

## DATASHEET

# Mains power protection

## MMP 2C Series - 1 phase

Compact Type 2 (Class II / Class C) protector  
 $I_{max} = 40 \text{ kA} / 40 \text{ kA } 8/20 \mu\text{s}$  (MOV / MOV or MOV / GDT)



### Features & benefits

- The varistor based design eliminates the high follow current ( $I_f$ ) associated with spark gap based surge protection
- A red indicator shows when the protector requires replacement (see technical data for replacement module part no.)
- This indication can also trigger a remote signal contact to interface with a building management system. Please use '/S' after the part no. to order the remote indication (change-over) contact version

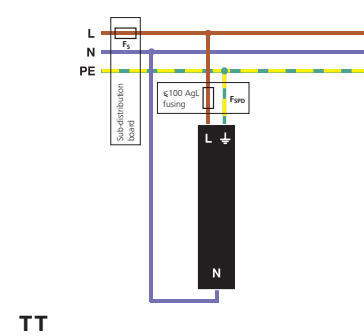
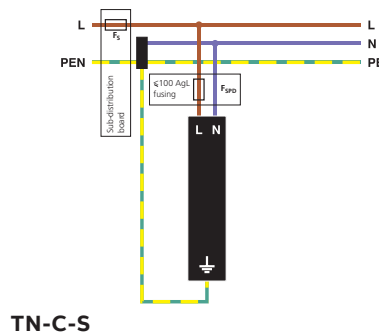
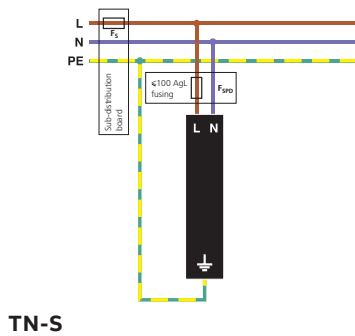
### Application

Use on single phase mains supplies and power distribution systems for protection against indirect lightning strikes.

### Installation

Should be installed in a sub-distribution panel or as close as possible to the equipment to be protected. The protector's base is suitable for attachment to a 35 mm top hat DIN rail.

The diagrams below illustrate how to wire the appropriate MMP protector according to your chosen electrical system.



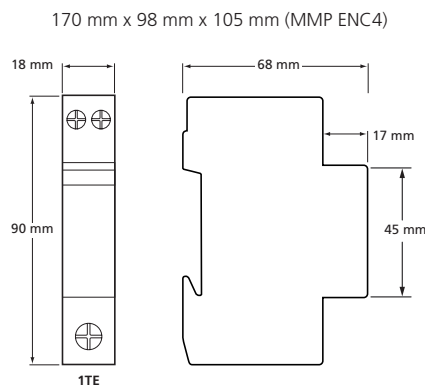
## MMP 2C Series - Technical Specification

Electrical specification	MMP 2C150/2	MMP 2C150/2/TT	MMP 2C150/1+1T
<b>Installation</b>	TN-S / TN-C-S	TT	TT
SPD protective element	MOV / MOV	MOV / MOV	MOV / GDT
Nominal voltage ( $U_n$ )	110-130 V <sub>RMS</sub>	110-130 V <sub>RMS</sub>	110-130 V <sub>RMS</sub>
Nominal frequency range	47-63 Hz	47-63 Hz	47-63 Hz
Maximum continuous operating voltage ( $U_c$ )	150 Vac / 200 Vdc	150 Vac / 200 Vdc	150 Vac / 200 Vdc (MOV) 255 Vac (GDT)
Maximum back up fuse	100 AgL	100 AgL	100 AgL
Short circuit capability	25 kA / 50 Hz	25 kA / 50 Hz	25 kA / 50 Hz
Signal contact ratings	250 V <sub>RMS</sub> / 0.5 A	250 V <sub>RMS</sub> / 0.5 A	250 V <sub>RMS</sub> / 0.5 A
<b>Part numbers</b>			
SPD part no.	MMP 2C150/2	MMP 2C150/2/TT	MMP 2C150/1+1T
SPD part no. with signal contact	MMP 2C150/2/S	MMP 2C150/2/TT/S	MMP 2C150/1+1T/S
Replacement module part no.	MMP 2C150	MMP 2C150	MMP 2C150 (L-N) MMP 2C150/1+1T (L/PE-N)
Transient specification	MMP 2C150/2	MMP 2C150/2/TT	MMP 2C150/1+1T
<b>Arrester classification<sup>1</sup></b>			
EN	2	2	2
IEC	II	II	II
E DIN VDE 0675	C	C	C
<b>Let-through voltage (<math>U_p</math>)<sup>2</sup></b>			
at 5 kA (8/20 $\mu$ s)	< 550 V	< 550 V	< 550 V (L-N)
at $I_n$ (8/20 $\mu$ s)	< 900 V	< 900 V	< 900 V (L-N)
at 1.2/50 $\mu$ s	-	-	< 1.5 kV (N-PE)
Nominal discharge current $I_n$ (8/20 $\mu$ s)	20 kA	20 kA	20 kA / 20 kA (L-N / N-PE)
Maximum discharge current $I_{max}$ (8/20 $\mu$ s)	40 kA	40 kA	40 kA / 40 kA (L-N / N-PE)
Mechanical specification	MMP 2C150/2	MMP 2C150/2/TT	MMP 2C150/1+1T
Temperature range	-40 to +80 °C		
<b>Connection type</b>			
for power (upper terminals)	6 mm <sup>2</sup> solid conductor, 4 mm <sup>2</sup> stranded conductor - maximum torque 2 Nm		
for power (lower terminals)	35 mm <sup>2</sup> solid conductor, 25 mm <sup>2</sup> stranded conductor - maximum torque 3 Nm		
for signal (remote contact)	1.5 mm <sup>2</sup> conductor (/S option) - maximum torque 0.25 Nm		
Mounting	Indoor, 35mm top hat DIN rail		
Degree of protection	IP20		
Case material	Thermoplastic, UL 94 V-0		
Weight <sup>3</sup>	140 g	140 g	130 g
Dimensions to DIN 43880	90 mm x 68 mm x 18 mm (1TE) Units with the remote signal contact terminals (removable) are 100 mm high		
Enclosure dimensions for up to /4 versions (2TE)	170 mm x 98 mm x 105 mm (MMP ENC4)		

<sup>1</sup> Tested to BS EN/IEC-61643

<sup>2</sup> Values stated are per pole

<sup>3</sup> Remote signal contact adds 5 g to weight



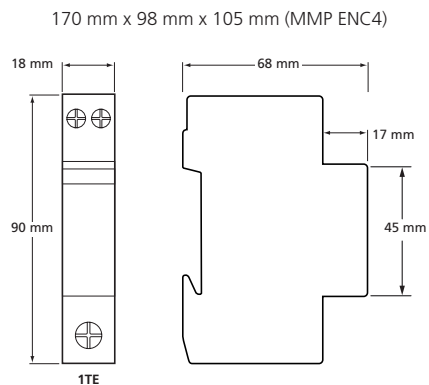
## MMP 2C Series - Technical Specification

Electrical specification	MMP 2C275/2	MMP 2C275/2/TT	MMP 2C275/1+1T
<b>Installation</b>	TN-S / TN-C-S	TT	TT
SPD protective element	MOV / MOV	MOV / MOV	MOV / GDT
Nominal voltage ( $U_n$ )	220-240 V <sub>RMS</sub>	220-240 V <sub>RMS</sub>	220-240 V <sub>RMS</sub>
Nominal frequency range	47-63 Hz	47-63 Hz	47-63 Hz
Maximum continuous operating voltage ( $U_c$ )	275 Vac / 350 Vdc	275 Vac / 350 Vdc	275 Vac / 350 Vdc (MOV) 255 Vac (GDT)
Maximum back up fuse	100 AgL	100 AgL	100 AgL
Short circuit capability	25 kA / 50 Hz	25 kA / 50 Hz	25 kA / 50 Hz
Signal contact ratings	250 V <sub>RMS</sub> / 0.5 A	250 V <sub>RMS</sub> / 0.5 A	250 V <sub>RMS</sub> / 0.5 A
<b>Part numbers</b>			
SPD part no.	MMP 2C275/2	MMP 2C275/2/TT	MMP 2C275/1+1T
SPD part no. with signal contact	MMP 2C275/2/S	MMP 2C275/2/TT/S	MMP 2C275/1+1T/S
Replacement module part no.	MMP 2C275	MMP 2C275	MMP 2C275 (L-N) MMP 2C275/1+1T (L/PE-N)
Transient specification	MMP 2C275/2	MMP 2C275/2/TT	MMP 2C275/1+1T
<b>Arrester classification<sup>1</sup></b>			
EN	2	2	2
IEC	II	II	II
E DIN VDE 0675	C	C	C
<b>Let-through voltage (<math>U_p</math>)<sup>2</sup></b>			
at 5 kA (8/20 $\mu$ s)	< 0.9 kV	< 0.9 kV	< 0.9 kV (L-N)
at $I_n$ (8/20 $\mu$ s)	< 1.5 kV	< 1.5 kV	< 1.5 kV (L-N)
at 1.2/50 $\mu$ s	-	-	< 1.5 kV (N-PE)
Nominal discharge current $I_n$ (8/20 $\mu$ s)	20 kA	20 kA	20 kA / 20 kA (L-N / N-PE)
Maximum discharge current $I_{max}$ (8/20 $\mu$ s)	40 kA	40 kA	40 kA / 40 kA (L-N / N-PE)
Mechanical specification	MMP 2C275/2	MMP 2C275/2/TT	MMP 2C275/1+1T
Temperature range	-40 to +80 °C		
<b>Connection type</b>			
for power (upper terminals)	6 mm <sup>2</sup> solid conductor, 4 mm <sup>2</sup> stranded conductor - maximum torque 2 Nm		
for power (lower terminals)	35 mm <sup>2</sup> solid conductor, 25 mm <sup>2</sup> stranded conductor - maximum torque 3 Nm		
for signal (remote contact)	1.5 mm <sup>2</sup> conductor (/S option) - maximum torque 0.25 Nm		
Mounting	Indoor, 35mm top hat DIN rail		
Degree of protection	IP20		
Case material	Thermoplastic, UL 94 V-0		
Weight <sup>3</sup>	150 g	150 g	135 g
Dimensions to DIN 43880	90 mm x 68 mm x 18 mm (1TE) Units with the remote signal contact terminals (removable) are 100 mm high		
Enclosure dimensions for up to /4 versions (2TE)	170 mm x 98 mm x 105 mm (MMP ENC4)		

<sup>1</sup> Tested to BS EN/IEC-61643

<sup>2</sup> Values stated are per pole

<sup>3</sup> Remote signal contact adds 5 g to weight



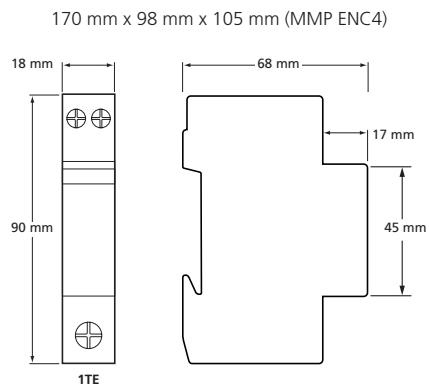
## MMP 2C Series - Technical Specification

Electrical specification	MMP 2C385/2	MMP 2C385/2/TT	MMP 2C385/1+1T
<b>Installation</b>	TN-S / TN-C-S	TT	TT
SPD protective element	MOV / MOV	MOV / MOV	MOV / GDT
Nominal voltage ( $U_n$ )	220-240 V <sub>RMS</sub>	220-240 V <sub>RMS</sub>	220-240 V <sub>RMS</sub>
Nominal frequency range	47-63 Hz	47-63 Hz	47-63 Hz
Maximum continuous operating voltage ( $U_c$ )	385 Vac / 505 Vdc	385 Vac / 505 Vdc	385 Vac / 505 Vdc (MOV) 255 Vac (GDT)
Maximum back up fuse	100 AgL	100 AgL	100 AgL
Short circuit capability	25 kA / 50 Hz	25 kA / 50 Hz	25 kA / 50 Hz
Signal contact ratings	250 V <sub>RMS</sub> / 0.5 A	250 V <sub>RMS</sub> / 0.5 A	250 V <sub>RMS</sub> / 0.5 A
<b>Part numbers</b>			
SPD part no.	MMP 2C385/2	MMP 2C385/2/TT	MMP 2C385/1+1T
SPD part no. with signal contact	MMP 2C385/2/S	MMP 2C385/2/TT/S	MMP 2C385/1+1T/S
Replacement module part no.	MMP 2C385	MMP 2C385	MMP 2C385 (L-N) MMP 2C385/1+1T (L/PE-N)
Transient specification	MMP 2C385/2	MMP 2C385/2/TT	MMP 2C385/1+1T
<b>Arrester classification<sup>1</sup></b>			
EN	2	2	2
IEC	II	II	II
E DIN VDE 0675	C	C	C
<b>Let-through voltage (<math>U_p</math>)<sup>2</sup></b>			
at 5 kA (8/20 $\mu$ s)	< 1.4 kV	< 1.4 kV	< 1.4 kV (L-N)
at $I_n$ (8/20 $\mu$ s)	< 1.9 kV	< 1.9 kV	< 1.9 kV (L-N)
at 1.2/50 $\mu$ s	-	-	< 1.5 kV (N-PE)
Nominal discharge current $I_n$ (8/20 $\mu$ s)	20 kA	20 kA	20 kA / 20 kA (L-N / N-PE)
Maximum discharge current $I_{max}$ (8/20 $\mu$ s)	40 kA	40 kA	40 kA / 40 kA (L-N / N-PE)
Mechanical specification	MMP 2C385/2	MMP 2C385/2/TT	MMP 2C385/1+1T
Temperature range	-40 to +80 °C		
<b>Connection type</b>			
for power (upper terminals)	6 mm <sup>2</sup> solid conductor, 4 mm <sup>2</sup> stranded conductor - maximum torque 2 Nm		
for power (lower terminals)	35 mm <sup>2</sup> solid conductor, 25 mm <sup>2</sup> stranded conductor - maximum torque 3 Nm		
for signal (remote contact)	1.5 mm <sup>2</sup> conductor (/S option) - maximum torque 0.25 Nm		
Mounting	Indoor, 35mm top hat DIN rail		
Degree of protection	IP20		
Case material	Thermoplastic, UL 94 V-0		
Weight <sup>3</sup>	160 g	160 g	140 g
Dimensions to DIN 43880	90 mm x 68 mm x 18 mm (1TE) Units with the remote signal contact terminals (removable) are 100 mm high		
Enclosure dimensions for up to /4 versions (2TE)	170 mm x 98 mm x 105 mm (MMP ENC4)		

<sup>1</sup> Tested to BS EN/IEC-61643

<sup>2</sup> Values stated are per pole

<sup>3</sup> Remote signal contact adds 5 g to weight



DATASHEET

# Mains power protection

## MMP 2C Series - 3 phase

Compact Type 2 (Class II / Class C) protector  
 $I_{max} = 40 \text{ kA} / 40 \text{ kA } 8/20 \mu\text{s}$  (MOV / MOV or MOV / GDT)



**Features & benefits**

- The varistor based design eliminates the high follow current ( $I_f$ ) associated with spark gap based surge protection
- A red indicator shows when the protector requires replacement (see technical data for replacement module part no.)

- This indication can also trigger a remote signal contact to interface with a building management system. Please use 'S' after the part no. to order the remote indication (change-over) contact version

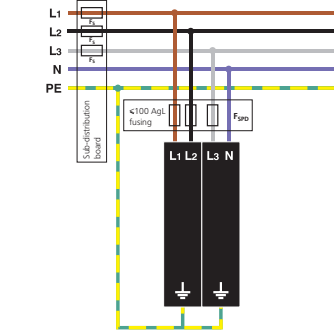
**Application**

Use on three phase mains supplies and power distribution systems for protection against indirect lightning strikes.

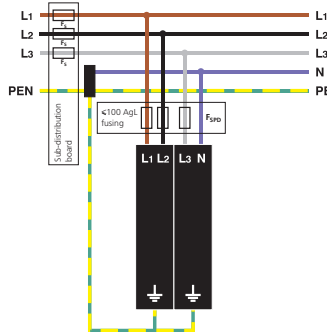
**Installation**

Should be installed in a sub-distribution panel or as close as possible to the equipment to be protected. The protector's base is suitable for attachment to a 35 mm top hat DIN rail.

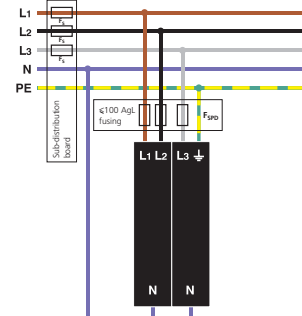
The diagrams below illustrate how to wire the appropriate MMP protector according to your chosen electrical system.



TN-S



TN-C-S



TT

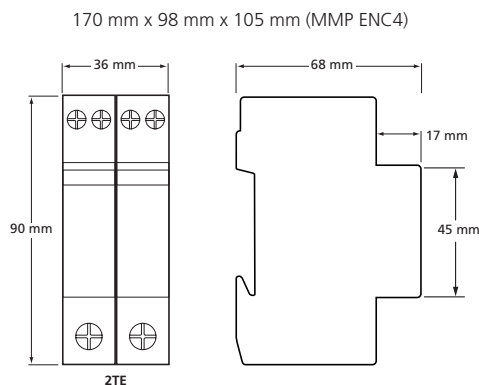
## MMP 2C Series - Technical Specification

Electrical specification	MMP 2C150/4	MMP 2C150/4/TT	MMP 2C150/3+1T
<b>Installation</b>	TN-S / TN-C-S	TT	TT
SPD protective element	MOV / MOV	MOV / MOV	MOV / GDT
Nominal voltage ( $U_n$ )	110-130 V <sub>RMS</sub>	110-130 V <sub>RMS</sub>	110-130 V <sub>RMS</sub>
Nominal frequency range	47-63 Hz	47-63 Hz	47-63 Hz
Maximum continuous operating voltage ( $U_c$ )	150 Vac / 200 Vdc	150 Vac / 200 Vdc	150 Vac / 200 Vdc (MOV) 255 Vac (GDT)
Maximum back up fuse	100 AgL	100 AgL	100 AgL
Short circuit capability	25 kA / 50 Hz	25 kA / 50 Hz	25 kA / 50 Hz
Signal contact ratings	250 V <sub>RMS</sub> / 0.5 A	250 V <sub>RMS</sub> / 0.5 A	250 V <sub>RMS</sub> / 0.5 A
<b>Part numbers</b>			
SPD part no.	MMP 2C150/4	MMP 2C150/4/TT	MMP 2C150/3+1T
SPD part no. with signal contact	MMP 2C150/4/S	MMP 2C150/4/TT/S	MMP 2C150/3+1T/S
Replacement module part no.	MMP 2C150	MMP 2C150	MMP 2C150 (L-N) MMP 2C150/1+1T (L/PE-N)
Transient specification	MMP 2C150/4	MMP 2C150/4/TT	MMP 2C150/3+1T
<b>Arrester classification<sup>1</sup></b>			
EN	2	2	2
IEC	II	II	II
E DIN VDE 0675	C	C	C
<b>Let-through voltage (<math>U_p</math>)<sup>2</sup></b>			
at 5 kA (8/20 $\mu$ s)	< 550 V	< 550 V	< 550 V (L-N)
at $I_n$ (8/20 $\mu$ s)	< 900 V	< 900 V	< 900 V (L-N)
at 1.2/50 $\mu$ s	-	-	< 1.5 kV (N-PE)
Nominal discharge current $I_n$ (8/20 $\mu$ s)	20 kA	20 kA	20 kA / 20 kA (L-N / N-PE)
Maximum discharge current $I_{max}$ (8/20 $\mu$ s)	40 kA	40 kA	40 kA / 40 kA (L-N / N-PE)
Mechanical specification	MMP 2C150/4	MMP 2C150/4/TT	MMP 2C150/3+1T
Temperature range	-40 to +80 °C		
<b>Connection type</b>			
for power (upper terminals)	6 mm <sup>2</sup> solid conductor, 4 mm <sup>2</sup> stranded conductor - maximum torque 2 Nm		
for power (lower terminals)	35 mm <sup>2</sup> solid conductor, 25 mm <sup>2</sup> stranded conductor - maximum torque 3 Nm		
for signal (remote contact)	1.5 mm <sup>2</sup> conductor (/S option) - maximum torque 0.25 Nm		
Mounting	Indoor, 35mm top hat DIN rail		
Degree of protection	IP20		
Case material	Thermoplastic, UL 94 V-0		
Weight <sup>3</sup>	280 g	280 g	260 g
Dimensions to DIN 43880	90 mm x 68 mm x 36 mm (2TE) Units with the remote signal contact terminals (removable) are 100 mm high		
Enclosure dimensions for up to /4 versions (2TE)	170 mm x 98 mm x 105 mm (MMP ENC4)		

<sup>1</sup> Tested to BS EN/IEC-61643

<sup>2</sup> Values stated are per pole

<sup>3</sup> Remote signal contact adds 5 g to weight



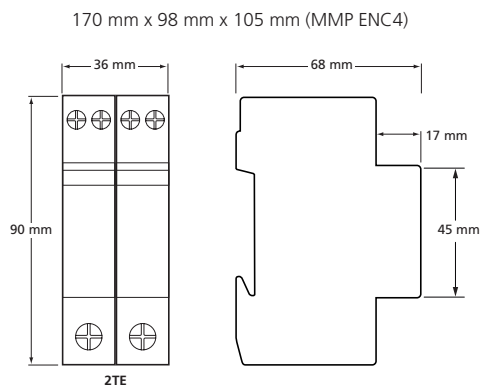
## MMP 2C Series - Technical Specification

Electrical specification	MMP 2C275/4	MMP 2C275/4/TT	MMP 2C275/3+1T
<b>Installation</b>	TN-S / TN-C-S	TT	TT
SPD protective element	MOV / MOV	MOV / MOV	MOV / GDT
Nominal voltage ( $U_n$ )	220-240 V <sub>RMS</sub>	220-240 V <sub>RMS</sub>	220-240 V <sub>RMS</sub>
Nominal frequency range	47-63 Hz	47-63 Hz	47-63 Hz
Maximum continuous operating voltage ( $U_c$ )	275 Vac / 350 Vdc	275 Vac / 350 Vdc	275 Vac / 350 Vdc (MOV) 255 Vac (GDT)
Maximum back up fuse	100 AgL	100 AgL	100 AgL
Short circuit capability	25 kA / 50 Hz	25 kA / 50 Hz	25 kA / 50 Hz
Signal contact ratings	250 V <sub>RMS</sub> / 0.5 A	250 V <sub>RMS</sub> / 0.5 A	250 V <sub>RMS</sub> / 0.5 A
<b>Part numbers</b>			
SPD part no.	MMP 2C275/4	MMP 2C275/4/TT	MMP 2C275/3+1T
SPD part no. with signal contact	MMP 2C275/4/S	MMP 2C275/4/TT/S	MMP 2C275/3+1T/S
Replacement module part no.	MMP 2C275	MMP 2C275	MMP 2C275 (L-N) MMP 2C275/1+1T (L/PE-N)
Transient specification	MMP 2C275/4	MMP 2C275/4/TT	MMP 2C275/3+1T
<b>Arrester classification<sup>1</sup></b>			
EN	2	2	2
IEC	II	II	II
E DIN VDE 0675	C	C	C
<b>Let-through voltage (<math>U_p</math>)<sup>2</sup></b>			
at 5 kA (8/20 $\mu$ s)	< 0.9 kV	< 0.9 kV	< 0.9 kV (L-N)
at $I_n$ (8/20 $\mu$ s)	< 1.5 kV	< 1.5 kV	< 1.5 kV (L-N)
at 1.2/50 $\mu$ s (N-PE)	-	-	< 1.5 kV (N-PE)
Nominal discharge current $I_n$ (8/20 $\mu$ s)	20 kA	20 kA	20 kA / 20 kA (L-N / N-PE)
Maximum discharge current $I_{max}$ (8/20 $\mu$ s)	40 kA	40 kA	40 kA / 40 kA (L-N / N-PE)
Mechanical specification	MMP 2C275/4	MMP 2C275/4/TT	MMP 2C275/3+1T
Temperature range	-40 to +80 °C		
<b>Connection type</b>			
for power (upper terminals)	6 mm <sup>2</sup> solid conductor, 4 mm <sup>2</sup> stranded conductor - maximum torque 2 Nm		
for power (lower terminals)	35 mm <sup>2</sup> solid conductor, 25 mm <sup>2</sup> stranded conductor - maximum torque 3 Nm		
for signal (remote contact)	1.5 mm <sup>2</sup> conductor (/S option) - maximum torque 0.25 Nm		
Mounting	Indoor, 35mm top hat DIN rail		
Degree of protection	IP20		
Case material	Thermoplastic, UL 94 V-0		
Weight <sup>3</sup>	300 g	300 g	270 g
Dimensions to DIN 43880	90 mm x 68 mm x 36 mm (2TE) Units with the remote signal contact terminals (removable) are 100 mm high		
Enclosure dimensions for up to /4 versions (2TE)	170 mm x 98 mm x 105 mm (MMP ENC4)		

<sup>1</sup> Tested to BS EN/IEC-61643

<sup>2</sup> Values stated are per pole

<sup>3</sup> Remote signal contact adds 5 g to weight



## MMP 2C Series - Technical Specification

Electrical specification	MMP 2C385/4	MMP 2C385/4/TT	MMP 2C385/3+1T
<b>Installation</b>	TN-S / TN-C-S	TT	TT
SPD protective element	MOV / MOV	MOV / MOV	MOV / GDT
Nominal voltage ( $U_n$ )	220-240 V <sub>RMS</sub>	220-240 V <sub>RMS</sub>	220-240 V <sub>RMS</sub>
Nominal frequency range	47-63 Hz	47-63 Hz	47-63 Hz
Maximum continuous operating voltage ( $U_c$ )	385 Vac / 505 Vdc	385 Vac / 505 Vdc	385 Vac / 505 Vdc (MOV) 255 Vac (GDT)
Maximum back up fuse	100 AgL	100 AgL	100 AgL
Short circuit capability	25 kA / 50 Hz	25 kA / 50 Hz	25 kA / 50 Hz
Signal contact ratings	250 V <sub>RMS</sub> / 0.5 A	250 V <sub>RMS</sub> / 0.5 A	250 V <sub>RMS</sub> / 0.5 A
<b>Part numbers</b>			
SPD part no.	MMP 2C385/4	MMP 2C385/4/TT	MMP 2C385/3+1T
SPD part no. with signal contact	MMP 2C385/4/S	MMP 2C385/4/TT/S	MMP 2C385/3+1T/S
Replacement module part no.	MMP 2C385	MMP 2C385	MMP 2C385 (L-N) MMP 2C385/1+1T (L/PE-N)
Transient specification	MMP 2C385/4	MMP 2C385/4/TT	MMP 2C385/3+1T
<b>Arrester classification<sup>1</sup></b>			
EN	2	2	C
IEC	II	II	II
E DIN VDE 0675	C	C	C
<b>Let-through voltage (<math>U_p</math>)<sup>2</sup></b>			
at 5 kA (8/20 $\mu$ s)	< 1.4 kV	< 1.4 kV	< 1.4 kV (L-N)
at $I_n$ (8/20 $\mu$ s)	< 1.9 kV	< 1.9 kV	< 1.9 kV (L-N)
at 1.2/50 $\mu$ s (N-PE)	-	-	< 1.5 kV (N-PE)
Nominal discharge current $I_n$ (8/20 $\mu$ s)	20 kA	20 kA	20 kA / 20 kA (L-N / N-PE)
Maximum discharge current $I_{max}$ (8/20 $\mu$ s)	40 kA	40 kA	40 kA / 40 kA (L-N / N-PE)
Mechanical specification	MMP 2C385/4	MMP 2C385/4/TT	MMP 2C385/3+1T
Temperature range	-40 to +80 °C		
<b>Connection type</b>			
for power (upper terminals)	6 mm <sup>2</sup> solid conductor, 4 mm <sup>2</sup> stranded conductor - maximum torque 2 Nm		
for power (lower terminals)	35 mm <sup>2</sup> solid conductor, 25 mm <sup>2</sup> stranded conductor - maximum torque 3 Nm		
for signal (remote contact)	1.5 mm <sup>2</sup> conductor (/S option) - maximum torque 0.25 Nm		
Mounting	Indoor, 35mm top hat DIN rail		
Degree of protection	IP20		
Case material	Thermoplastic, UL 94 V-0		
Weight <sup>3</sup>	320 g	320 g	280 g
Dimensions to DIN 43880	90 mm x 68 mm x 36 mm (2TE) Units with the remote signal contact terminals (removable) are 100 mm high		
Enclosure dimensions for up to /4 versions (2TE)	170 mm x 98 mm x 105 mm (MMP ENC4)		

<sup>1</sup> Tested to BS EN/IEC-61643

<sup>2</sup> Values stated are per pole

<sup>3</sup> Remote signal contact adds 5 g to weight

