

ENGINEERING
TOMORROW

Danfoss

Quick reference

Light commercial reciprocating compressors **for refrigeration**

R134a 220-240V 50 / 60Hz



Compressor	Recommended compressor cooling at ambient temperatures									Voltage and frequency	Electrical equipment						Dimensions (mm)						
	32°C			38°C			43°C				LST (RSIR)		HST (CSIR)		HST(CSIR)	LST / HST		Height		Connectors location / I.D			
	LBP	MBP	HBP	LBP	MBP	HBP	LBP	MBP	HBP		PTC starting device		Starting relay	Starting capacitor	Starting device	LST / HST		A	B	Suction	Process	Dis-charge	Oil cooler
											Spades 6.3 mm	Spades 4.8 mm	Spades 6.3 mm	Spades 6.3 mm	Spades 6.3 mm	Cord relief	Cover			C	D	E	F
PL35G		F ₂	F ₂		F ₂	F ₂				1/5	103N0011	103N0018	117U6021	117U5014		103N1010	103N0491	137	135	6.2	6.2	5.0	
TL2.5G	S	S	S	S	S	S	S	S	F ₂	1/2/3/6	103N0011	103N0018	117U6007	117U5014		103N1010	103N2011	163	159	6.2	6.2	5.0	
TL3G	S	S	F ₂	S	S	F ₂	S	S	F ₂	1/2/3	103N0011	103N0018	117U6009	117U5014		103N1010	103N2010	163	159	6.2	6.2	5.0	
TL4G	S	S	F ₂	S	S	F ₂	S	S	F ₂	1/2/3	103N0011	103N0018	117U6004	117U5014		103N1010	103N2010	173	169	6.2	6.2	5.0	
TL5G	S	S	F ₂	S	S	F ₂	S	S	F ₂	1/2/3	103N0011	103N0018	117U6000	117U5014		103N1010	103N2010	173	169	6.2	6.2	5.0	
FR6G	S	F ₂	F ₂	S	F ₂	F ₂	S	F ₂	F ₂	1/2/3	103N0011	103N0018	117U6000	117U5015		103N1010	103N2010	196	191	8.2	6.2	6.2	
FR7.5G	S	F ₂	F ₂	S	F ₂	F ₂	O/F ₁	F ₂	F ₂	1/2/3	103N0011	103N0018	117U6001	117U5015		103N1010	103N2010	196	191	8.2	6.2	6.2	6.2
FR8.5G	S	F ₂	F ₂	S	F ₂	F ₂	O/F ₁	F ₂	F ₂	1/2/3	103N0011	103N0018	117U6015	117U5015		103N1010	103N2010	196	191	8.2	6.2	6.2	6.2
FR10G	S	F ₂	F ₂	S	F ₂	F ₂	O/F ₁	F ₂	F ₂	1/2/3	103N0011	103N0018	117U6010	117U5015		103N1010	103N2010	196	191	8.2	6.2	6.2	6.2
FR11G	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	1/2	103N0011	103N0018	117U6010	117U5015		103N1010	103N2010	196	191	8.2	6.2	6.2	
SC10G	O/F ₁	F ₂	F ₂	F ₁	F ₂	F ₂	F ₁	F ₂	F ₂	1/2/3	103N0011		117U6002	117U5017		103N1004	103N2009	199	193	8.2	6.2	6.2	
SC12G	O/F ₁	F ₂	F ₂	O/F ₁	F ₂	F ₂	O/F ₁	F ₂	F ₂	1/2/3	103N0011		117U6003	117U5017		103N1004	103N2009	209	203	8.2	6.2	6.2	6.2
SC15G	O/F ₁	F ₂	F ₂	O/F ₁	F ₂	F ₂	O/F ₁	F ₂	F ₂	1/2/3			117U6005	117U5017		103N1004	103N2009	209	203	10.2	6.2	6.2	6.2
SC18G	O/F ₁	F ₂	F ₂	O/F ₁	F ₂	F ₂	O/F ₁	F ₂	F ₂	1/2/3			117U6019	117U5017		103N1004	103N2009	219	213	10.2	6.2	6.2	6.2
SC21G	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	1/2/3					117-7029	103N1004	103N2009	219	213	10.2	6.2	6.2	
SC12/ 12G	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	1			117U6003	117U5017		103N1004	103N2009	249	244	12	6.2	6.2	
SC15/ 15G	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	1			117U6005	117U5017		103N1004	103N2009	249	244	12	6.2	6.2	
SC18/ 18G	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	1			117U6019	117U5017		103N1004	103N2009	259	254	16	6.2	6.2	
SC21/ 21G	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	F ₂	1					117-7029	103N1004	103N2009	259	254	16	6.2	6.2	
PL50F		F ₂			F ₂				F ₂	1			117U6021	117U5014		103N1010	103N0491	137	135	6.2	6.2	5.0	
TL3FT	S			S			S			2	103N0011	103N0018	117U6007	117U5014		103N1010	103N2010	173	169	6.2	6.2	5.0	
TL4FT	S			S			S			2	103N0011	103N0018	117U6004	117U5014		103N1010	103N2010	173	169	6.2	6.2	5.0	
TL5FT	S			S			S			2	103N0011	103N0018	117U6000	117U5014		103N1010	103N2010	173	169	6.2	6.2	5.0	
TLES5.7FT.3	S			S			S			2	103N0011	103N0018	117U6004	117U5014		103N1010	103N2010	173	169	6.2	6.2	5.0	
NL6.1FT	S			S			S			2/3	103N0011	103N0018	117U6000	117U5015		103N1010	103N2010	188	182	6.2	6.2	5.0	
NL7.3FT	S			S			F ₁			2	103N0011	103N0018	117U6001	117U5015		103N1010	103N2010	188	182	6.2	6.2	5.0	
NL8.4FT	S			F ₁			F ₁			2	103N0011	103N0018	117U6001	117U5015		103N1010	103N2010	190	184	6.2	6.2	5.0	
NL10FT	S			O/F ₁			O/F ₁			2	103N0011	103N0018	117U6002	117U5015		103N1010	103N2010	203	197	8.2	6.2	6.2	6.2
SC12FT	O/F ₁			O/F ₁			F ₂ *			2/3	103N0011		117U6003	117U5017		103N1004	103N2009	209	203	8.2	6.2	6.2	6.2
SC15FT	F ₁			F ₁			F ₂			2/3	103N0011		117U6005	117U5017		103N1004	103N2009	209	203	10.2	6.2	6.2	6.2
SC18FTX	F ₂			F ₂			F ₂			2/3			117U6019	117U5017		103N1004	103N2009	219	213	10.2	6.2	6.2	
SC21FTX 50 Hz	F ₂			F ₂			F ₂			2			117U6019	117U5017		103N1004	103N2009	219	213	10.2	6.2	6.2	
SC21FTX 60 Hz	F ₂			F ₂			F ₂			8					117-7039	103N1004	103N2008	219	213	10.2	6.2	6.2	
NL6.1MF		F ₁	F ₁		F ₁	F ₁		F ₁	F ₁	5/7	103N0011	103N0018	117U6015	117U5015		103N1010	103N2011	190	184	8.2	6.2	6.2	
NL7.3MF		F ₁	F ₁		F ₁	F ₁		F ₁	F ₁	5/7	103N0011	103N0018	117U6016	117U5015		103N1010	103N2011	197	191	8.2	6.2	6.2	
NL8.4MF		F ₁	F ₁		F ₁	F ₁		F ₁	F ₁	5/7	103N0011	103N0018	117U6016	117U5015		103N1010	103N2011	197	191	8.2	6.2	6.2	
NL10MF		F ₁	F ₁		F ₁	F ₁		F ₁	F ₁	5/7	103N0011	103N0018	117U6022	117U5018		103N1010	103N2011	203	197	8.2	6.2	6.2	
NL11MF		F ₂	F ₂		F ₂	F ₂		F ₂	F ₂	7	103N0011	103N0018	117U6022	117U5018		103N1010	103N2011	203	197	8.2	6.2	6.2	
NLE10MF	F ₁	F ₁		F ₁	F ₁		F ₁	F ₁		1	103N0011	103N0018	117U6003	117U5015		103N1010	103N2011	203	197	8.2	6.2	6.2	
GS26MFX		F ₂			F ₂			F ₂		1	Starting device (start relay, start & run capacitor):117-7055				107B9100/9101/9104**	259	247	12.9	6.5	8.2			
GS34MFX		F ₂			F ₂			F ₂		1	Starting device (start relay, start & run capacitor):117-7056				107B9100/9101/9104**	259	247	12.9	6.5	8.2			
TL4GH			F ₂			F ₂			F ₂	1/4			117U6000	117U5014		103N1010	103N2011	173	169	6.2	6.2	5.0	
FR7GH		O/F ₁			O/F ₁			O/F ₁		1/4			117U6016	117U5015		103N1010	103N2011	196	191	8.2	6.2	8.2	8.2
SC10GH			F ₂			F ₂			F ₂	1/4			117U6005	117U5017		103N1004	103N2008	199	193	10.2	6.2	8.2	
SC12GH			F ₂			F ₂			F ₂	1/4			117U6011	117U5017		103N1004	103N2008	209	203	10.2	6.2	8.2	
SC15GH			F ₂			F ₂			F ₂	1/4			117U6011	117U5017		103N1004	103N2008	209	203	10.2	6.2	8.2	
SC18GH			F ₂			F ₂			F ₂	1			117U6019	117U5017		103N1004	103N2009	219	213	10.2	6.2	8.2	
SC18GH			F ₂			F ₂			F ₂	1/4					117-7039	103N1004	103N2008	219	213	10.2	6.2	8.2	
SC15GHH		O			O			O		1					117-7027	103N1004	103N2009	209	203	10.2	6.2	8.2	8.2
GS26GHX		F ₂			F ₂			F ₂		1	Starting device (start relay, start & run capacitor):117-7070				107B9100/9101/9104**	259	247	12.9	6.5	8.2			

Model designation

Compressor design	Optimization level	Compressor size	Application range	Start characteristics
PL	Blank : Standard energy level	Nominal displacement in cm3	F : R134a LBP/(MBP) FT : R134a LBP/ (MBP) tropical	Blank > Universal (principal rule)
TL				
NL	S : Semi direct intake	Exception: For PL compressors the capacity at rating point is stated.	G : R134a LBP/MBP/HBP GH : R134a heat pumps	X = HST Characteristics (expansion valve)
FR				
SC	E : Energy optimized (optimized motor)		GHH : R134a heat pumps (opt.) MF : R134a MBP	
GS				

Examples

Compressor design	Optimization level	Compressor size	Application range	Start characteristics
TL	S	4	FT	
NL	E	10	MF	
SC		15	GHH	
GS		26	MF	X

Accessories for SC Twin

SC10/10, SC12/12 and SC15/15:

- Service valve for 12 mm tube 118-7350
- Solder connector for 12 mm tube..... 104B0584

SC18/18 and SC21/21

- Service valve for 16mm tube 118-7351
- Solder connector for 16mm tube 118-7405

SC10/10, SC12/12, SC15/15, SC18/18 and SC21/21:

- Seal ring for service valve and solder connector 118-3638
- Time delay relay..... 117N0001
- Check valve (to be used with time – delay relay) 020-1014

Optional IP44 equipment for SC compressors

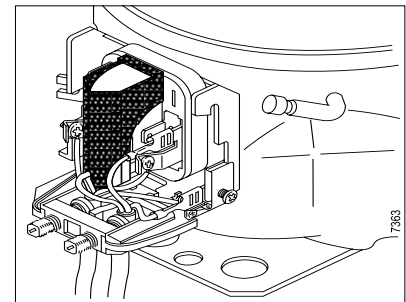
Danfoss now offers special accessories, which provide a better IP protection class for a major part of the SC compressor models. All SC models for 220-240V/50Hz or 208-230V/60Hz and CSIR motor can be IP upgraded. The equipment consists of one additional part, the so called “back cover”, and a special starting capacitor. Both are used instead of the normal starting capacitor. When using this equipment, the protection class is increased to IP44, i.e. the compressor and its electrical parts are splash-proof.



Code number	Description
130N2020	Back cover
117U5117**	IP44 starting capacitor 80µF
** replaces standard capacitor 117U5017	

Protection screen for PTC

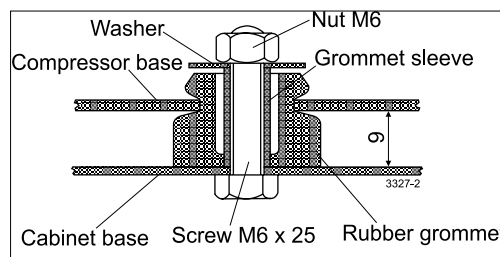
Note: To fulfil the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.



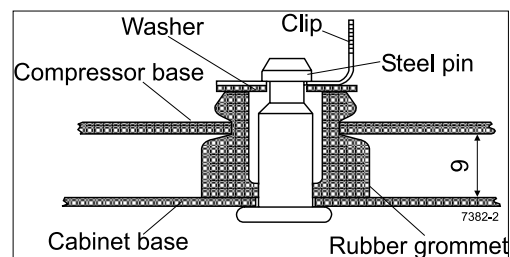
Mounting accessories

The mounting accessories for the compressors are available in two versions, with bolt joint or snap-on joint.

The rubber grommets are designed for the 16 mm holes of the baseplate.

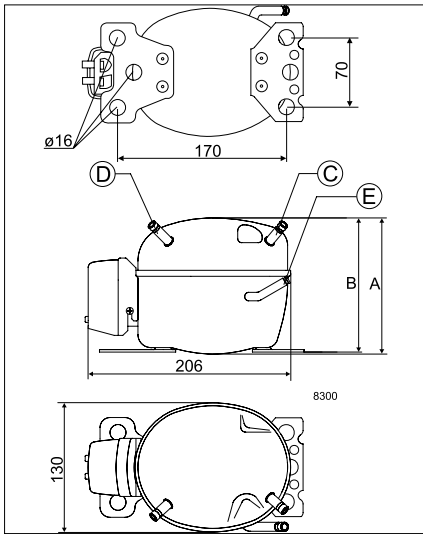


Bolt joint for
one compressor: 118-1917
in quantities: 118-1918

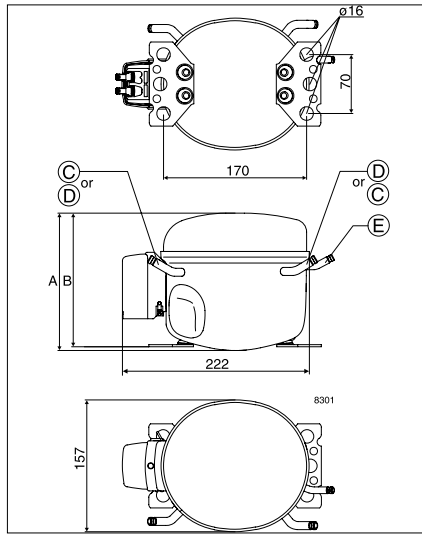


Snap-on
in quantities: 118-1919

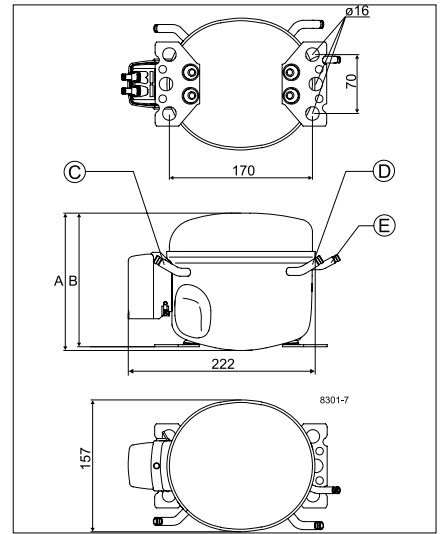
PL



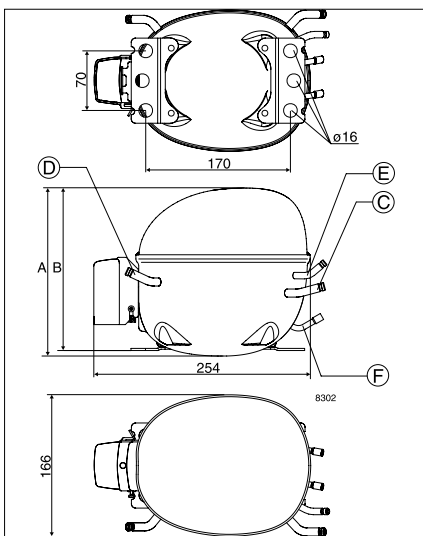
TL



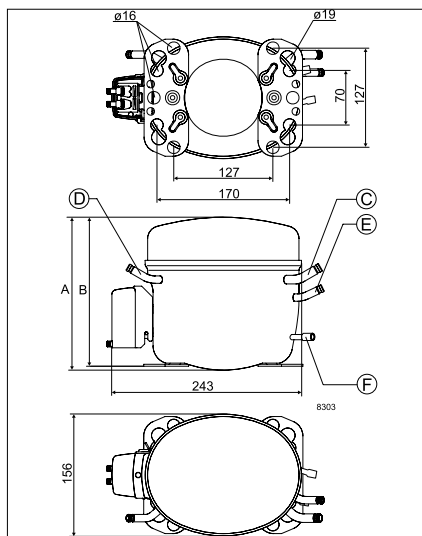
TLS-TLES



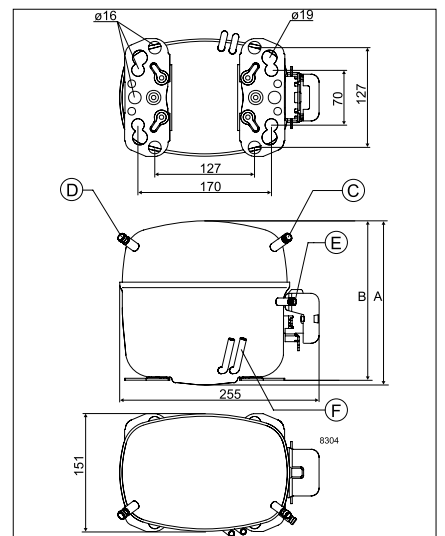
TLS-TLES



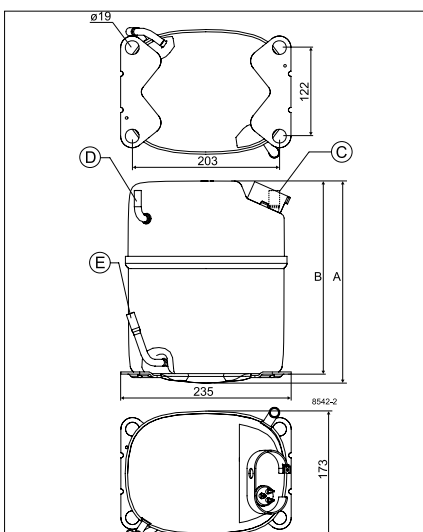
FR



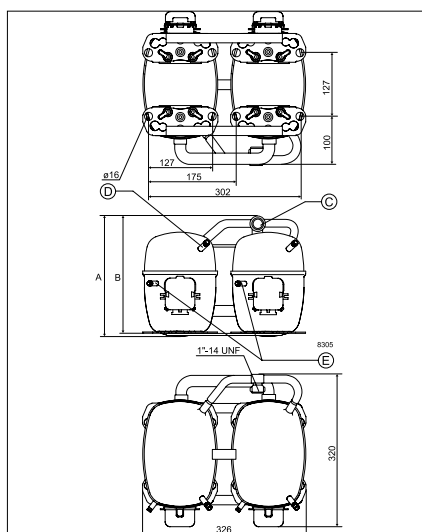
SC



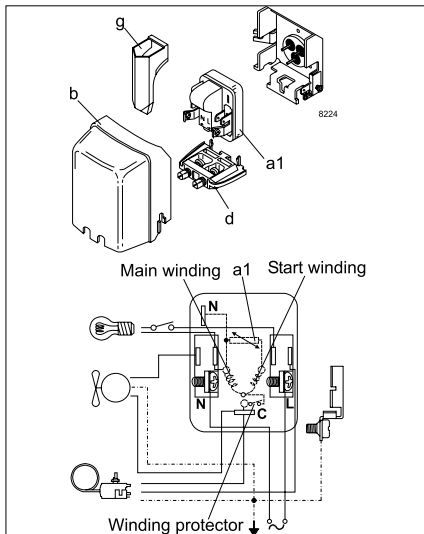
GS



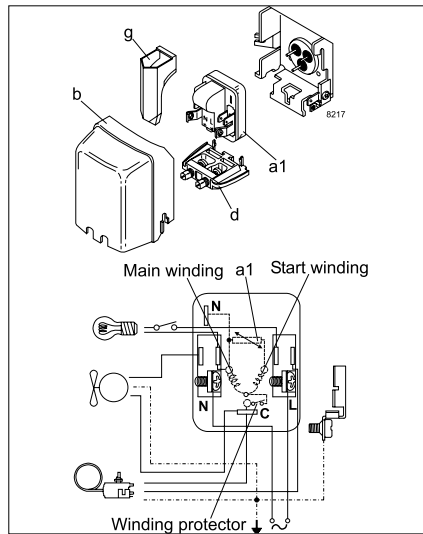
SCTwin



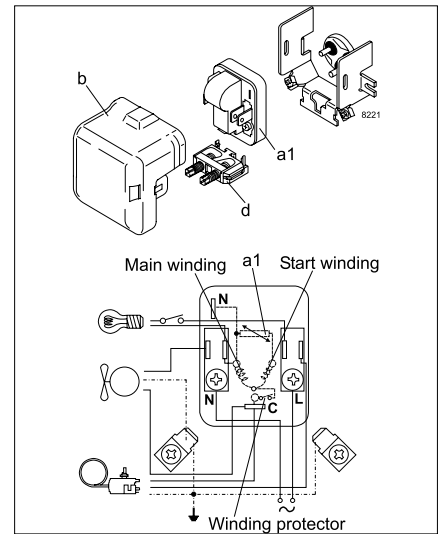
LST - RSIR



PL

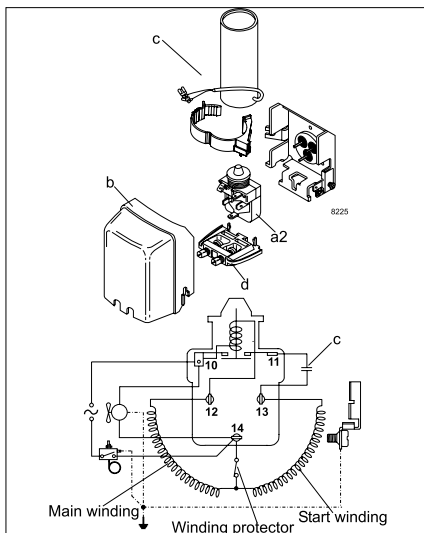


TL-TLS-TLES-NL-NLE-FR

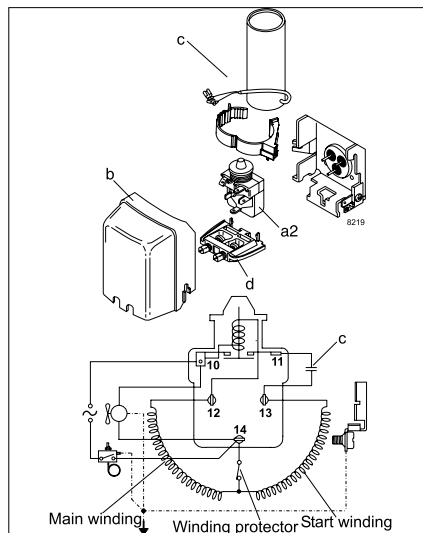


SC

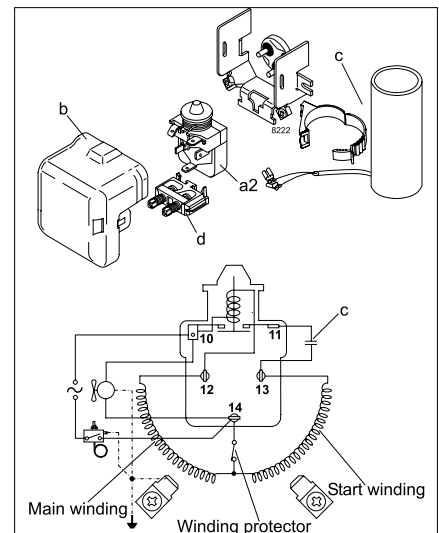
HST - CSIR



PL

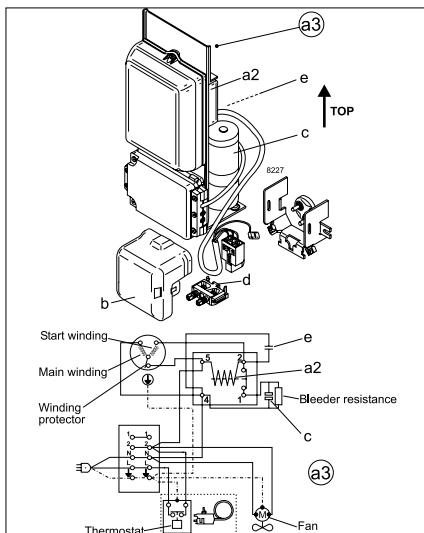


TL-TLS-TLES-NL-NLE-FR

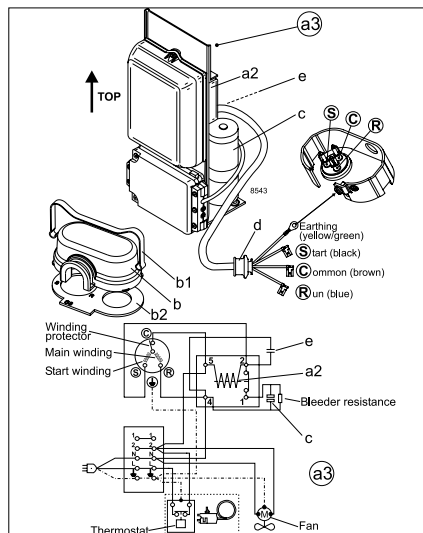


SC

HST - CSR



SC

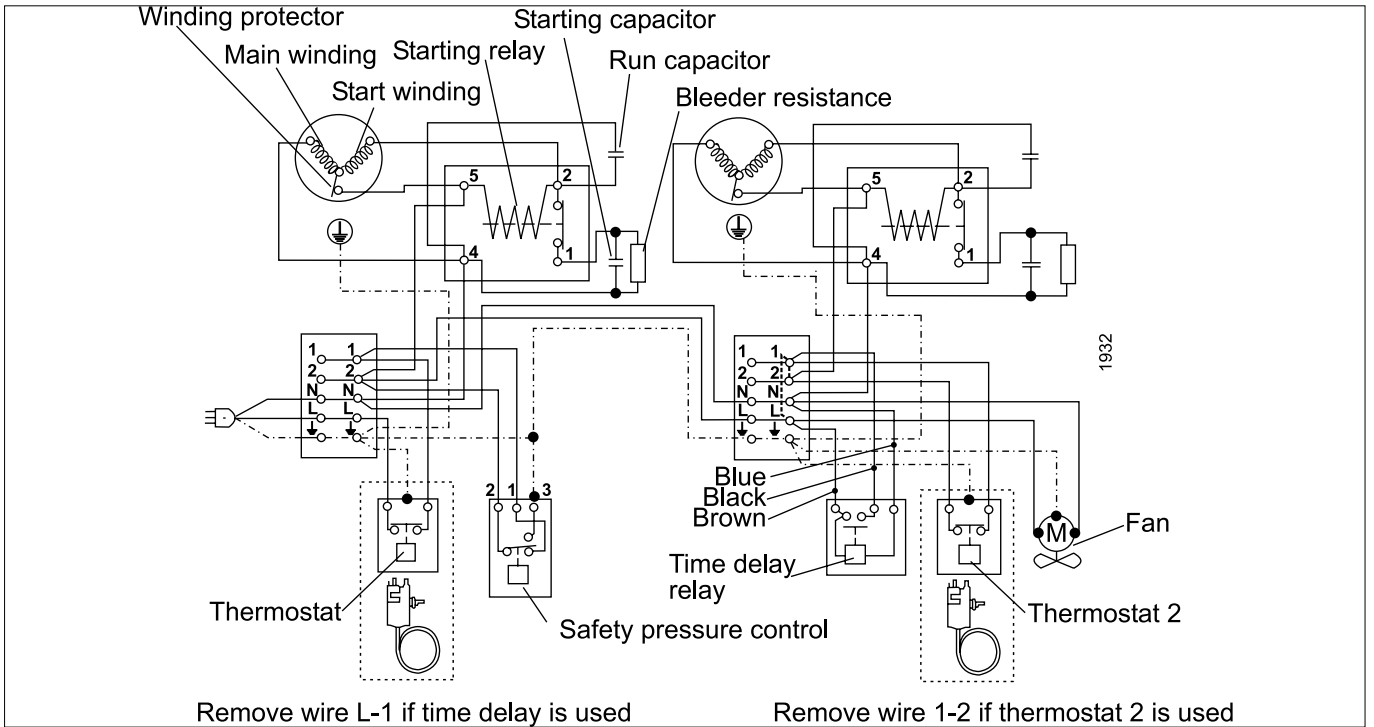


GS

Legend :

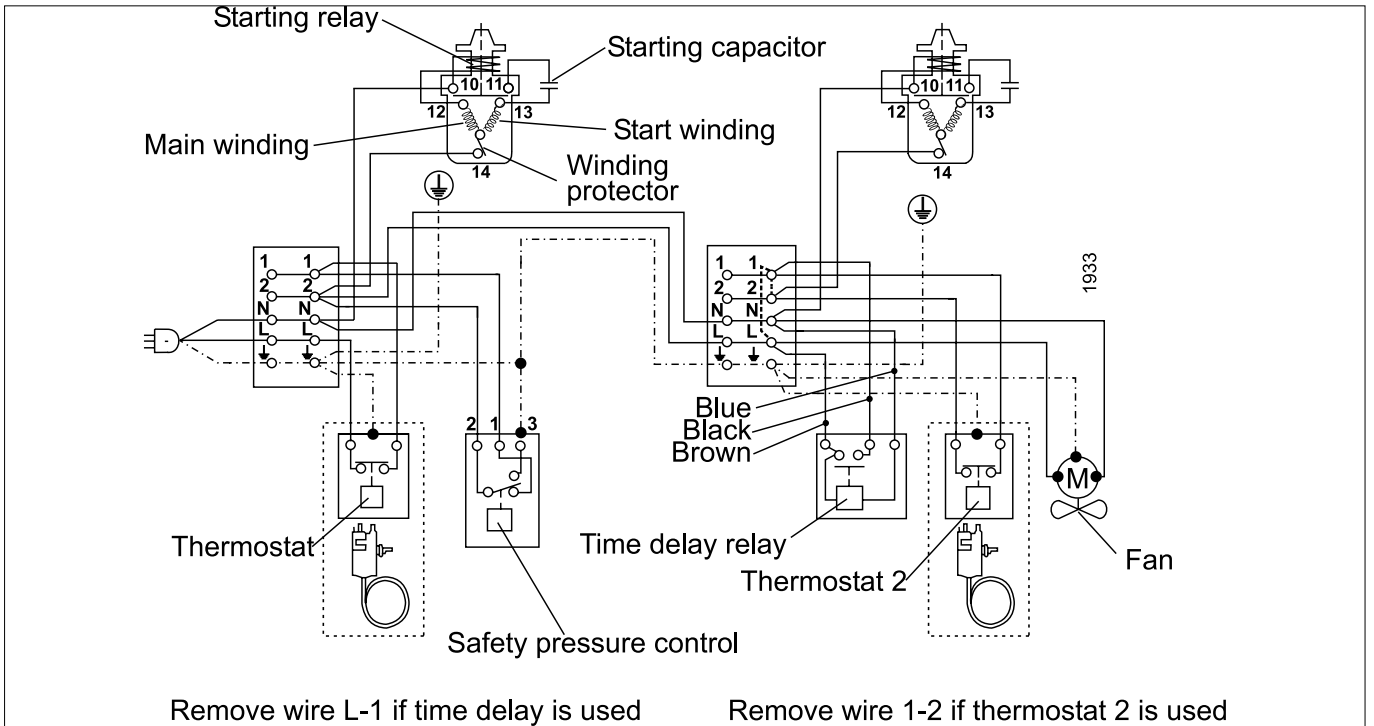
- a1:** PTC starting device
- a2:** Starting relay
- a3:** Starting device
- b:** Cover
- b1:** Clamp (part of compressor)
- b2:** Gasket (part of compressor)
- c:** Starting capacitor
- d:** Cord relief
- e:** Run capacitor
- g:** Protection screen for PTC

HST - CSR



SC Twin

HST - CSIR



SC Twin

Danfoss Commercial Compressors

is a worldwide manufacturer of compressors and condensing units for refrigeration and HVAC applications. With a wide range of high quality and innovative products we help your company to find the best possible energy efficient solution that respects the environment and reduces total life cycle costs.

We have 40 years of experience within the development of hermetic compressors which has brought us amongst the global leaders in our business, and positioned us as distinct variable speed technology specialists. Today we operate from engineering and manufacturing facilities spread across three continents.



Our products can be found in a variety of applications such as rooftops, chillers, residential air conditioners, heatpumps, coldrooms, supermarkets, milk tank cooling and industrial cooling processes.

<http://cc.danfoss.com>

Danfoss Commercial Compressors, BP 331, 01603 Trévoux Cedex, France | +334 74 00 28 29



Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.