

Model

Designation	SC18MNX	115V/60Hz 1~	Sales code:	104H7870
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R290
Oil viscosity	32cSt	Displacement	17,69cm ³ / 1,08cu.in
Oil quantity	550cm ³ / 18,6fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	150g / 5,3oz		
Free gas volume comp.	1460cm ³ / 49,4fl.oz		
Weight	14,2kg / 31,3lbs		
Motor protection	external		
Winding resistance main	0,6Ω (at 25°C)		
Winding resistance aux	3,2Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	135°C / 275°F		



General - Configurations with SC18MNX

	Conf. 1	Conf. 2
Motor configuration	CSIR	CSCR
Power supply (nominal)	115V/60Hz	115V/60Hz
Number of phases	1	1
Voltage range	103-127V	103-127V
Approvals	UL	UL
Starting torque	HST	HST
Note	- / -	

Applications with SC18MNX

	Conf. 1	Conf. 2
Refrigerant	R290	R290
Application	MBP	MBP
System cooling	fan 3m/s	fan 3m/s
Hot gas defrost	-/-	-/-
Long interval pull down	OK	OK

Electrical data - Configurations with SC18MNX

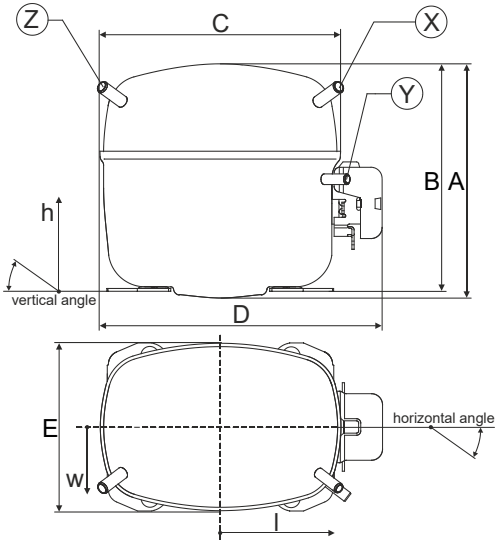
	Conf. 1	Conf. 2
Starting device type	relay	relay
Run capacitor	-/-	23,5μF
Start capacitor	410μF	410μF
LRA (locked rotor amps / 4s/ U(N))	61,2A	63A
RLA (rated load amps / 1s/ U(N))	11A	9,6A
Cut in current (U(N))	61,2A	63A

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Compressor dimensions

Housing	A Height	219mm / 8,62in
	B Height	213mm / 8,39in
	C Length shell	218mm / 8,58in
	D Length w. cover	255mm / 10,04in
	E Width	151mm / 5,94in

Connectors		Suction	Discharge	Process
		X	Y	Z
Diameter	[mm]	øi 9,54-9,72	øi 6,41-6,59	øi 6,41-6,59
	(i:inside, o:outside) [in]	øi 0,38-0,38	øi 0,25-0,26	øi 0,25-0,26
Material		copper	copper	copper
Horizontal angle	±2°	37°	37°	143°
Vertical angle	±2°	30°	0°	150°
Position l/h/w	[mm]	107/193/55	115/110/63	-107/193/55
	[in]	4,2/7,6/2,2	4,5/4,3/2,5	-4,2/7,6/2,2
Straight tube l.	[mm]	12	12	12
	[in]	0,5	0,5	0,5



Compressor fixation

Baseplate	[mm]	[inch]
BI	204	8.03
Bw	150	5.9
øE	ø 9.7	ø 0.38

Large holes	[mm]	[inch]
LI	165	6.5
Lw	101.6	4
øL	ø 19	ø 0.75

Small holes	[mm]	[inch]
SI	170	6.7
Sw	70	2.76
øS	ø 16	ø 0.63
QI	127	5
Qw	127	5

Bolt joint

Mounting accessories	one comp.	multi pack
Bolt joint M6 ø16mm	118-1917	118-1918
Bolt joint ø1/4" ø16mm	118-1946	
Bolt joint ø1/4" ø19mm	118-1949	
Snap-on ø7,3 ø16mm	118-1947	118-1919

Application notes

Provision for PE Grounding is located at the PE Stamp on the compressor

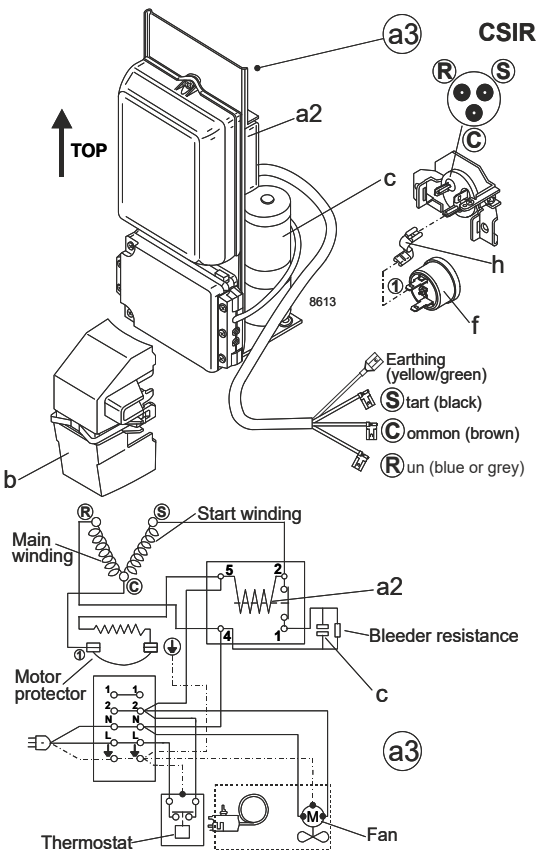
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Starting torque	HST
Approvals	UL

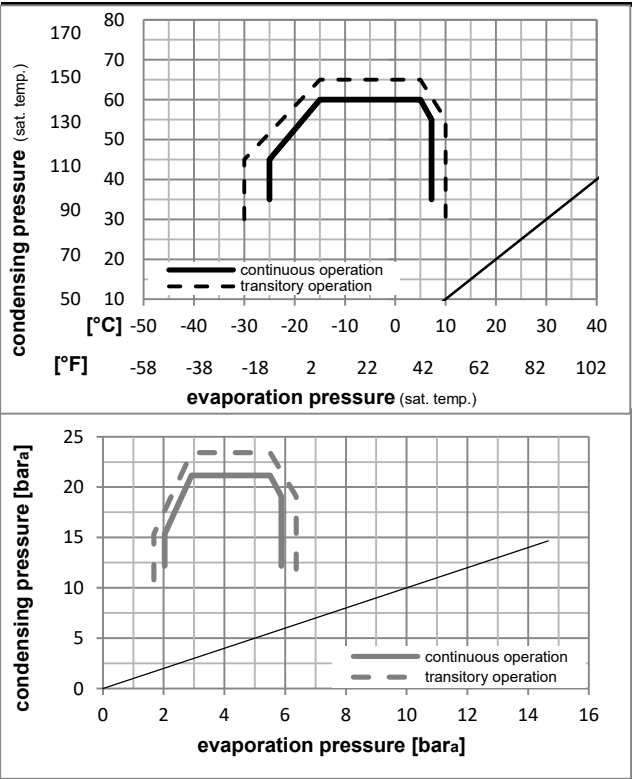
Electrical accessories / wiring diagram



Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 3m/s

Operation pressure range



Components

a3	SC starter kit	117-7053
f	ext. protector (T0761/46)	117U3212
b	plastic cover + clamp	117U1021

Alternative components

a2	potential relay (RVA 7AA3R)	117-7441
c	start capacitor (410µF, 6.3mm)	117U5043
f	ext. protector (T0761/46)	117U3212
b	plastic cover + clamp	117U1021

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Optimization + standard conditions

R290, 115V/60Hz, CSIR, fan 3m/s, UL

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)					Power consumption				

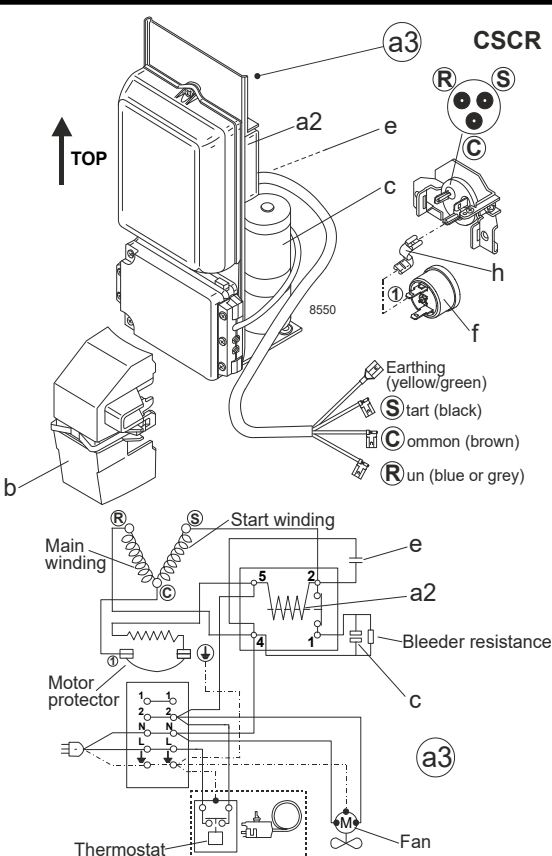
Model

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Configuration

Motor configuration	CSCR
Power supply (nominal)	115V/60Hz 1~
Refrigerant	R290
Application	MBP
Voltage range	103-127V
Starting torque	HST
Approvals	UL

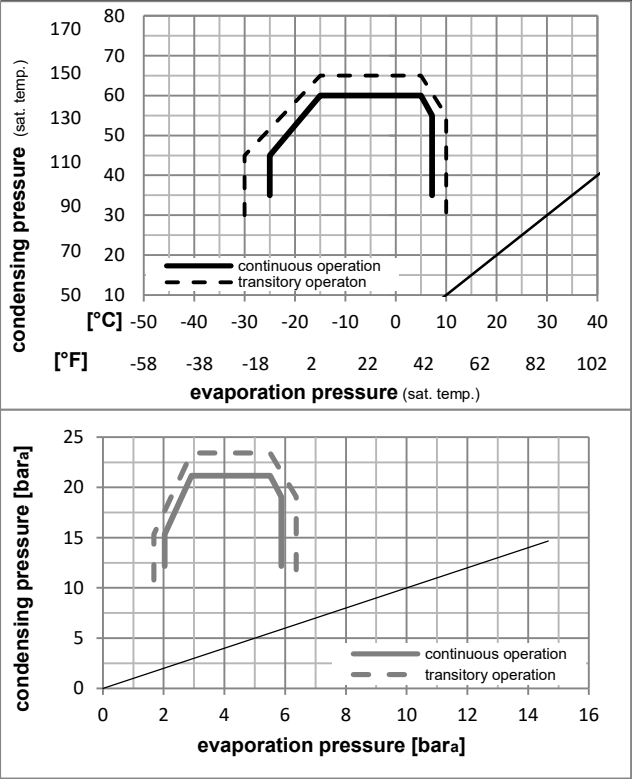
Electrical accessories / wiring diagram



Ambient/ machine room temperatures minimum /maximum

Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 3m/s

Operation pressure range



Components

a3	SC starter kit	117-7045
f	ext. protector (T0761/46)	117U3212
b	plastic cover + clamp	117U1021

Alternative components

a2	potential relay (RVA 7AA3R)	117-7441
e	run capacitor (23,5µF, 6.3mm)	117-7114
c	start capacitor (410µF, 6.3mm)	117U5043
f	ext. protector (T0761/46)	117U3212
b	plastic cover + clamp	117U1021

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Optimization + standard conditions

R290, 115V/60Hz, CSCR, fan 3m/s, UL

Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)						Power consumption																																																														
Return gas temp.					Current consumption						Ref. mass flow																																																														
Liquid temp.					Cooling capacity						COP				EER				P1				I				ṁ																																														
pe					pc					RGT					Tliq					[W]					[Btu/h]					[kcal/h]					[W/W]					[Btu/Wh]					[kcal/Wh]					[W]					[A]					[kg/h]													
[°C]					-7	54	35	46	1587,3					5421					1366,1					1,82					6,22					1,57					870,9					10,32					18,11					ASHRAE MBP																			
[°F]					20	130	95	115																																																																	
[°C]					-10	55	32	55	1263,7					4316					1087,6					1,52					5,18					1,30					833,8					10,05					15,99					cecomaf MBP																			
[°F]					14	131	90	131																																																																	
[°C]					-10	45	20	45	1442,8					4927					1241,7					1,83					6,24					1,57					789,1					9,86					17,71					EN12900 MBP																			
[°F]					14	113	68	113																																																																	
[°C]					-7	49	18	49	1513,4					5169					1302,5					1,80					6,14					1,55					841,6					10,18					19,65					ARI540 MBP																			
[°F]					20	120	65	120																																																																	
[°C]					-10	45	32	45	1502,0					5130					1292,6					1,90					6,50					1,64					789,1					9,86					17,18					opt																			
[°F]					14	113	90	113																																																																	
[°C]					-25	45	32	45	848,9					2899					730,6					1,33					4,54					1,14					638,8					9,18					9,57					opt																			
[°F]					-13	113	90	113																																																																	

Performance tables

R290, 115V/60Hz, CSCR, fan 3m/s, UL

	pe		Cooling capacity			COP		EER		P1		I		m	
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]				
[°C / °F]	-25	-13	848,9	2899	730,6	1,33	4,54	1,14	638,8	9,18	9,57				
cond. pressure	-23	-10	909,8	3107	783,0	1,39	4,73	1,19	656,4	9,23	10,27				
pc= 45/113	-15	5	1250,1	4269	1075,9	1,69	5,76	1,45	740,7	9,59	14,22				
return gas temp.	-9	15	1533,0	5235	1319,3	1,93	6,59	1,66	794,4	9,89	17,55				
RGT= 32/90	-4	25	1883,4	6432	1620,9	2,22	7,59	1,91	847,0	10,25	21,72				
liquid temp	0	32	2179,3	7443	1875,5	2,47	8,43	2,12	883,4	10,52	25,28				
Tliq= 45/113	7,2	45	2864,8	9784	2465,5	3,01	10,29	2,59	951,0	11,07	33,66				
[°C / °F]	-25	-13	670,7	2291	577,2	1,04	3,56	0,90	643,1	8,72	8,35				
cond. pressure	-23	-10	730,8	2496	628,9	1,10	3,75	0,95	665,2	8,86	9,11				
pc= 55/131	-15	5	1045,2	3569	899,5	1,35	4,62	1,17	771,9	9,60	13,14				
return gas temp	-9	15	1290,2	4406	1110,4	1,53	5,24	1,32	840,6	10,09	16,33				
RGT= 32/90	-4	25	1586,4	5418	1365,3	1,75	5,97	1,50	907,9	10,58	20,24				
liquid temp	0	32	1834,6	6265	1578,9	1,92	6,56	1,65	954,6	10,91	23,56				
Tliq= 55/131	7,2	45	2410,2	8231	2074,2	2,31	7,91	1,99	1041,2	11,51	31,40				