

MZS-230AV

IEC Class I / II compliant

Conforming standards

- IEC 61643-11 compliant
- RoHS compliant

Features

- Impulse sparkover current up to 25 kA (direct strike waveform 10/350 μ s)
- Voltage protection level 2.0kV or less
- High follow current shutoff ability
- Deterioration display function (warning contact output terminal attached)
- DIN rail mountable (35 mm)

Applications

- Low voltage power supply circuits in switchboards and distribution boards (AC 100V/200V)
- Power supply circuits in control equipment (AC 100V/200V)

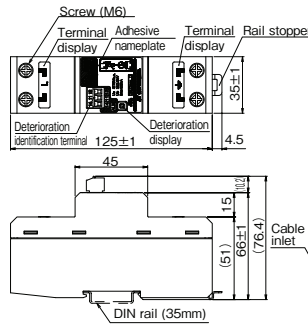
Characteristics

Item	Measurement conditions	Performance
Maximum continuous operating voltage (50/60Hz) (Uc)	—	275V
Impulse current (Iimp)	10/350 μ s	25kA
Short-circuit withstand capability (Iscsr)	L-NPE	50kA
Voltage protection level (Up)	Based on IEC	2.0 kV or less

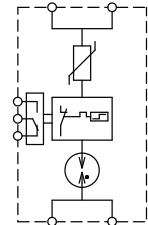


Dimensions: W35×D125×H66 (mm)
 Mass: 370 (g)

External view



Circuit diagram



MZS-NPE

IEC Class I / II compliant

Conforming standards

- IEC 61643-11 compliant
- RoHS compliant

Features

- Impulse sparkover current up to 75 kA (direct strike waveform 10/350 μ s)
- Voltage protection level 1.5 kV or less
- DIN rail mountable (35 mm)

Applications

- Low voltage power supply circuits in switchboards and distribution boards (AC 100V/200V)
- Power supply circuits in control equipment (AC 100V/200V)

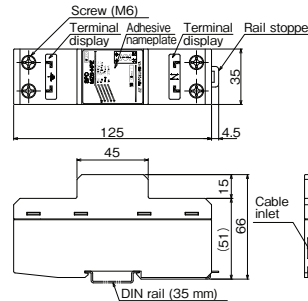
Characteristics

Item	Measurement conditions	Performance
Maximum continuous operating voltage (50/60Hz) (Uc)	—	255V
Impulse current (Iimp)	10/350 μ s	75kA
Nominal discharge current (In)	8/20 μ s	20kA
Voltage protection level (Up)	Based on IEC	1.5 kV or less

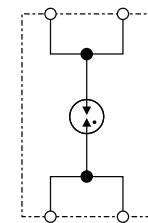


Dimensions: W35×D125×H66 (mm)
 Mass: 290 (g)

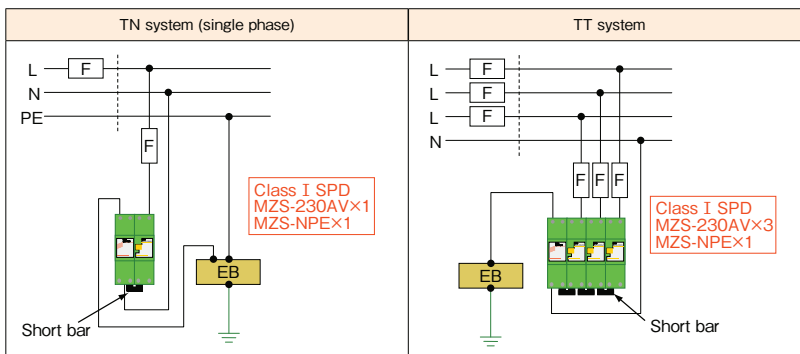
External view



Circuit diagram



Installation examples (MZS-200AV + MZS-NPE)



MZS-400AV

IEC Class I / II compliant

Conforming standards

- IEC 61643-1/IEC 62305-4 compliant
- RoHS compliant

Features

- Impulse sparkover current up to 25 kA (direct strike waveform 10/350 μ s)
- Voltage protection level 2.5kV or less
- High follow current shutoff ability
- Deterioration display function (warning contact output terminal attached)
- DIN rail mountable (35 mm)

Applications

- Low voltage power supply circuits in switchboards and distribution boards (AC 400V)
- Power supply circuits in control equipment (AC 400V)

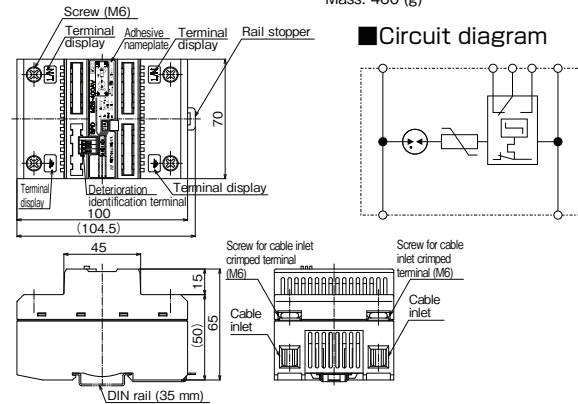
Characteristics

Item	Measurement conditions	Performance
Maximum continuous operating voltage (50/60Hz) (Uc)	—	460V
Impulse current (Iimp)	10/350 μ s	25kA
Nominal discharge current (In)	8/20 μ s	20kA
Voltage protection level (Up)	Based on IEC	2.5kV or less



External view

Dimensions: W70×D100×H65 (mm)
Mass: 460 (g)



Circuit diagram

MZS-NPE400

IEC Class I / II compliant

Conforming standards

- IEC 61643-1/IEC 62305-4 compliant
- RoHS compliant

Features

- Impulse sparkover current up to 75 kA (direct strike waveform 10/350 μ s)
- Voltage protection level 1.8 kV or less
- DIN rail mountable (35 mm)

Applications

- Low voltage power supply circuits in switchboards and distribution boards (AC 400V)
- Power supply circuits in control equipment (AC 400V)

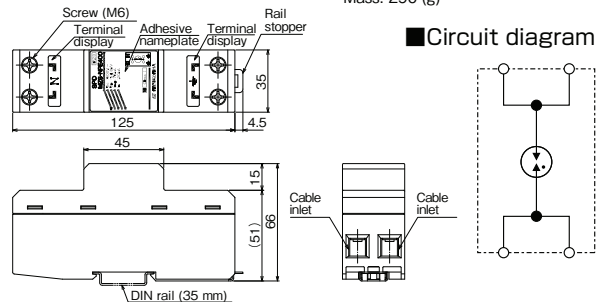
Characteristics

Item	Measurement conditions	Performance
Maximum continuous operating voltage (50/60Hz) (Uc)	—	500V
Impulse current (Iimp)	10/350 μ s	75kA
Nominal discharge current (In)	8/20 μ s	20kA
Voltage protection level (Up)	Based on IEC	1.8 kV or less



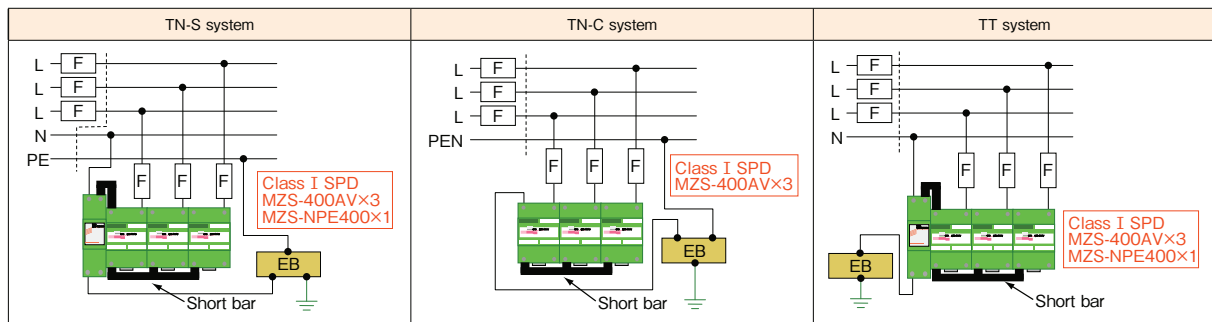
External view

Dimensions: W35×D125×H66 (mm)
Mass: 290 (g)



Circuit diagram

Installation examples (MZS-400AV + MZS-NPE400)



Item	Measurement conditions						
		MZS-230AV	MZS-NPE	MZS-400AV	MZS-NPE400	MZS-300DC	MZS-600DC
Applications		Low voltage power supply circuits in switchboards and distribution boards Power supply circuits in control equipment				Protects DC power supply circuits, such as power conditioning systems for solar power generation systems.	
Test classification	IEC 61643-1	Class I, II (IEC 61643-11)		Class I, II			
Maximum continuous operating voltage (Uc)	—	AC275V	AC255V	AC460V	AC500V	DC300V	DC615V
Impulse current (Iimp)	10/350μs	25kA	75kA	25kA	75kA	25kA	
Nominal discharge current (In)	8/20μs	—	20kA				
Short-circuit withstand capability (Iscsr)	—	50kA	—				
Voltage protection level (Up)	Based on IEC	2.0kV or less	1.5kV or less	2.5kV or less	1.8kV or less	1.5kV or less	2.5kV or less
Follow current shutoff rating (Ifi)	Uc=AC460V	—		50kA	—		
	Uc=DC300V	—				50kA	—
	Uc=DC610V	—					50kA
Applicable wires	—	AWG11~5(4~16mmil)		AWG10~4(5.5~22mmil)			
Deterioration display	—	Yes (Concavo: normal; Convex: deteriorating)	—	Yes (Blue : normal; Red: deteriorating)	—	Yes (Concavo: normal; Convex: deteriorating)	Yes (Blue : normal; Red: deteriorating)
Warning contact output terminal	—	Yes	—	Yes	—	Yes	
Operating environmental conditions	Rated operating temperature Rated operating humidity	-40°C to +80°C 96% or less (no condensation)		-40°C to +70°C 95% or less (no condensation)			