

Single Pack SC12/12DL 220-240V 50Hz CSIR

Single pack code number: **195B3086**

Position	Title	Code	Amount
1	Compressor SC12/12DL	104L4092	1
2	Starting relay	117U6019	2
3	Starting capacitor (80 μ F 220V, 6.3mm)	117U5017	2
4	Cover	103N2009	2
5	Cord relief	103N1004	2
6	Bolt joint for one compressor M6 \varnothing 16mm	118-1917	2

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Model

Designation	SC12/12DL	220-240V/50Hz 1~	Sales code:	104L4092
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Compressor design

Oil type	Polyolester	Refrigerant(s)	R404A, R507, R407C
Oil viscosity	32cST	Displacement	25,74cm ³ / 1,57cu.in
Oil quantity	1233cm ³ / 41,7fl.oz	Compressors on pallet	18
Refr. charge - tech. limit	2200g / 77,6oz		
Free gas volume comp.	2920cm ³ / 98,7fl.oz		
Weight	27,8kg / 61,3lbs		
Motor protection	1# internal		
Winding resistance main	3,7Ω (at 25°C)		
Winding resistance aux	14Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	135°C / 275°F		



General - Configurations with SC12/12DL

	Conf. 1	Conf. 2
Motorconfiguration	CSIR	CSIR
Power supply (nominal)	220-240V/50Hz	220-240V/50Hz
Number of phases	1	1
Voltage range	198-254V	198-254V
Approvals	CCC, EAC, VDE	CCC, EAC, VDE
Starting torque	HST	HST
Note	- / -	

Applications with SC12/12DL

	Conf. 1	Conf. 2
Refrigerant	R404A	R407C
Application	HBP	HBP
System cooling	fan 3m/s	fan 3m/s
Hot gas defrost	OK	OK
Long interval pull down	OK	OK

Electrical data - Configurations with SC12/12DL

	Conf. 1	Conf. 2
Starting device type	relay	relay
Run capacitor	- / -	- / -
Start capacitor	80μF	80μF
LRA (locked rotor amps / 4s)	2x 23,4A	2x 23,4A
RLA (rated load amps / 1s)	2x 4,3A	2x 4,3A
Cut in current	2x 23,4A	2x 23,4A

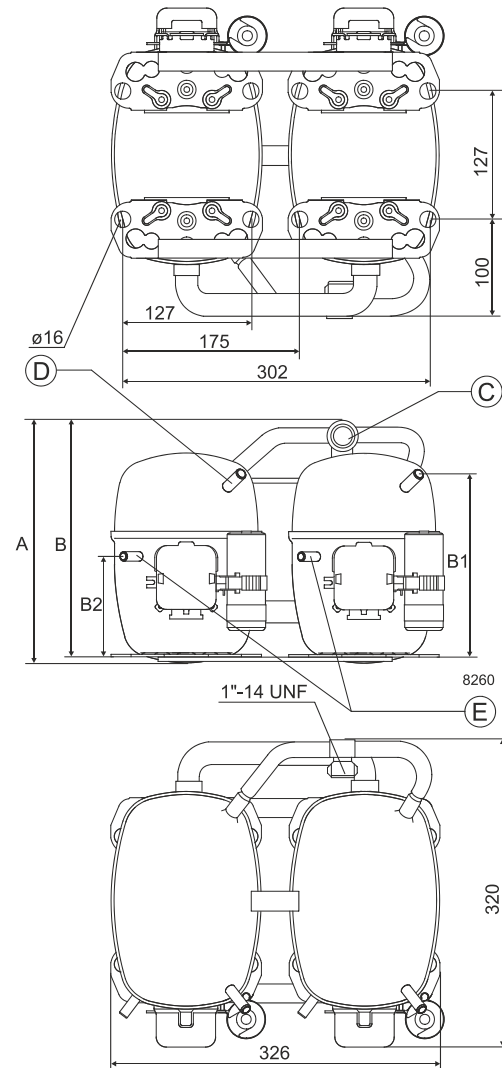
Model

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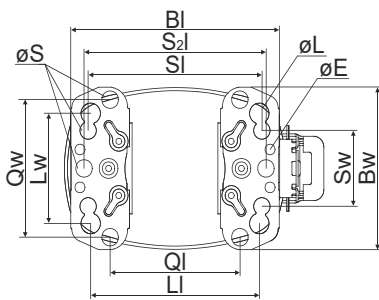
Compressor dimensions

Housing	A Height	259mm / 10,2in
	B Height	254mm / 10in
	B1	193mm / 7,6in
	B2	110mm / 4,33in

Connectors		Suction	Discharge	Process
		C	E	D
Diameter	[mm]	øi 15,21-15,37	øi 6,11-6,29	øi 6,11-6,29
(i:inside, o:outside)	[in]	øi 0,6-0,61	øi 0,24-0,25	øi 0,24-0,25
Material		steel	copper	copper
Horizontal angle	±2°	0°	37°	37°
Vertical angle	±2°	0°	0°	0°
Position l/h/w	[mm]	0/0/0	0/0/0	0/0/0
	[in]	0/0/0	0/0/0	0/0/0
Straight tube l.	[mm]	10	12	12
	[in]	0,4	0,5	0,5

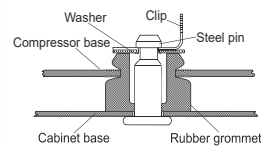
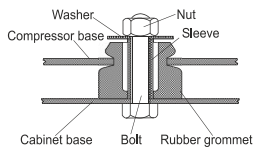


Compressor fixation



Baseplate	[mm]	[inch]
BI	204	8.03
Bw	150	5.9
øE	ø 9.7	ø 0.38
Large holes		
LI	165	6.5
Lw	101.6	4
øL	ø 19	ø 0.75
Small holes		
SI	170	6.7
Sw	70	2.76
øS	ø 16	ø 0.63
QI	127	5
Qw	127	5

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
<u>Bolt joint</u>		<u>Snap-on</u>



Application notes

Provision for PE Grounding is located at the PE Stamp on the compressor
 Twin should be used with a time-delay relay

Model

Designation	SC12/12DL	220-240V/50Hz	Conf. 1	Sales code:	104L4092
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Configuration

Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R404A
Application	HBP
Voltage range	198-254V
Starting torque	HST
Approvals	CCC, EAC, VDE

Ambient/ machine room temperatures minimum /maximum

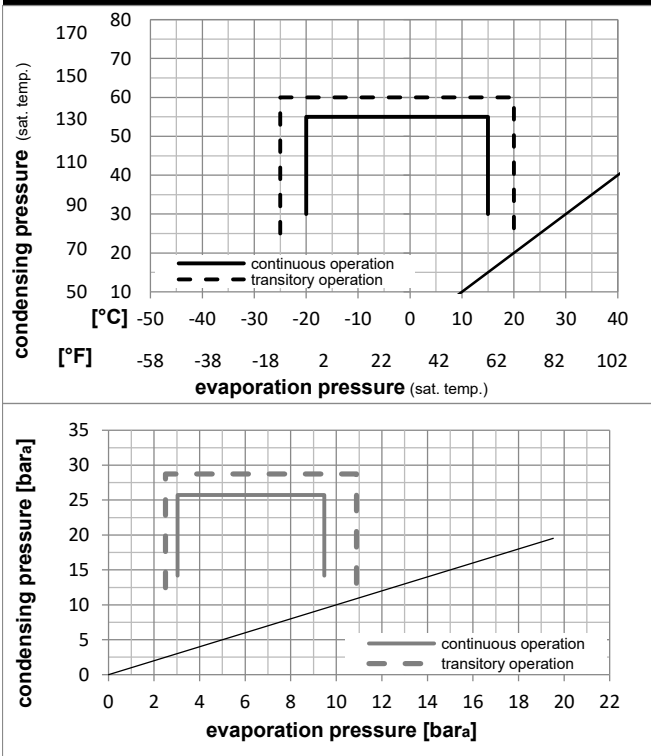
Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 3m/s

Operation Limits

Electrical accessories / wiring diagram

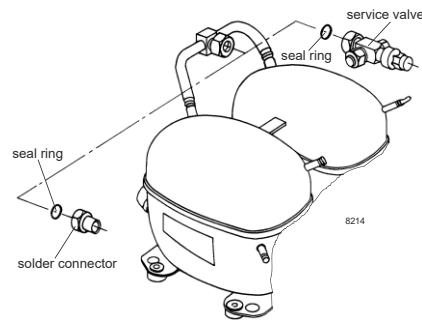


Operation pressure range



Components

a2	relay	117U6019
c	start capacitor (80μF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2009
.	Check valve (to be used with time-delay relay)	020-1014
.	Service valve 12mm	118-7350
.	Solder connector (alternative) 12 mm	104B0584
.	Seal ring for service valve and solder conn.	118-3638



Model

Designation	SC12/12DL	220-240V/50Hz	Conf. 1	Sales code:	104L4092
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Optimization + standard conditions

R404A, 220V/50Hz, CSIR, fan 3m/s, CCC, EAC, VDE

		Evaporating pressure (saturation temperature)				Condensing pressure (saturation temperature)						Power consumption			
		Return gas temp.				Liquid temp.						Current consumption			Ref. mass flow
		Cooling capacity				COP	EER	P1			I	m			
		pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/W/h]	[kcal/W/h]	[W]	[A]	[kg/h]	
[°C]	[°F]														
		7,2	54	35	46	3885,8	13271	3344,1	2,26	7,71	1,94	1720,4	9,84	110,49	ASHRAE HBP
		45	130	95	115										
		5	55	32	55	3051,7	10422	2626,3	1,80	6,15	1,55	1695,0	9,71	101,63	cecomaf HBP
		41	131	90	131										
		5	50	20	50	3166,7	10815	2725,3	1,99	6,78	1,71	1594,7	9,29	108,00	EN12900 HBP
		41	122	68	122										
		-7	54	35	46	2247,4	7675	1934,2	1,57	5,37	1,35	1429,0	8,52	61,84	ASHRAE MBP
		20	130	95	115										
		-10	55	32	55	1653,1	5646	1422,7	1,23	4,21	1,06	1340,7	8,15	52,92	cecomaf MBP
		14	131	90	131										
		-10	45	20	45	1936,8	6614	1666,8	1,55	5,30	1,34	1247,5	7,78	58,34	EN12900 MBP
		14	113	68	113										

Performance tables

R404A, 220V/50Hz, CSIR, fan 3m/s, CCC, EAC, VDE

	pe		Cooling capacity			COP	EER	P1			I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/W/h]	[kcal/W/h]	[W]	[A]	[kg/h]	
[°C / °F]	-20	-4	1217,5	4158	1047,8	1,24	4,25	1,07	978,3	6,74	33,03	
cond. pressure	-15	5	1611,5	5504	1386,9	1,43	4,89	1,23	1124,8	7,29	44,02	
pc= 45/113	-10	14	2055,5	7020	1769,0	1,65	5,63	1,42	1247,5	7,78	56,60	
return gas temp.	-5	23	2558,7	8738	2202,0	1,90	6,48	1,63	1349,3	8,21	71,13	
RGT= 32/90	0	32	3130,4	10691	2694,0	2,18	7,46	1,88	1432,7	8,58	88,00	
liquid temp	5	41	3779,7	12908	3252,8	2,52	8,60	2,17	1500,4	8,88	107,67	
Tliq= 45/113	15	59	5348,4	18266	4602,9	3,34	11,42	2,88	1600,0	9,31	157,71	
[°C / °F]	-20	-4	931,6	3182	801,7	0,95	3,23	0,81	984,9	6,81	29,31	
cond. pressure	-15	5	1277,4	4363	1099,4	1,09	3,71	0,93	1176,6	7,51	40,51	
pc= 55/131	-10	14	1653,1	5646	1422,7	1,23	4,21	1,06	1340,7	8,15	52,92	
return gas temp	-5	23	2067,9	7062	1779,7	1,40	4,77	1,20	1480,0	8,73	66,93	
RGT= 32/90	0	32	2531,0	8644	2178,2	1,58	5,41	1,36	1597,2	9,25	83,00	
liquid temp	5	41	3051,7	10422	2626,3	1,80	6,15	1,55	1695,0	9,71	101,63	
Tliq= 55/131	15	59	4302,6	14694	3702,9	2,33	7,97	2,01	1843,1	10,44	149,21	

Model

Designation	SC12/12DL	220-240V/50Hz	Conf. 2	Sales code:	104L4092
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Configuration

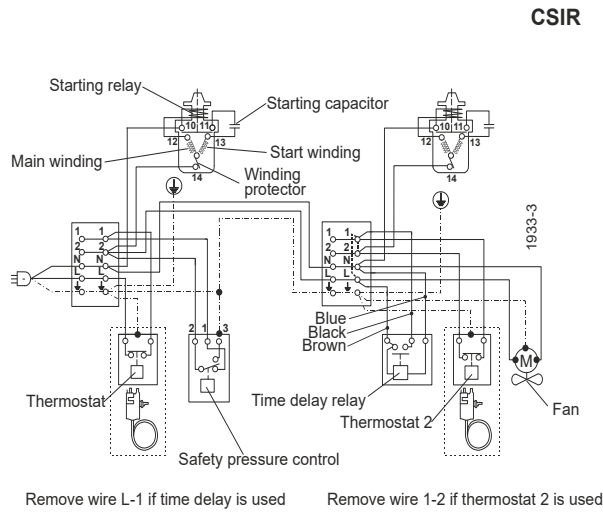
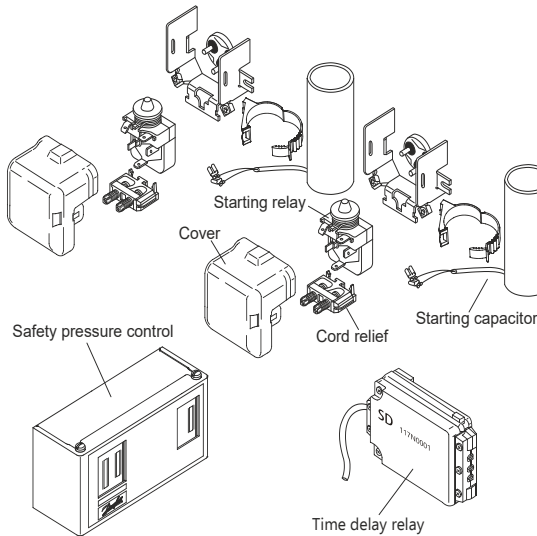
Motorconfiguration	CSIR
Power supply (nominal)	220-240V/50Hz 1~
Refrigerant	R407C
Application	HBP
Voltage range	198-254V
Starting torque	HST
Approvals	CCC, EAC, VDE

Ambient/ machine room temperatures minimum /maximum

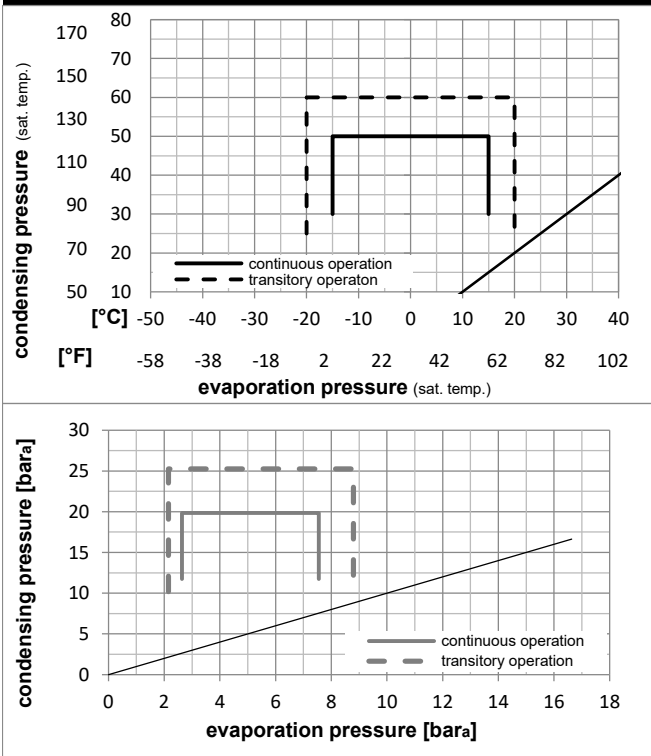
Ambient temperature range:	10 - 38°C / 50 - 101°F
Machine room temperature range:	10 - 43°C / 50 - 110°F
Compressor cooling:	fan 3m/s

Operation Limits

Electrical accessories / wiring diagram

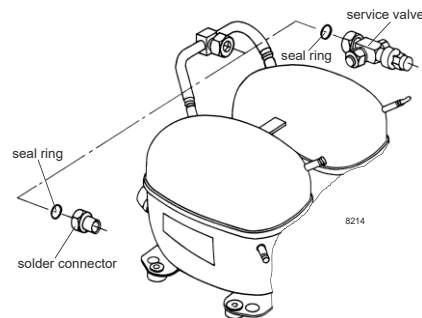


Operation pressure range



Components

a2	relay	117U6019
c	start capacitor (80µF)	117U5017
d	cord relief	103N1004
b	plastic cover	103N2009
.	Check valve (to be used with time-delay relay)	020-1014
.	Service valve 12mm	118-7350
.	Solder connector (alternative) 12 mm	104B0584
.	Seal ring for service valve and solder conn.	118-3638



Model

Designation	SC12/12DL	220-240V/50Hz	Conf. 2	Sales code:	104L4092
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Optimization + standard conditions

R407C, 220V/50Hz, CSIR, fan 3m/s, CCC, EAC, VDE

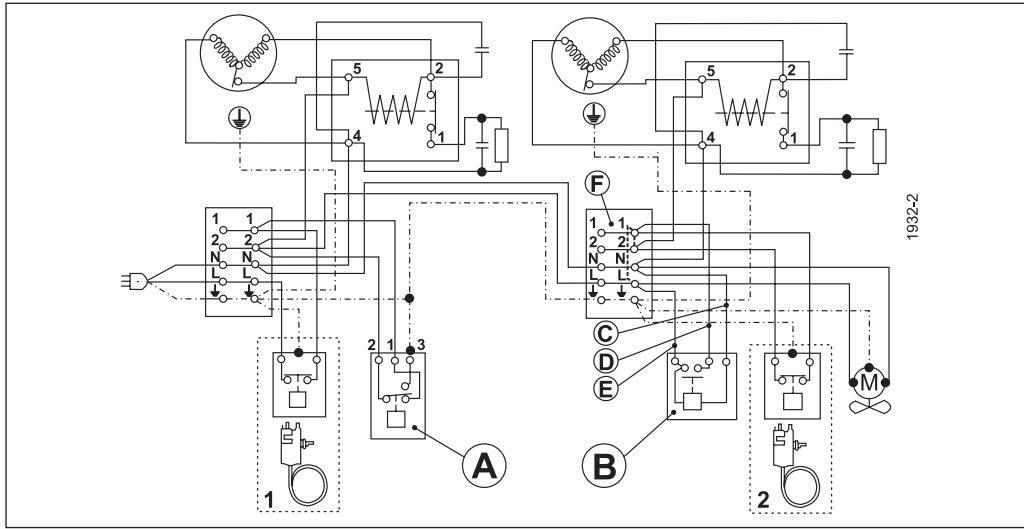
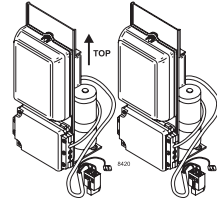
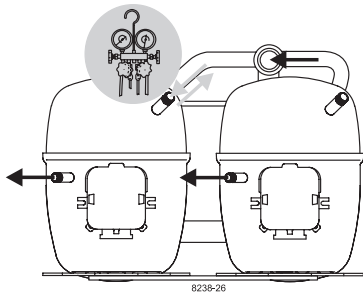
	Evaporating pressure (saturation temperature)				Cooling capacity			COP	EER	EER	Power consumption			ASHRAE HBP				
	pe	pc	RGT	Tliq	[W]	[Btu/h]	[kcal/h]				P1	I	Ref. mass flow					
	[°C]	[°F]	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]					
	7,2	45	54	130	35	95	46	115	3385,0	11561	2913,2	2,38	8,13	2,05	1421,3	8,15	72,34	ASHRAE HBP
	5	41	55	131	32	90	55	131	2748,5	9387	2365,4	1,98	6,78	1,71	1385,1	8,01	65,53	cecomaf HBP
	5	41	50	122	20	68	50	122	2895,0	9887	2491,4	2,16	7,37	1,86	1341,4	7,81	70,16	EN12900 HBP
	-7	20	54	130	35	95	46	115	1774,3	6060	1527,0	1,58	5,38	1,36	1125,4	7,02	37,05	ASHRAE MBP
	-10	14	55	131	32	90	55	131	1328,5	4537	1143,3	1,28	4,37	1,10	1039,3	6,70	30,84	cecomaf MBP
	-10	14	45	113	20	68	45	113	1604,4	5479	1380,8	1,57	5,35	1,35	1024,6	6,62	35,71	EN12900 MBP

Performance tables

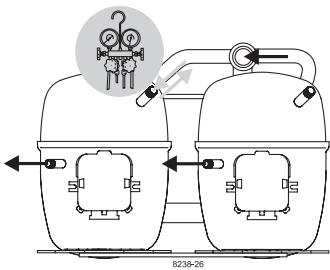
R407C, 220V/50Hz, CSIR, fan 3m/s, CCC, EAC, VDE

	pe		Cooling capacity			COP	EER		P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]		[Btu/Wh]	[kcal/Wh]			
[°C / °F]	-15	5	1263,5	4315	1087,4	1,39	4,73	1,19	912,2	6,23	26,25
cond. pressure	-10	14	1661,5	5674	1429,9	1,62	5,54	1,40	1024,6	6,62	34,71
pc= 45/113	-5	23	2130,5	7276	1833,5	1,89	6,47	1,63	1124,4	6,98	44,80
return gas temp.	0	32	2680,3	9154	2306,7	2,21	7,55	1,90	1211,8	7,30	56,81
RGT= 32/90	5	41	3320,7	11341	2857,8	2,58	8,81	2,22	1286,9	7,58	71,05
liquid temp	10	50	4061,6	13871	3495,5	3,01	10,28	2,59	1349,7	7,82	87,87
Tliq= 45/113	15	59	4913,0	16779	4228,2	3,51	11,98	3,02	1400,4	8,03	107,69
[°C / °F]	-15	5	988,6	3376	850,8	1,10	3,76	0,95	897,9	6,19	22,81
cond. pressure	-10	14	1328,5	4537	1143,3	1,28	4,37	1,10	1039,3	6,70	30,84
pc= 55/131	-5	23	1728,5	5903	1487,6	1,48	5,06	1,27	1167,6	7,18	40,43
return gas temp	0	32	2198,6	7508	1892,1	1,71	5,85	1,47	1282,8	7,61	51,87
RGT= 32/90	5	41	2748,5	9387	2365,4	1,98	6,78	1,71	1385,1	8,01	65,53
liquid temp	10	50	3388,3	11572	2916,0	2,30	7,85	1,98	1474,5	8,37	81,78
Tliq= 55/131	15	59	4127,7	14097	3552,4	2,66	9,09	2,29	1551,2	8,69	101,10

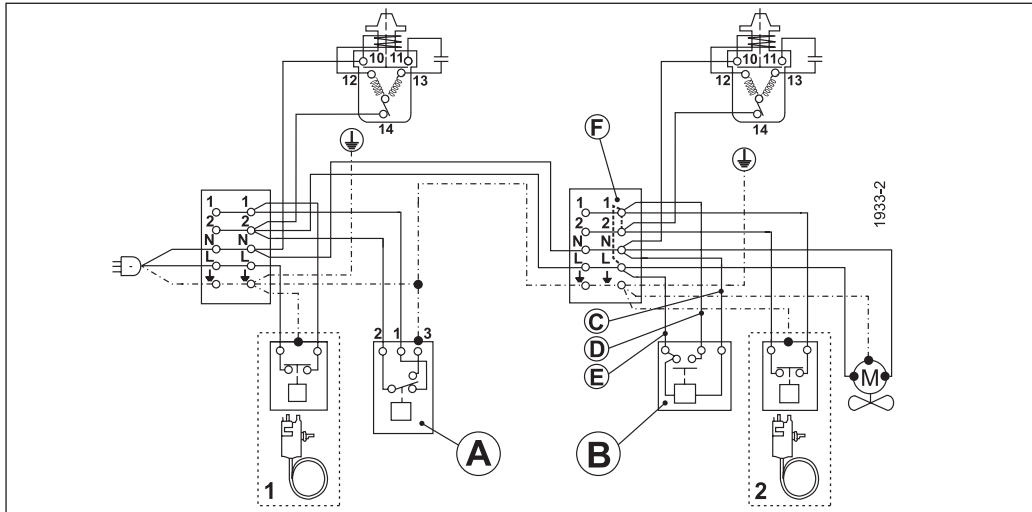
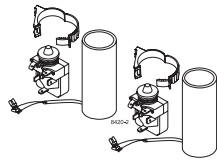
SC Twin Compressors



	A	B	C	D	E	F	
ENGLISH	Safety pressure control	Time delay relay	Blue	Black	Brown	Remove wire L-1 if time delay is used	Remove wire 1-2 if thermostat 2 is used
中文	安全压力控制	延时继电器	蓝	黑	棕	若延时继电器使用, 线L-1不使用	若温控器2使用, 线1-2不使用
Русский	Предохранительное реле давления	Реле задержки времени	Синий	Чёрный	Коричневый	Отсоедините провод L-1, если используется реле задержки времени	Отсоедините провод 1-2, если используется термостат 2
DEUTSCH	Sicherheitsdruckschalter	Zeitrelais (verzögernd)	Blau	Schwarz	Braun	Bei Benutzung der Anlaßverzögerung Brücke L-1 entfernen	Bei Benutzung von Thermostat 2 Brücke 1-2 entfernen
FRANÇAIS	Pressostat	Relais de temporisation	Bleu	Noir	Marron	Supprimer la connection L-1 si le relais de temporisation est utilisé	Supprimer la connection 1-2 si thermostat 2 est utilisé
ESPAÑOL	Presostato de seguridad	Relé de retardo	Azul	Negro	Marrón	Quitar cable L-1, si se utiliza un relé de retardo	Quitar cable 1-2, si se utiliza el termostato 2
ITALIANO	Pressostato	Relè di ritardo avviam.	Blu	Nero	Marrone	Eliminare il cavo L-1 se è utilizzato il ritardatore	Eliminare il cavo 1-2 se è utilizzato il termostato 2
NEDERLANDS	Pressostaat	Tijdvertraging-relais	Blauw	Zwart	Bruin	Verwijder draad L-1 indien tijdvertraging wordt toegepast	Verwijder draad 1-2 indien thermostaat wordt toegepast
DANSK	Sikkerhedspressostat	Tidsforsinkelsesrelæ	Blå	Sort	Brun	Ved tidsforsinkelse fjernes ledning L-1	Ved termostat 2 fjernes ledning 1-2
SVENSKA	Säkerhetspressostat	Tidsfördröjningsrelä	Blå	Svart	Brun	Vid anslutning av tidfördröjningsrelä avlägsnas bygling L-1	Vid anslutning av termostat 2 avlägsnas bygling 1-2



SC Twin Compressors



	A	B	C	D	E	F	
ENGLISH	Safety pressure control	Time delay relay	Blue	Black	Brown	Remove wire L-1 if time delay is used	Remove wire 1-2 if thermostat 2 is used
中文	安全压力控制	延时继电器	蓝	黑	棕	若延时继电器使用, 线L-1不使用	若温控器2使用, 线1-2不使用
Русский	Предохранительное реле давления	Реле задержки времени	Синий	Чёрный	Коричневый	Отсоедините провод L-1, если используется реле задержки времени	Отсоедините провод 1-2, если используется термостат 2
DEUTSCH	Sicherheitsdruckschalter	Zeitrelais (verzögernd)	Blau	Schwarz	Braun	Bei Benutzung der Anlaufverzögerung Brücke L-1 entfernen	Bei Benutzung von Thermostat 2 Brücke 1-2 entfernen
FRANÇAIS	Pressostat	Relais de temporisation	Bleu	Noir	Marron	Supprimer la connection L-1 si le relais de temporisation est utilisé	Supprimer la connection 1-2 si thermostat 2 est utilisé
ESPAÑOL	Presostato de seguridad	Relé de retardo	Azul	Negro	Marrón	Quitar cable L-1, si se utiliza un relé de retardo	Quitar cable 1-2, si se utiliza el termostato 2
ITALIANO	Pressostato	Relè di ritardo avviam.	Blu	Nero	Marrone	Eliminare il cavo L-1 se è utilizzato il ritardatore	Eliminare il cavo 1-2 se è utilizzato il termostato 2
NEDERLANDS	Pressostaat	Tijdvertraging-relais	Blauw	Zwart	Bruin	Verwijder draad L-1 indien tijdvertraging wordt toegepast	Verwijder draad 1-2 indien thermostaat wordt toegepast
DANSK	Sikkerhedspressostat	Tidsforsinkelsesrelæ	Blå	Sort	Brun	Ved tidsforsinkelse fjernes ledning L-1	Ved termostat 2 fjernes ledning 1-2
SVENSKA	Säkerhetspressostat	Tidsfördröjningsrelä	Blå	Svart	Brun	Vid anslutning av tidsfördröjningsrelä avlägsnas bygling L-1	Vid anslutning av termostat 2 avlägsnas bygling 1-2

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