

Fuse carriers		
Type of product	Range	Pages
<b>Introduction</b>		
		B4/2
For protection of control circuits or transformer	Up to 25, 32, 50 or 125 A	B4/3
For protection of control circuits or transformer For North American market	Up to 30 A	B4/5
For protection of motors or transformers	Up to 25, 32 A	B4/6
Technical Data for Designers		B4/11



Fuse carriers

### 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

<b>Application</b>	<ul style="list-style-type: none"> <li>■ Motor protection.</li> <li>■ Transformer protection.</li> </ul>
<b>Solution</b>	<ul style="list-style-type: none"> <li>■ <b>aM type</b> 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.</li> </ul>
<b>Application</b>	<ul style="list-style-type: none"> <li>■ Lighting circuit protection.</li> <li>■ Supply line protection.</li> <li>■ Furnace protection.</li> </ul>
<b>Solution</b>	<ul style="list-style-type: none"> <li>■ <b>gG</b> type fuses, which are more widely used but whose limiting capacity is weaker than that of <b>aM</b> type fuses.</li> </ul>

#### 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

#### 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

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

### 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 <sup>(1)</sup>

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 <sup>(2)</sup>	6	DF81N
		2 P	6	DF82
		3 P	4	DF83
		3 P + N <sup>(2)</sup>	3	DF83N
32	10 x 38	1 P	12	DF101
		N	12	DF10N
		1 P + N <sup>(2)</sup>	6	DF101N
		2 P	6	DF102
		3 P	4	DF103
		3 P + N <sup>(2)</sup>	3	DF103N
50	14 x 51	1 P	6	DF141
		N	6	DF14N
		1 P + N <sup>(2)</sup>	3	DF141N
		2 P	3	DF142
		3 P	2	DF143C <sup>(3)</sup>
		3 P + N <sup>(2)</sup>	1	DF143NC <sup>(3)</sup>
125	22 x 58	1 P	6	DF221
		N	6	DF22N
		1 P + N <sup>(2)</sup>	3	DF221N
		2 P	3	DF222
		3 P	2	DF223C <sup>(3)</sup>
		3 P + N <sup>(2)</sup>	1	DF223NC <sup>(3)</sup>

### Fuse carriers with "blown fuse" indicators (LED) <sup>(1) (4)</sup>

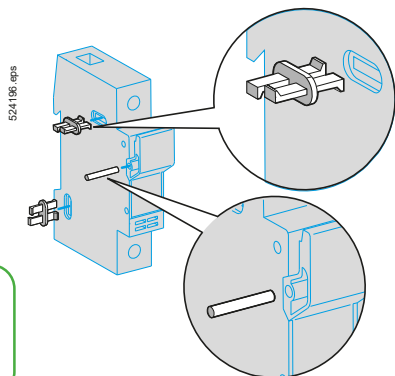
Conventional thermal current (Ith)	Size of cartridge fuse or link	Composition	Sold in lots of	Unit reference
A	mm			
25	8.5 x 32	1 P	12	DF81V
		1 P + N <sup>(2)</sup>	6	DF81NV
		2 P	6	DF82V
		3 P	4	DF83V
		3 P + N <sup>(2)</sup>	3	DF83NV
32	10 x 38	1 P	12	DF101V
		1 P + N <sup>(2)</sup>	6	DF101NV
		2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

<sup>(1)</sup> 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.

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

<sup>(3)</sup> 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.

<sup>(4)</sup> 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 <sup>(1)</sup>

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 <sup>(2)</sup>

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	25	AB1R● <sup>(3)</sup>
		A...Z	25	AB1G● <sup>(3)</sup>

## 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

<sup>(1)</sup> 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.

<sup>(2)</sup> 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.

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

# TeSys Power

## Fuse carriers for North American market

### Product references - DF type

## For protection of control circuits or transformers

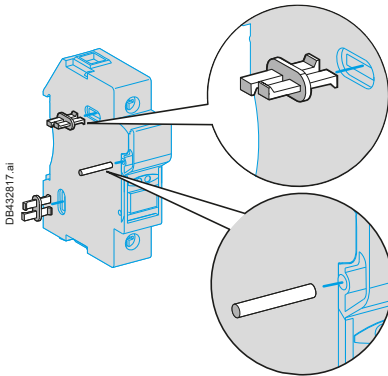
### References



DFCC1



DFCC3V



Detail of assembly clip and pin mounting

#### Fuse carriers <sup>(1)</sup>

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

#### Fuse carriers with "blown fuse" indicators (LED) <sup>(1) (2)</sup>

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

#### Fuse carrier assembly kits <sup>(3)</sup>

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● <sup>(4)</sup>
		A...Z	25	AB1G● <sup>(4)</sup>

<sup>(1)</sup> 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.

<sup>(2)</sup> Operational voltage of the blown fuse indicator: 230 V...690 V.

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

<sup>(4)</sup> When ordering, replace the p in the reference with the number or letter required.

Example: AB1R1 or AB1GA.

Fuse carriers





PB111831.eps

LS1D323



PB111830.eps

LS1D32

Fuse carriers



PB111830.eps

LS1D32



PB121303.eps

+ LA8D324

## For protection of motors or transformers

### 3-pole basic blocks

#### Connection by spring terminals

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

#### Connection by screw clamp terminals or connectors

32 A	10 x 38	– <sup>(4)</sup>	Without	LS1D32	0.300
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### 4-pole basic blocks

#### Connection by screw clamp terminals or connectors

32 A	10 x 38	– <sup>(4)</sup>	Without	LS1D32 + LA8D324 <sup>(5)</sup>	0.300
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## 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.
- (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.

# TeSys Power

## Fuse carriers - Handles and accessories

### Product references - for LS type

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			
External handles			
32 A	3 or 4	Right-hand side (IP54)	LS1D32005 <sup>(1)</sup>
		Left-hand side (IP54)	LS1D32006

Links			
Tubular links			
For fuse carrier			Unit reference
Rating	Number of poles	Sold in lots of	Unit reference
32 A	3 or 4	10	DK1CB92 <sup>(2)</sup>

<sup>(1)</sup> Reference **LS1D32005** replaces reference **DK1FB005**.

<sup>(2)</sup> For use on a neutral circuit, the tubular link can be interlocked with special device **LA8D25906** (sold in lots of 10).

Fuse carriers



# TeSys Power

## Fuse carriers - Accessories

### Product references - for LS type

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	For supply to one or more GV2G busbar sets	1	GV1G09
Connection from the top			
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 <sup>2</sup>	Power supply to 1 or 2 power splitter boxes	1	LAD3B1
Downstream terminal block	16 mm <sup>2</sup>	Connection of motor cables	1	LAD331
Cable end reducer	–	For connection of conductors from 1 to 1.5 mm <sup>2</sup>	20	LAD99






# TeSys Power

Fuse carriers, handles and accessories

## Product references

Fuse  
carriers

DF101	DF222V
DF101N	DF223C
DF101NV	DF223NC
DF101PV	DF223NVC
DF101V	DF223VC
DF102	DF22AM1
DF102V	DF22AM2
DF103	DF22AP
DF103N	DF22N
DF103NV	DF81
DF103V	DF81N
DF10AP	DF81NV
DF10N	DF81V
DF141	DF82
DF141N	DF82V
DF141NV	DF83
DF141V	DF83N
DF142	DF83NV
DF142V	DF83V
DF143C	DFCC1
DF143NC	DFCC1V
DF143NVC	DFCC2
DF143VC	DFCC2V
DF14AM1	DFCC3
DF14AM2	DFCC3V
DF14AP	DK1CB92
DF14N	LA8D324
DF221	LS1D30
DF221N	LS1D32
DF221NV	LS1D32005
DF221V	LS1D32006
DF222	LS1D323

This document is current.  Click on the product reference to get the most recent availability status (hyperlink to [se.com](https://www.se.com) product datasheet).  
If your product variant is no longer available, please consult your distributor or regional sales office.

# Technical Data for Designers

## Contents

### DF type:

- > Characteristics .....B4/12
- > Dimensions and schemes .....B4/13

### DF type for the North American market:

- > Characteristics .....B4/14
- > Dimensions and schemes .....B4/15

### LS, GK type:

- > Characteristics .....B4/16
- > Dimensions.....B4/17
- > Schemes .....B4/18

#### Environment characteristics

Fuse carrier type		DF8	DF10	DF14	DF22
Conforming to standards		IEC/EN 60947-3, IEC/HD 60269-2	IEC/EN 60947-3 <sup>(1)</sup> , IEC/HD 60269-2, R22HL2, UL 4248-1 <sup>(2)</sup> , CSA C22.2 No 4248-1 <sup>(2)</sup>	IEC/EN 60947-3, UL 4248-1, CSA C22.2 No 4248-1	
Product certification		IEC, EAC, CCC, UKCA	IEC, UL, CSA, EAC, DNV-GL, CCC, UKCA	IEC, UL, CSA, EAC, UKCA	
Degree of protection		Conforming to IEC 60529	IP 20		
Ambient air temperature		Storage	°C -40...+80		
		For operation, with derating <sup>(1)</sup>	°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				
Maximum power dissipated by fuse	W	2.50	3.00	5.00	9.50				
Rated insulation voltage (U <sub>i</sub> ) with tubular links, a.c. or D.C. supply	V	500	690	690	690				
Rated impulse withstand voltage (U <sub>imp</sub> )	kV	6	6	8	8				
Conventional thermal current (I <sub>th</sub> ) for ambient air temperature ≤ 20 °C <sup>(3)</sup>	A								
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	kA								
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	kA								
With tubular links	kA	11	15	15	19				
Cabling (number of conductors x c.s.a.)		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Solid cable	mm <sup>2</sup>	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 35 2 x 25
Flexible cable without cable end	mm <sup>2</sup>	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
Flexible cable with cable end	mm <sup>2</sup>	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 (U <sub>i</sub> ) a.c. supply	V	250			
Conventional thermal current (I <sub>th</sub> ) for ambient air temperature ≤ 20 °C <sup>(1)</sup>	A	5			
Rated operational current		24 V	48 V	127 V	240 V
	Category AC-15	A 4	4	3	2.5
	Category DC-13	A 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			

<sup>(1)</sup> DF101PV excluded.

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

<sup>(3)</sup> 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 Power

## Fuse carriers

### Dimensions, schemes - DF type

#### Dimensions

##### Modular fuse carriers 25 A and 32 A

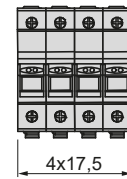
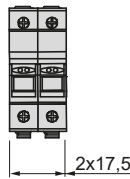
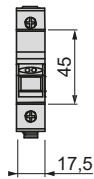
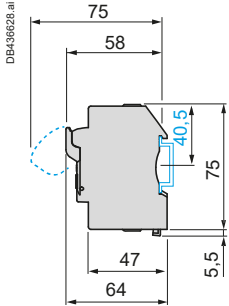
Mounting on 35 mm L rail

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

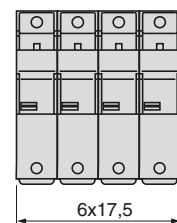
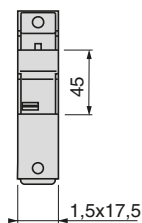
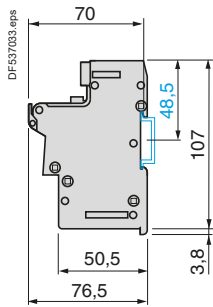
Mounting on 35 mm L rail

DF141 and DF141V  
DF14N

DF141N and DF141NV  
DF142 and DF142V

DF143C and DF143VC

DF143NC and DF143NVC



##### Modular fuse carriers 125 A

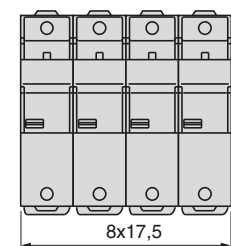
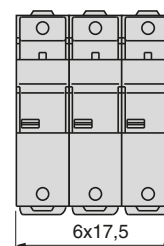
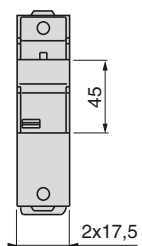
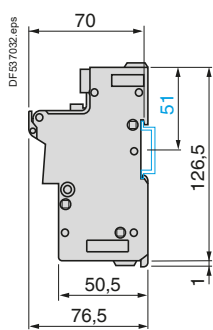
Mounting on 35 mm L rail

DF221 and DF221V  
DF22N

DF221N and DF221NV  
DF222 and DF222V

DF223C and DF223VC

DF223NC and DF223NVC



#### Schemes

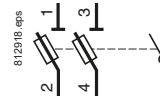
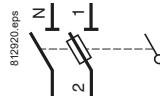
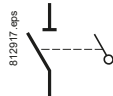
##### Modular fuse carriers

DF•1P

DF•N

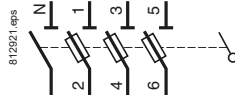
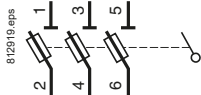
DF•1P + N

DF•2P



DF•3P

DF•3P + N



Introduction:  
page B4/2

References:  
pages B4/3 and B4/4

Characteristics:  
page B4/12

Fuse carriers



Ref.



# TeSys Power

## Fuse carriers for North American market

### Characteristics - DF type

Fuse carriers



Ref.



#### 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, UKCA	
Degree of protection	Conforming to IEC 60529	IP 20	
Ambient air temperature	Storage	°C	-40...+80
	For operation, with derating <sup>(1)</sup>	°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	
Maximum power dissipated by fuse		W	3.00
Rated insulation voltage (Ui) with tubular links, a.c. supply		V	600
Rated impulse withstand voltage (Uimp)		kV	6
Conventional thermal current (Ith) for ambient air temperature ≤ 40 °C <sup>(1)</sup>		A	30
With tubular links			
With aM cartridge fuses			
With gG cartridge fuses		A	30
Short-circuit current withstand With UL 248-4 Class CC fuses		kA	200
Conforming to UL 512 at 600 V			
Cabling (number of conductors x c.s.a.)	Solid cable	mm <sup>2</sup>	Min. 1 x 1.5 Max. 1 x 16 2 x 6
	Flexible cable without cable end	mm <sup>2</sup>	1 x 1.5 1 x 10 2 x 6
	Flexible cable with cable end	mm <sup>2</sup>	1 x 1.5 1 x 10 2 x 6
Tightening torque		Nm	2.2

<sup>(1)</sup> 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 Power

## Fuse carriers for North American market

### Dimensions, schemes - DF type

#### Dimensions

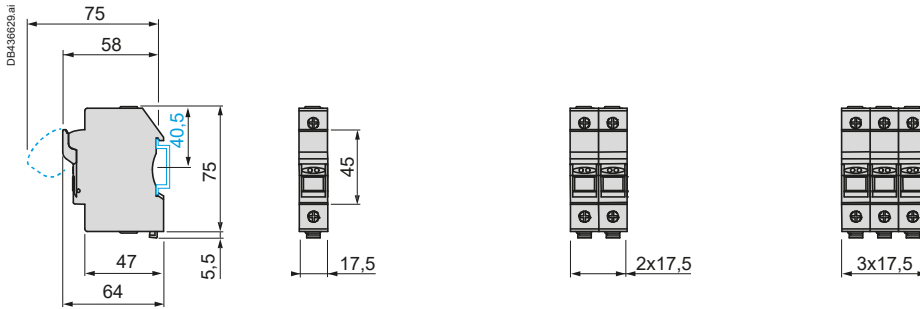
##### Modular fuse carriers 30 A

Mounting on 35 mm  rail

DFCC1 and DFCC1V

DFCC2 and DFCC2V

DFCC3 and DFCC3V



#### Schemes

##### Modular fuse carriers

DFCC1P

DFCC2P

DFCC3P



Fuse carriers



Ref.





Ref.



Environment			
Fuse carrier type		LS1D32	LS1D323
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
Maximum tilt in relation to normal vertical mounting plane			±23°

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

Early break contact characteristics			
Rated operational voltage	V	~ 250. ... 60	~ 250. ... 60
Conventional thermal current	A	2.5	2.5

Blow fuse contact characteristics 95/96-98			
Rated operational voltage	V	–	–
Conventional thermal current	A	–	–

Cartridge fuse characteristics			
Fuse size		10 x 38	10 x 38
Type aM	~ 400 V	A	32 <sup>(2)</sup>
	~ 500 V	A	20
	~ 660 V	A	–
Type gG	~ 400 V	A	25 <sup>(2)</sup>
	~ 500 V	A	25
	~ 660 V	A	–
Maximum power dissipated by fuse	W	3	3

Cabling						
Connection by screw clamp terminals or connectors						
Number and c.s.a. of conductors		mm <sup>2</sup>	Min.	Max.	Min.	Max.
			Solid cable	2 x 1	2 x 6	–
Flexible cable without cable end	2 x 1.5	2 x 6	–	–		
Flexible cable with cable end	2 x 1	2 x 4	–	–		
Connection	Screw clamp terminals			–	–	
Tightening torque	Nm	1.7	–	–		

Connection by spring terminals						
Number and c.s.a. of conductors		mm <sup>2</sup>	Min.	Max.	Min.	Max.
			Solid cable	–	–	2 x 1 <sup>(3)</sup>
Flexible cable without cable end	–	–	2 x 1.5 <sup>(1)</sup>	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 mm<sup>2</sup>, the use of an LA9D99 cable end reducer is recommended.



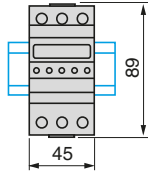
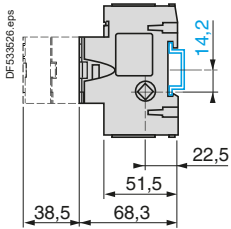
# TeSys Power

## Fuse carriers

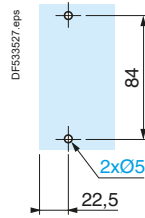
### Dimensions, mounting - LS type

#### LS1D32

##### Mounting on rail NSYDPR200BD



##### Panel mounting



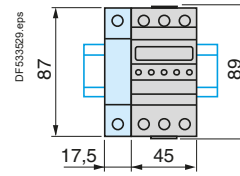
#### LS1D32 + LA8D324

##### Mounting on rail NSYDPR200BD

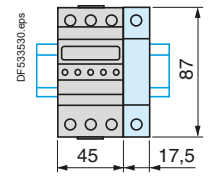


##### Mounting of 4th pole

###### On left-hand side



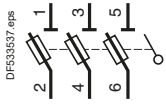
###### On right-hand side



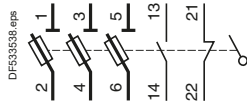
#### Fuse carriers without single-phase protection device

##### 3-pole

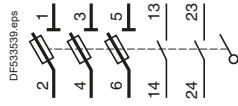
###### LS1D32, D323



###### LS1D32, D323 + GVAE11●

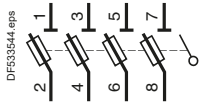


###### LS1D32, D323 + GVAE20●



##### 4-pole

###### LS1D32 + LA8D324



Fuse carriers



Ref.

