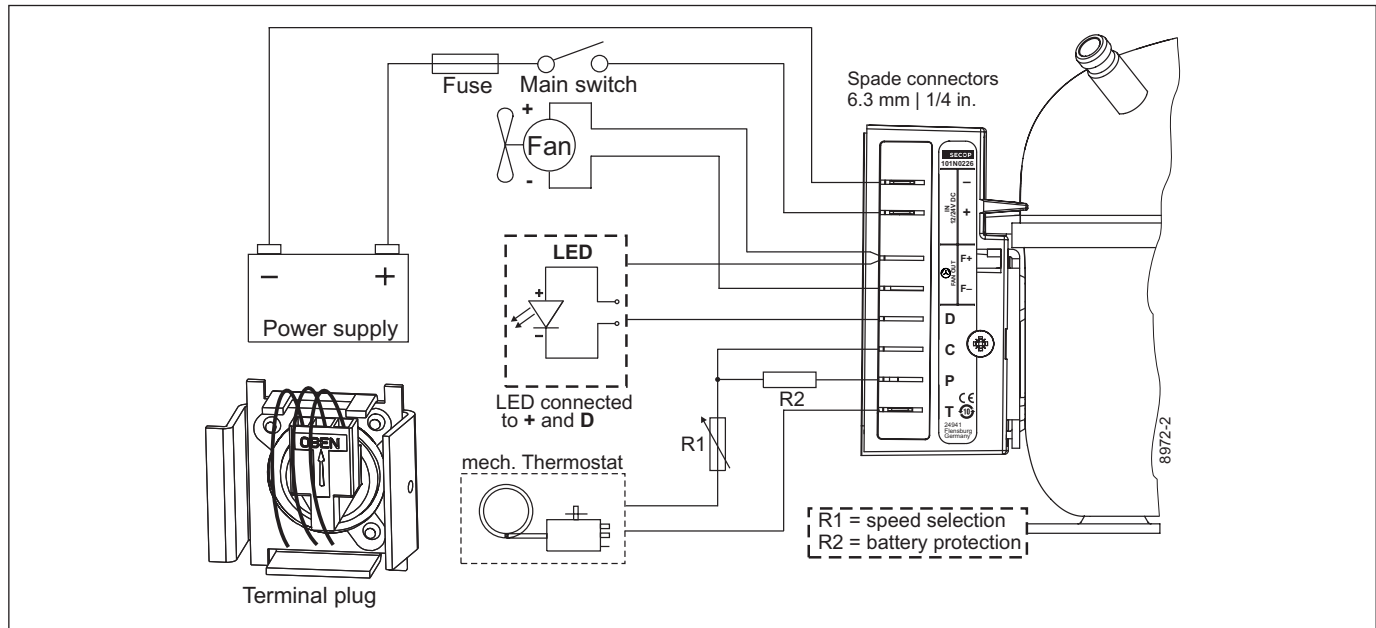
Wire dimensions					
Size		Max. length*		Max. length*	
Cross section	AWG	12V operation		24V operation	
[mm²]	[Gauge]	[m]	[ft.]	[m]	[ft.]
2.5	12	2.5	8	5	16
4	12	4	13	8	26
6	10	6	20	12	39
10	8	10	33	20	66

*Length between battery and electronic unit

Operational errors	
LED 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 higher or lower than 10°C, the electronic will cut out).
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	Too many start attempts or fan over current (Too many compressor or fan starts in short time or fan current higher than 0.5A _{avg}).
1	Battery protection cut-out (The voltage is outside the cut-out setting).

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