

TeSys DF, LS, GK Fuse carriers		
Type of product	Range	Pages
Introduction		B4/2
For protection of control circuits or transformer TeSys DF and accessories	Up to 25, 32, 50 or 125 A	B4/3
For protection of control circuits or transformer TeSys DF – For North American market	Up to 30 A	B4/5
For protection of motors or transformers TeSys LS, GK and accessories	Up to 25, 32, 50 A	B4/6
Technical Data for Designers		B4/9

Operation: safety

The fuse carrier performs two basic functions:

- it isolates the downstream circuit by means of a visible break and wide opening contacts,
- it holds the cartridge fuses designed to protect the installation against short-circuits.

The type of cartridge fuse needed to protect the circuit must be determined before selecting the fuse carrier.

Cartridge fuse selection (type, rating, size)

Type

Application	<ul style="list-style-type: none"> ■ Motor protection. ■ Transformer protection.
Solution	<ul style="list-style-type: none"> ■ aM type fuses. These fuses are designed to withstand high current peaks of a very short duration. They must be combined with a thermal overload relay coupled with a contactor.
Application	<ul style="list-style-type: none"> ■ Lighting circuit protection. ■ Supply line protection. ■ Furnace protection.
Solution	<ul style="list-style-type: none"> ■ gG type fuses, which are more widely used but whose limiting capacity is weaker than that of aM type fuses.

Rating

gG fuses
aM fuses

See standard NF C 15-100.
Table 53 A paragraph 532-2-1 and table 52 C paragraph 523-1.

Motors 3 x 220 V		Motors 3 x 400 V		Cartridge fuses type aM		Fuse carrier
P	in	P	in	Size	Rating	
kW	A	kW	A		A	
9	32	15	28.5	10 x 38	32	LS1D32
11	39	22	44	14 x 51	50	GK1EK
22	75	37	73	22 x 58	80	GK1FK

Size

Use the "fuse characteristics" table opposite to select the correct fuse size according to:

- the nominal current of the circuit to be protected,
- the operational voltage.

Fuse carrier selection

Application	Isolation of a circuit for safety reasons only.
Solution	The fuse carrier may be fitted with links. The maximum permissible current is indicated in the "pole characteristics" table opposite.
Application	Isolation of a circuit and its protection against short-circuits.
Solution	Select a fuse carrier according to: <ul style="list-style-type: none"> ■ the type of cartridge fuse required, ■ the maximum permissible current in the fuse carrier poles (see "pole characteristics" table opposite). If the operational current is greater than the maximum permissible current in the poles of the fuse carrier corresponding to the cartridge fuse size selected, select the fuse carrier the next size up. <p>The safety provided by using a fuse carrier can be increased by adding a padlocking device with up to three padlocks.</p>

Recommendations for use

The fuse carrier conforms to utilisation category AC-21A/22A of standard IEC 60947-3. It is therefore recommended that the fuse carrier early break auxiliary contacts always be inserted in the coil circuit of the contactor with which it is in series. If the fuse carrier is not associated with a contactor, it is essential to ensure that it will be operated off-load.



DF101



DF141



DF221



DF101NV



DF141NV



DF221NV



DF103



DF143NC



DF223NC



DF103V



DF143VC



DF223VC

For protection of control circuits or transformers

Fuse carriers ⁽¹⁾

Conventional thermal current (Ith)	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
A	mm			
25	8.5 x 32	1 P	12	DF81
		N	12	DF10N
		1 P + N ⁽²⁾	6	DF81N
		2 P	6	DF82
		3 P	4	DF83
32	10 x 38	3 P + N ⁽²⁾	3	DF83N
		1 P	12	DF101
		N	12	DF10N
		1 P + N ⁽²⁾	6	DF101N
		2 P	6	DF102
50	14 x 51	3 P	4	DF103
		3 P + N ⁽²⁾	3	DF103N
		1 P	6	DF141
		N	6	DF14N
		1 P + N ⁽²⁾	3	DF141N
125	22 x 58	2 P	3	DF142
		3 P	2	DF143C ⁽³⁾
		3 P + N ⁽²⁾	1	DF143NC ⁽³⁾
		1 P	6	DF221
		N	6	DF22N
		1 P + N ⁽²⁾	3	DF221N
		2 P	3	DF222
		3 P	2	DF223C ⁽³⁾
		3 P + N ⁽²⁾	1	DF223NC ⁽³⁾

Fuse carriers with "blown fuse" indicators (LED) ^{(1) (4)}

Conventional thermal current (Ith)	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
A	mm			
25	8.5 x 32	1 P	12	DF81V
		1 P + N ⁽²⁾	6	DF81NV
		2 P	6	DF82V
		3 P	4	DF83V
		3 P + N ⁽²⁾	3	DF83NV
32	10 x 38	1 P	12	DF101V
		1 P + N ⁽²⁾	6	DF101NV
		2 P	6	DF102V
		3 P	4	DF103V
		3 P + N ⁽²⁾	3	DF103NV
50	14 x 51	1 P	6	DF141V
		1 P + N ⁽²⁾	3	DF141NV
		2 P	3	DF142V
		3 P	2	DF143VC ⁽³⁾
		3 P + N ⁽²⁾	1	DF143NVC ⁽³⁾
125	22 x 58	1 P	6	DF221V
		1 P + N ⁽²⁾	3	DF221NV
		2 P	3	DF222V
		3 P	2	DF223VC ⁽³⁾
		3 P + N ⁽²⁾	1	DF223NVC ⁽³⁾

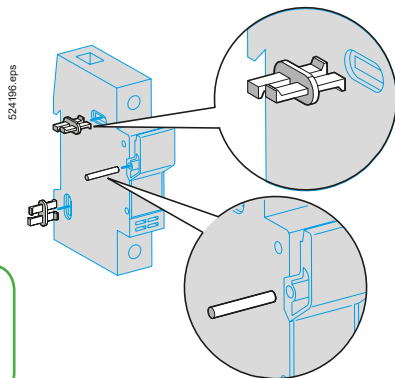
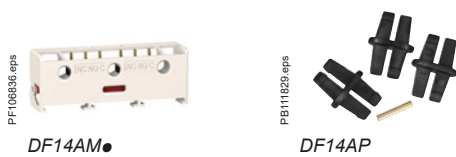
⁽¹⁾ Each pole can be marked. A clip-in marker holder is provided for this purpose. Clip-in markers type AB1R● or AB1G● can also be used. DF8●●● and DF10●●● are pad lockable fuse carriers.

⁽²⁾ N: neutral pole fitted with a locked tubular link as standard.

⁽³⁾ A letter "C" in the reference indicates that the fuse carrier can be fitted with auxiliary early break, "blown fuse" signalling and "fuse present" signalling contacts.

⁽⁴⁾ Operational voltage of the blown fuse indicator: 110 V...690 V.





Detail of assembly clip and pin mounting

Fuse carriers



Accessories

Auxiliary early break and "blown fuse" signalling contacts ⁽¹⁾

Fuse carriers to be equipped	Size of cartridge fuse or link	Number of contacts	Sold in lots of	Unit reference
DF14 (3 P or 3 P + N)	14 x 51	1	1	DF14AM1
		2	1	DF14AM2
DF22 (3 P or 3 P + N)	22 X 58	1	1	DF22AM1
		2	1	DF22AM2

Fuse carrier assembly kits ⁽²⁾

Fuse carriers to be assembled	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
DF8	8.5 x 32	1 pin, 2 clips	12	DF10AP
DF10	10 x 38			
DF14	14 x 51	1 pin, 3 clips	10	DF14AP
DF22	22 x 58	1 pin, 3 clips	10	DF22AP

Marking accessories

Description	Composition	Marking	Sold in lots of	Unit reference
Clip-in markers	Strip of 10 identical numbers or letters	0...9 A...Z	25	AB1R● ⁽³⁾ AB1G● ⁽³⁾

Substitution

Fuse carriers

Old range			New range	
Reference	Size of cartridge fuse or link	Composition	Reference w/o indicator	Reference with indicator
DF6AB08	8.5 x 32	1 P	DF81	DF81V
DF6AB10	10 x 38	1 P	DF101	DF101V
DF6N10	8.5 x 32 or 10 x 38	1 N	DF10N	-
GK1CC	8.5 x 32	1 P + N	DF81N	DF81NV
GK1CD	8.5 x 32	2 P	DF82	DF82V
GK1CF	8.5 x 32	3 P	DF83	DF83V
GK1CH	8.5 x 32	3 P + N	DF83N	DF83NV
GK1DC	10 x 38	1 P + N	DF101N	DF101NV
GK1DD	10 x 38	2 P	DF102	DF102V
GK1DF	10 x 38	3 P	DF103	DF103V
GK1DH	10 x 38	3 P + N	DF103N	DF103NV
GK1EB	14 x 51	1 P	DF141	DF141V
GK1EN	14 x 51	1 N	DF14N	-
GK1EC	14 x 51	1 P + N	DF141N	DF141NV
GK1ED	14 x 51	2 P	DF142	DF142V
GK1EF	14 x 51	3 P	DF143C	DF143VC
GK1EH	14 x 51	3 P + N	DF143NC	DF143NVC
GK1FB	22 x 58	1 P	DF221	DF221V
GK1FN	22 x 58	1 N	DF22N	-
GK1FC	22 x 58	1 P + N	DF221N	DF221NV
GK1FD	22 x 58	2 P	DF222	DF222V
GK1FF	22 x 58	3 P	DF223C	DF223VC
GK1FH	22 x 58	3 P + N	DF223NC	DF223NVC

Fuse carrier assembly kits

Old range		New range
Reference	Size of cartridge fuse or link	Reference
GK1AP2	8.5 x 32 or 10 x 38	DF10AP
GK1AP3	8.5 x 32 or 10 x 38	DF10AP
	14 x 51	DF14AP
GK1AP4	8.5 x 32 or 10 x 38	DF10AP
	22 x 58	DF22AP
GK1AP5	14 x 51	DF14AP
GK1AP6	14 x 51	DF14AP
	22 x 58	DF22AP
GK1AP9	22 x 58	DF22AP

⁽¹⁾ These auxiliary contacts provide the following functions: early break, "blown fuse" signalling (if the fuse carrier is fitted with striker fuses) and "fuse present" signalling.

⁽²⁾ 1 pin and 2 clips are required to assemble two DF8 or DF10 fuse carriers together. 1 pin and 3 clips are required to assemble two DF14 or DF22 fuse carriers together.

⁽³⁾ When ordering, replace the ● in the reference with the number or letter required. Example: AB1-R1 or AB1-GA.

For protection of control circuits or transformers

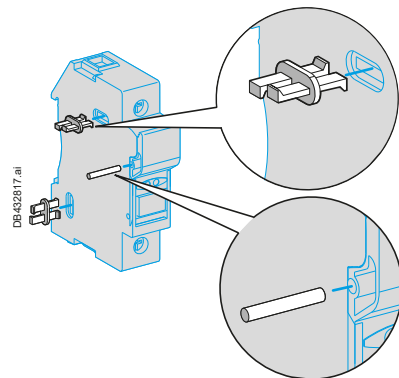
References



DFCC1



DFCC3V



Detail of assembly clip and pin mounting

Fuse carriers ⁽¹⁾

Conventional thermal current (Ith)	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
A				
30	Class CC	1 P	12	DFCC1
		2 P	12	DFCC2
		3 P	6	DFCC3

Fuse carriers with “blown fuse” indicators (LED) ^{(1) (2)}

Conventional thermal current (Ith)	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
A				
30	Class CC	1 P	12	DFCC1V
		2 P	6	DFCC2V
		3 P	6	DFCC3V

Fuse carrier assembly kits ⁽³⁾

Fuse carriers to be assembled	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
DFCC	Class CC	1 pin, 2 clips	12	DF10AP

Marking accessories

Description	Composition	Marking	Sold in lots of	Unit reference
Clip-in markers	Strip of 10 identical numbers or letter	0...9	25	AB1R● ⁽⁴⁾
		A...Z	25	AB1G● ⁽⁴⁾

⁽¹⁾ Each pole can be marked. A clip-in marker holder is provided for this purpose. Clip-in markers type AB1R● or AB1G● can also be used. DFCC fuse holders are pad lockable.

⁽²⁾ Operational voltage of the blown fuse indicator: 230 V...690 V.

⁽³⁾ 1 pin and 2 clips are required to assemble two DFCC fuse carriers together.

⁽⁴⁾ When ordering, replace the p in the reference with the number or letter required. Example: AB1R1 or AB1GA.

Fuse carriers





PE111831.eps

LS1D323



PE111830.eps

LS1D32



PE121302.eps

GK1EK



PE111830.eps

LS1D32



PE121303.eps

+ LA8D324

Fuse carriers



For protection of motors or transformers

3-pole basic blocks

Connection by spring terminals

Rating	Cartridge fuse size	Number of early break contacts ⁽¹⁾	Single-phase protection device ⁽²⁾	Reference ⁽³⁾	Weight kg
25 A	10 x 38	– ⁽⁴⁾	Without	LS1D323	0.270

Connection by screw clamp terminals or connectors

32 A	10 x 38	– ⁽⁴⁾	Without	LS1D32	0.300
50 A	14 x 51	1	Without	GK1EK	0.430
			With	GK1EV	0.470
			Without	GK1ES	0.470
			With	GK1EW	0.510

4-pole basic blocks

Connection by screw clamp terminals or connectors

32 A	10 x 38	– ⁽⁴⁾	Without	LS1D32 + LA8D324 ⁽⁵⁾	0.300
50 A	14 x 51	1	Without	GK1EM	0.570
			With	GK1EY	0.600
			Without	GK1ET	0.610
			With	GK1EX	0.650

Fuse carriers for the North American market

25 and 30 A basic blocks: please consult your Regional Sales Office.

- (1) With 1 or 2 early break contacts to be inserted in the contactor control circuit.
- (2) Fuse carriers with single-phase protection device must be fitted with striker fuses.
- (3) LS1D: clips directly onto a 35 mm rail or screw fixing.
GK1: clips directly onto a 35 mm rail or Telequick mounting plate.
- (4) Addition of add-on contact block, see page B4/7.
- (5) Can be mounted on left-hand or right-hand side of the basic block.

PC112152.eps



GK1AP05

Add-on contact blocks

Description	For use on	Mounting	Maximum number	Type of contacts	Sold in lots of	Unit reference
Instantaneous auxiliary contacts (early break contacts)	LS1D32	Front	1	N/O + N/C	10	GVAE11
				N/O + N/O	10	GVAE20
	LS1D323	Front	1	N/O + N/C	10	GVAE113
				N/O + N/O	10	GVAE203

Operators

For fuse carrier		For mounting on	Reference
Rating	Number of poles		
Side handles			
125 A	3 or 4	Right-hand side	GK1AP07
		Left-hand side	GK1AP08

Front handles ⁽¹⁾

32 - 50 - 125 A	Fitted as standard
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External handles

32 A	3 or 4	Right-hand side (IP54)	LS1D32005 ⁽²⁾
		Left-hand side (IP54)	LS1D32006
50 A	3 or 4	Right-hand side	GK1AP05
		Left-hand side	GK1AP06

Padlocking devices ⁽³⁾

For fuse carrier		Single-phase protection device	Reference
Rating	Number of poles		
32 A	3 or 4	Without	integral
50 A	3	Without	GK1AV07
		With	GK1AV08
	4	Without	GK1AV08
		With	GK1AV09

Links

Tubular links

For fuse carrier		Sold in lots of	Unit reference
Rating	Number of poles		
32 A	3 or 4	10	DK1CB92 ⁽⁴⁾
50 A	3 or 4	10	DK1EB92 ⁽⁵⁾
125 A	3 or 4	10	DK1FA92 ⁽⁵⁾

⁽¹⁾ Fitted as standard on 32, 50 and 125 A fuse carriers type GK1.

⁽²⁾ Reference LS1D32005 replaces reference DK1FB005.

⁽³⁾ For the 125 A rating, use side handles GK1AP07 or GK1AP08.

⁽⁴⁾ For use on a neutral circuit, the tubular link can be interlocked with special device LA8D25906 (sold in lots of 10).

⁽⁵⁾ 50 A fuse carriers type GK1 are fitted with an interlocked neutral tubular link as standard.

Fuse carriers





Accessories for LS1D32 (screw clamp terminals)

Description	Application	Sold in lots of	Unit reference
Plate for mounting	LS1D32 and contactor LC1D09...D38 with front faces aligned	1	LAD311
Combination blocks	Between LS1D32 and contactor LC1K or LP1K	10	GV2AF01
	Between LS1D32 and contactor LC1D09...D38	10	GV2AF3
	Between LS1D32 mounted on LAD311 and contactor LC1D09...D38	10	GV2AF4

Description	Application	Pitch mm	Reference
Sets of 3-pole 63 A busbars	2 tap-offs	45	GV2G245
		54	GV2G254
		72	GV2G272
	3 tap-offs	45	GV2G345
		54	GV2G354
	4 tap-offs	45	GV2G445
		54	GV2G454
		72	GV2G472
	5 tap-offs	54	GV2G554

Description	Application	Sold in lots of	Unit reference
Protective end cover	For unused busbar outlets	5	GV1G10
Terminal block Connection from the top	For supply to one or more GV2G busbar sets	1	GV1G09
Cover for terminal block	For mounting in modular panels	10	LA9E07
Padlocking device	For use with up to 4 padlocks (not supplied) Ø6 mm shank max	1	GV2V03

Accessories for LS1D323 (spring terminals)

Description	Application	Reference
Plate for mounting	LS1D323 and contactor LC1D09...D38 with front faces aligned	LAD311

Description	Extension by	Number of starters	Reference
Power splitter box, 63 A	LAD32●	2	LAD322
		4	LAD324

Description	Kit contents	Reference
Assembly and power connection kit for LS1D323 and LC1D093...D323	1 LAD311 plate for mounting LS1D323 2 LAD341 power connection modules - between LS1D323 and power splitter box - between LS1D323 and contactor	LAD352

Description	Maximum capacity	Application	Sold in lots of	Unit reference
Upstream terminal block	16 mm ²	Power supply to 1 or 2 power splitter boxes	1	LAD3B1
Downstream terminal block	16 mm ²	Connection of motor cables	1	LAD331
Cable end reducer	–	For connection of conductors from 1 to 1.5 mm ²	20	LAD99

Technical Data for Designers

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TeSys

TeSys DF Fuse carriers

Characteristics

Environment characteristics

Fuse carrier type		DF8	DF10	DF14	DF22
Conforming to standards		IEC/EN 60947-3, IEC/HD 60269-2	IEC/EN 60947-3 ⁽¹⁾ , IEC/HD 60269-2, R22HL2, UL 4248-1 ⁽²⁾ , CSA C22.2 No 4248-1 ⁽²⁾	IEC/EN 60947-3, UL 4248-1, CSA C22.2 No 4248-1	
Product certification		IEC, EAC, DNV-GL, CCC	IEC, UL, CSA, EAC, DNV-GL, CCC	IEC, UL, CSA, EAC	
Degree of protection	Conforming to IEC 60529	IP 20			
Ambient air temperature	Storage	°C -40...+80			
	For operation, with derating ⁽¹⁾	°C -20...+60			
Operating positions		± 23° in relation to normal mounting plane			
Flame resistance	Conforming to IEC 60695-2-1	°C 960			

Pole characteristics

Fuse size	mm	8.5 x 32	10 x 38	14 x 51	22 x 58				
Rated insulation voltage (Ui) with tubular links, a.c. or D.C. supply	V	500	690	690	690				
Rated impulse withstand voltage (Uimp)	kV	6	6	8	8				
Conventional thermal current (Ith) for ambient air temperature ≤ 20 °C ⁽³⁾	With tubular links	A 25	32	50	125				
	With aM cartridge fuses	A 25	32	50	125				
	With gG cartridge fuses	A 25	32	50	100				
	Rated conditional short-circuit current Conforming to IEC 60947-3								
400 V	kA 20	120	120	120					
500 V	kA –	120	120	120					
690 V	kA –	–	80	80					
Peak withstand current (dynamic stress) Conforming to IEC 60269-1	With tubular links	kA 11	15	15	19				
	Cabling (number of conductors x c.s.a.)								
Solid cable	mm ²	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
		1 x 1.5	1 x 16 2 x 6	1 x 1.5	1 x 16 2 x 6	1 x 2.5	1 x 25 2 x 10	1 x 2.5	1 x 25 2 x 10
		Flexible cable without cable end	mm ²	1 x 1.5	1 x 10 2 x 6	1 x 1.5	1 x 10 2 x 6	1 x 2.5	1 x 25 2 x 10
Flexible cable with cable end	mm ²	1 x 1.5	1 x 10 2 x 6	1 x 1.5	1 x 10 2 x 6	1 x 2.5	1 x 25 2 x 10	1 x 2.5	1 x 35 2 x 16
Tightening torque	Nm	2.2		3.5		4			

Characteristics of early break and signalling contacts DF14 AM and DF22 AM

Rated insulation voltage (Ui) a.c. supply	V	250				
Conventional thermal current (Ith) for ambient air temperature ≤ 20 °C ⁽¹⁾	A	5				
Rated operational current	A	24 V	48 V	127 V	240 V	
		Category AC-15	4	4	3	2.5
		Category DC-13	3	1	0.2	0.1
Definition of rated characteristics	Conforming to IEC 60947-5-1	B300				
Low load operating characteristics	Minimum voltage	V 10				
	Minimum current	mA 30				
Cabling		Faston connectors				

(1) DF101PV excluded.

(2) DF101PV add UL/CSA 4248-19.

(3) For use in an installation with ambient temperature > 20 °C, apply a derating coefficient:

Maximum temperature	20 °C	30 °C	40 °C	50 °C	60 °C
Max. relative humidity	95 %	90 %	80 %	50 %	50 %
Current derating coefficient	1	0.95	0.9	0.8	0.7

Number of poles (each side)	1 to 3	4 to 6	≥ 7
Current derating coefficient	1	0.95	0.9

TeSys

TeSys DF Fuse carriers

Dimensions, schemes

Dimensions

Modular fuse carriers 25 A and 32 A

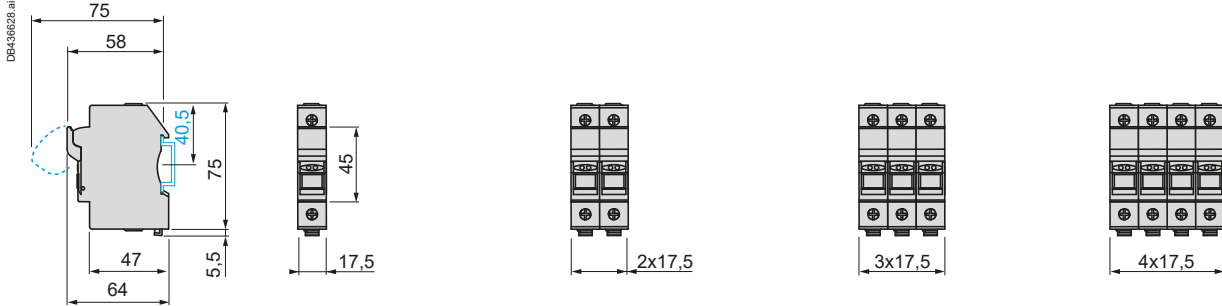
Mounting on 35 mm L rail

DF81 and DF81V
DF101 and DF101V
DF10N

DF81N and DF81NV
DF82 and DF82V
DF101N and DF101NV
DF102 and DF102V

DF83 and DF83V
DF103 and DF103V

DF83N and DF83NV
DF103N and DF103NV



Modular fuse carriers 50 A

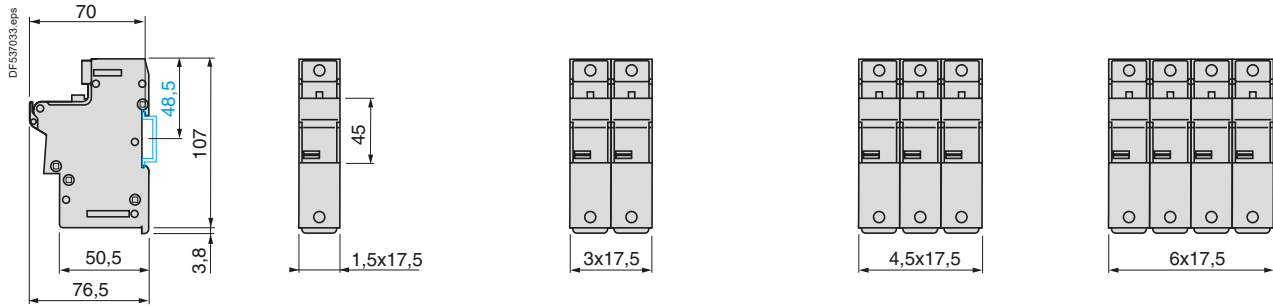
Mounting on 35 mm L rail

DF141 and DF141V
DF14N

DF141N and DF141NV
DF142 and DF142V

DF143C and DF143VC

DF143NC and DF143NVC



Modular fuse carriers 125 A

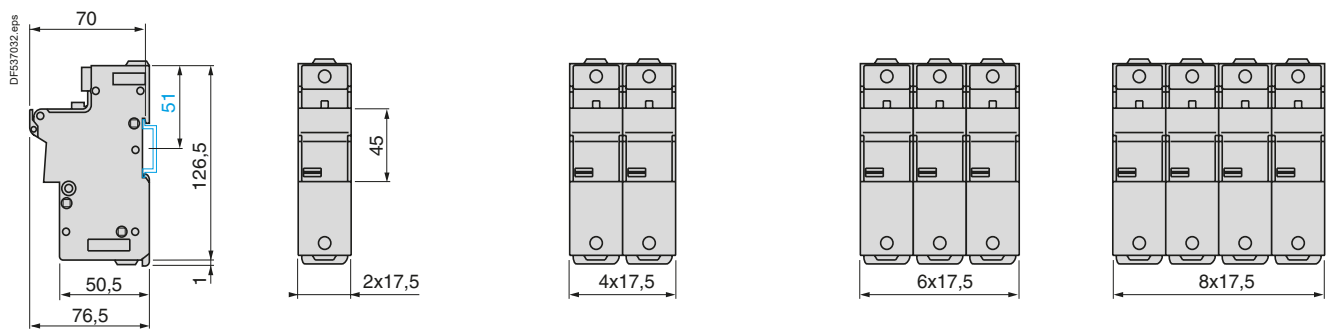
Mounting on 35 mm L rail

DF221 and DF221V
DF22N

DF221N and DF221NV
DF222 and DF222V

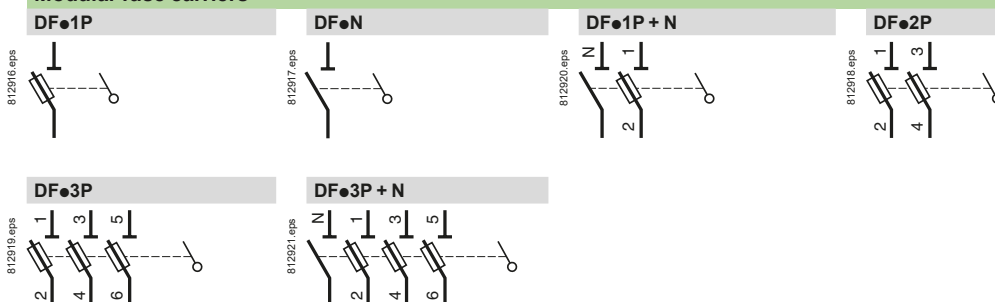
DF223C and DF223VC

DF223NC and DF223NVC



Schemes

Modular fuse carriers



Environment characteristics			
Fuse carrier type		DFCC	
Conforming to standards		UL 4248-1 & 4, CSA 22-2 No 4248-1 & 4	
Product certification		UL, CSA, CCC	
Degree of protection	Conforming to IEC 60529	IP 20	
Ambient air temperature	Storage	°C	-40...+80
	For operation, with derating ⁽¹⁾	°C	-20...+60
Operating positions	Without derating	±23° in relation to normal vertical mounting plane	
Flame resistance	Conforming to IEC 60695-2-1	°C	960

Pole characteristics			
Fuse carrier type		DFCC	
Fuse size		Class CC	
Rated insulation voltage (U_i) with tubular links, a.c. supply	V	600	
Rated impulse withstand voltage (U_{imp})	kV	6	
Conventional thermal current (I_{th}) for ambient air temperature ≤ 40 °C ⁽¹⁾	With tubular links	A	30
	With aM cartridge fuses	A	30
	With gG cartridge fuses	A	30
Short-circuit current withstand With UL 248-4 Class CC fuses			
Conforming to UL 512 at 600 V	kA	200	
Cabling (number of conductors x c.s.a.)		Min.	Max.
	Solid cable	mm²	1 x 1.5 2 x 6
	Flexible cable without cable end	mm²	1 x 1.5 2 x 6
Flexible cable with cable end	mm²	1 x 1.5	1 x 10 2 x 6
Tightening torque	Nm	2.2	

⁽¹⁾ For use in an installation with ambient temperature > 20 °C, apply a derating coefficient:

Maximum temperature	20 °C	30 °C	40 °C	50 °C	60 °C
Max. relative humidity	95 %	90 %	80 %	50 %	50 %
Current derating coefficient	1	0.95	0.9	0.8	0.7


TeSys

TeSys DF Fuse carriers for North American market

Dimensions, schemes

Dimensions

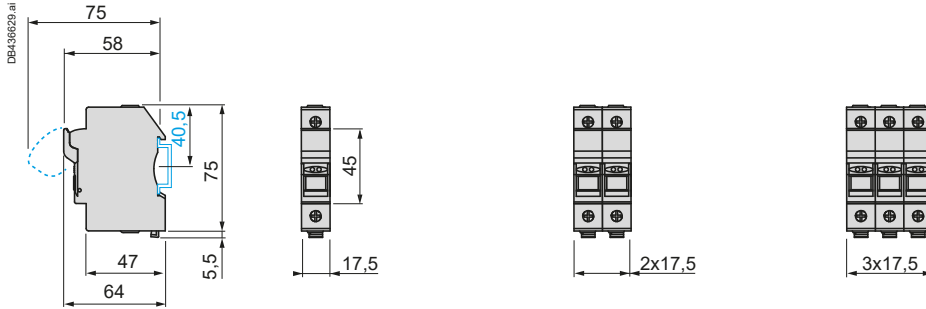
Modular fuse carriers 30 A

Mounting on 35 mm  rail

DFCC1 and DFCC1V

DFCC2 and DFCC2V

DFCC3 and DFCC3V



Schemes

Modular fuse carriers

DFCC1P

DFCC2P

DFCC3P



Fuse carriers



TeSys

TeSys LS, GK Fuse carriers

Characteristics

Fuse carriers



Ref.



Environment

Fuse carrier type		LS1D32	LS1D323	GK1E●
Conforming to standards	NF EN 60947-3	●		●
	IEC 60947-3	●		●
Product certifications		BV, UR		–
Ambient air temperature for operation with links without derating	°C	-50...+70		-50...+70
Maximum tilt in relation to normal vertical mounting plane		±23°		±23°

Pole characteristics

Fuse size		10 x 38	10 x 38	14 x 51
Rated operational voltage with links, a.c. supply	V	690	690	690
Maximum continuous current at ambient temperature ≤ 40 °C ⁽¹⁾ (Min. cable Ø/le)				
With tubular links	mm ² /A	6/32 or 4/25 or 2.5/16	4/25 or 2.5/16	10/50 or 6/40
With aM fuses	mm ² /A	6/32 or 4/22 or 2.5/20	4/25 or 2.5/20	10/50 or 6/35
With gG fuses	mm ² /A	4/25 or 2.5/20 or 1.5/16	2.5/20 or 1.5/16	10/40 or 6/32

Early break contact characteristics

Rated operational voltage	V	~ 250. --- 60	~ 250. --- 60	~ 500	--- 48
Conventional thermal current	A	2.5	2.5	6	3

Blow fuse contact characteristics 95/96-98

Rated operational voltage	V	–	–	~ 250	--- 24
Conventional thermal current	A	–	–	6	3

Cartridge fuse characteristics

Fuse size		10 x 38	10 x 38	14 x 51	
Type aM	~ 400 V	A	32 ⁽²⁾	25	50
	~ 500 V	A	20	20	40
	~ 660 V	A	–	–	25
Type gG	~ 400 V	A	25 ⁽²⁾	25	40
	~ 500 V	A	25	25	40
	~ 660 V	A	–	–	25
Maximum power dissipated by fuse	W	3	3	8.5	

Cabling

Connection by screw clamp terminals or connectors

Number and c.s.a. of conductors		Min.	Max.	Min.	Max.	Min.	Max.
Solid cable	mm ²	2 x 1	2 x 6	–	–	1 x 2.5	1 x 25
Flexible cable without cable end	mm ²	2 x 1.5	2 x 6	–	–	1 x 2.5	1 x 25
Flexible cable with cable end	mm ²	2 x 1	2 x 4	–	–	1 x 2.5	1 x 16
Connection		Screw clamp terminals		–	–	Connector	
Tightening torque	Nm	1.7		–	–	2	

Connection by spring terminals

Number and c.s.a. of conductors		Min.	Max.	Min.	Max.	Min.	Max.
Solid cable	mm ²	–	–	2 x 1 ⁽³⁾	2 x 4	–	–
Flexible cable without cable end	mm ²	–	–	2 x 1.5 ⁽¹⁾	2 x 4	–	–

(1) For use in an installation with ambient temperature > 55 °C, apply a derating coefficient equivalent to $\sqrt{\frac{120 - \text{ambient temperature}}{80}}$

(2) These values are for fuse carriers mounted side by side with a gap of 10 mm between them or mounted with sets of busbars GV2●54. If mounted side by side without a gap, use the following fuse sizes: aM fuse: 25 A and gG fuse: 20 A.

(3) For cross-sections 1 to 1.5 mm², the use of an LA9D99 cable end reducer is recommended.

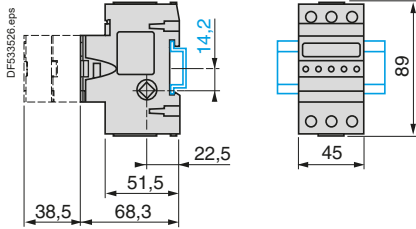
TeSys

TeSys LS, GK Fuse carriers

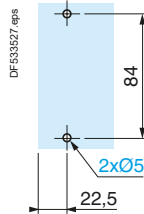
Dimensions, mounting

LS1D32

Mounting on rail NSYDPR200BD



Panel mounting

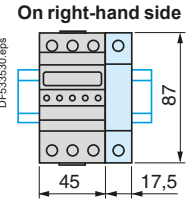
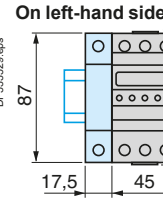


LS1D32 + LA8D324

Mounting on rail NSYDPR200BD

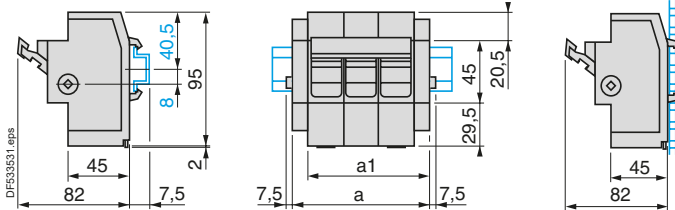


Mounting of 4th pole

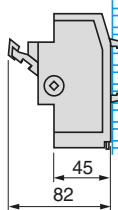


GK1EK, EM, ES, ET, EV, EW, EX, EY

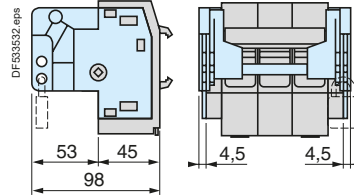
Mounting on rail NSYDPR200BD



Mounting on pre-slotted plate AM1P



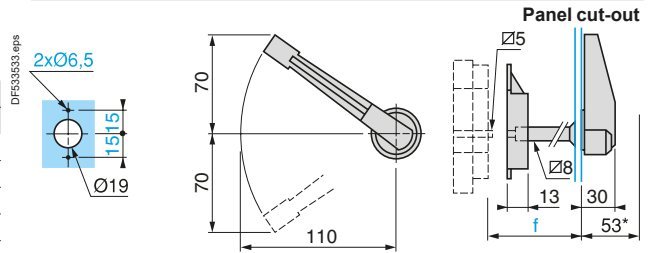
GK1E + GK1AV (padlocking device)



a: with single-phase protection device.
a1: without single-phase protection device.

GK1	a		a1	
	3 P	4 P	3 P	4 P
EK	-	-	88	-
EM	-	-	-	114
ES	-	-	97	-
ET	-	-	-	123
EV	106	-	-	-
EW	115	-	-	-
EX	-	141	-	-
EY	-	132	-	-

External operator GK1AP05 right-hand, GK1AP06 left-hand



External operator, RH or LH side	f
GK1EK, EM, ES, ET	29...114
GK1EV, EW, EX, EY	29...114

Fuse carriers



TeSys

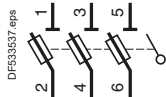
TeSys LS, GK Fuse carriers

Schemes

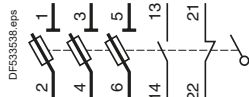
Fuse carriers without single-phase protection device

3-pole

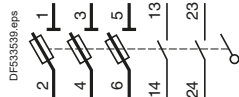
LS1D32, D323



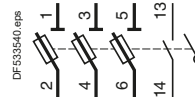
LS1D32, D323 + GVAE11●



LS1D32, D323 + GVAE20●

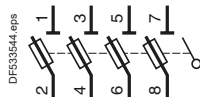


GK1EK

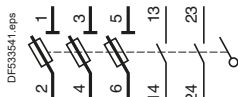


4-pole

LS1D32 + LA8D324

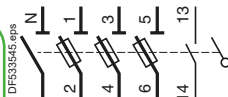


GK1ES

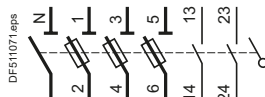


3-pole + Neutral

GK1EM



GK1ET

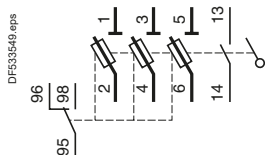


Fuse carriers

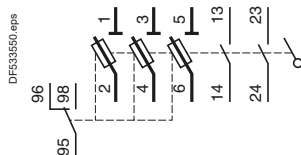
Fuse carriers with single-phase protection device

3-pole

GK1EV

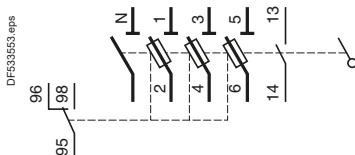


GK1EW



3-pole + Neutral

GK1EY



GK1EX

