

Single Packs

SECOP

Single Pack BD100CN 12/24V DC PM

Single pack code number: **195B4439**

Position	Title	Code	Amount
1	Compressor BD100CN	101Z0401	1
2	Electronic unit High Speed	101N0391	1
3	Bolt joint for one compressor M6 ø16mm	118-1917	1

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BD100CN Direct Current Compressor R290 12/24V DC



General

Code number (without electronic units)	101Z0401
Electronic unit - High Speed	101N0390, 30 pcs: 101N0391
Electronic unit - ULT High Speed	101NULT1, 30 pcs: 101NULT2
Compressors on pallet	150

Approvals

–
UL / CB



Application

Application	LBP/MBP
Evaporating temperature °C	-40 to -5 (5)
Voltage/max. voltage VDC	9.6 - 17 / 21.3 - 31.5
Max. condensing temperature continuous (short) °C	55 (65)
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	1.8

Design

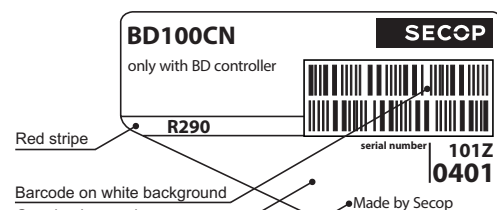
Displacement cm³	2.00
Oil quantity (type) cm³	150 (polyolester)
Maximum refrigerant charge g	120
Free gas volume in compressor cm³	870
Weight - Compressor/Electronic unit kg	4.3/0.32

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

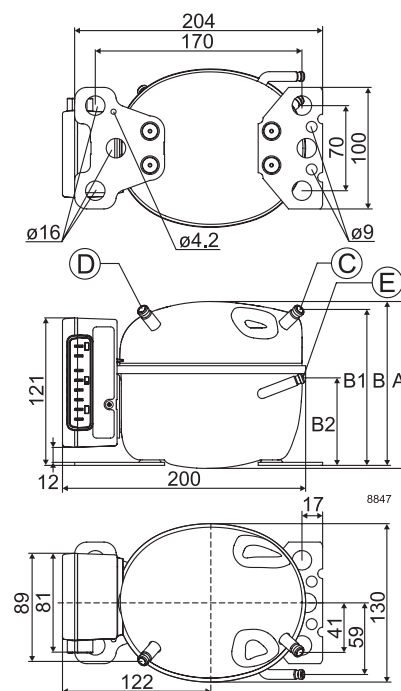
Voltage	12V	24V
Cut out VDC	10.4	22.8
Cut in VDC	11.7	24.2

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]
101N0390 with AEO	0	AEO
	203	2,500
	451	3,100
101NULT1 with AEO	867	3,800
	1700	4,400

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

Wire dimensions					
Size		Max. length* 12V operation		Max. length* 24V operation	
Cross section	AWG				
[mm²]	[Gauge]	[m]	[ft.]	[m]	[ft.]
6	10	2.5	8	5	16

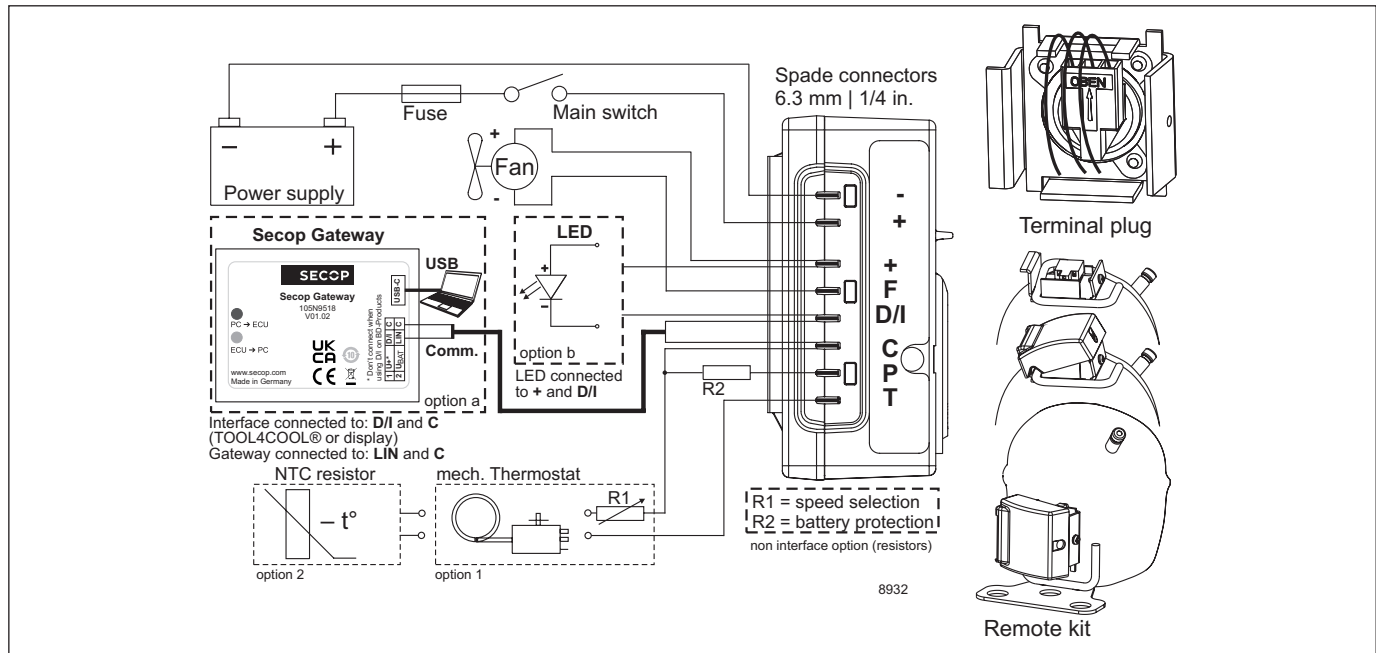
*Length between battery and electronic unit

Error code or LED flashes	Error type
	Can be read out in the software TOOL4COOL®
6	Thermostat failure (If the NTC thermistor is short-circuit or has no connection).
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	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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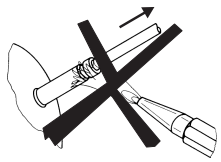
Instructions for Electronic Units
are available for download on
www.secop.com



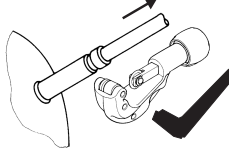
BD Compressors

SECCP

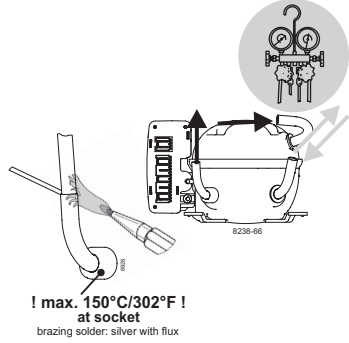
Service/Repair



8545



BD Nano

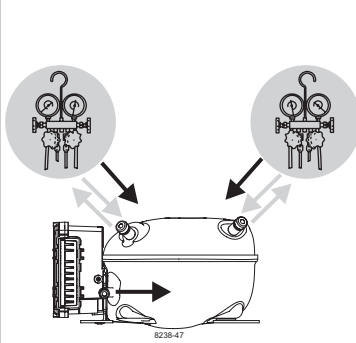


**! max. 150°C/302°F !
at socket**

brazing solder: silver with flux

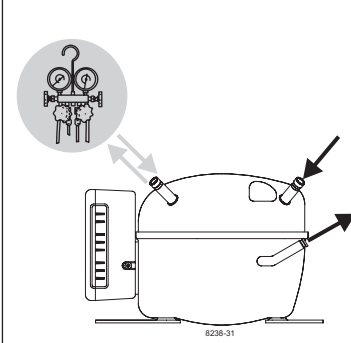
Do not heat up the bottom of the discharge
connector directly.
Do not braze longer than 10 seconds and
wait for 5 minutes for the next soldering
attempt (Product Bulletin DES.N.101.M1).

BD Micro



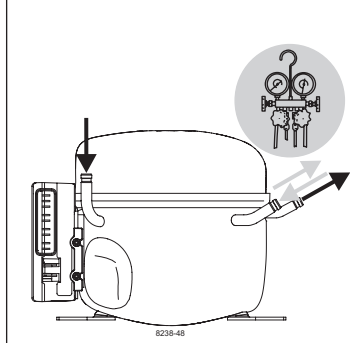
8238-47

BD P-Housing



8238-31

BD T-Housing



8238-48

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