

# Surge Protection Devices Ex9UE3



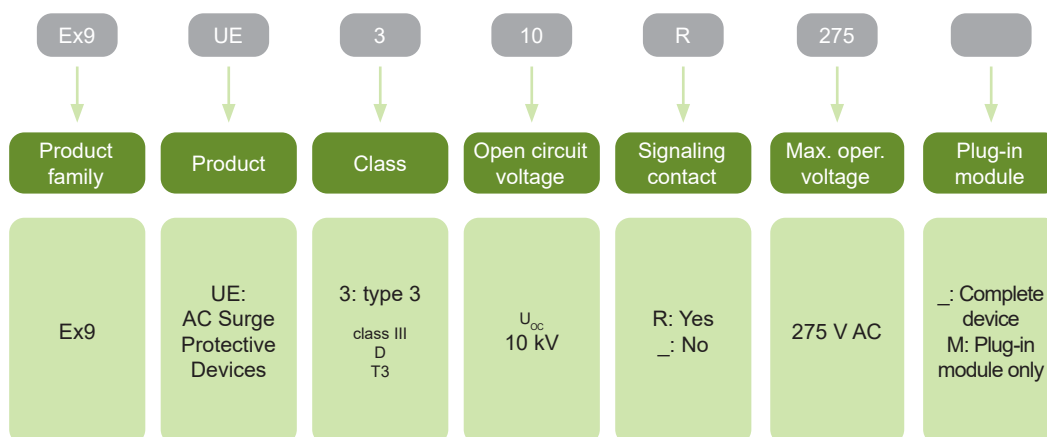
- Surge Protection Devices
- Type 3 (Class III, T3, D)
- Tested according to EN 61643-11
- Maximum continuous operational voltage  $U_c$  275 V AC
- Design based on Y connection of functional elements
- Plug-in module design
- With and without remote indication contact
- Device status indicator on the front side

The Ex9UE3 line is a group of Class III Surge Protective Devices. They are intended as a fine protection against transient overvoltage, installed downstream to Class II SPDs. The application field of Ex9UE3 is protection of sensitive electronics used in or close to distribution board, typically home automation, IT systems etc. The Y connection of functional elements provides balanced protection of L and N conductor towards PE thanks to identical MOVs for both working conductors and full isolation due to connection to PE via Spark Gap.

Class III SPDs should be installed maximum 5 meters from the protected device. Coordination with Class II SPDs Ex9UE2 20 is defined also for near installation. To reach best parameters, it is recommended to install both classes with mutual distance of 5 meters of connecting cables.

The design of Ex9UE3 is based on Metal Oxide Varistors. Such design provides very low response time. The modular design with plug in inserts allows simple and quick replacement of function modules in case of MOV is beyond if its lifespan due to often occurrence of overvoltage peaks.

## Type Key



## Certification marks



# Surge Protection Devices Ex9UE3

## Type 3 SPDs (Class III, T3, D) - complete devices, $I_{max} = 10 \text{ kA (8/20 } \mu\text{s)}$

- Maximum discharge current  $I_{max}$  10 kA (8/20  $\mu\text{s}$ )
- Nominal discharge current  $I_n$  5 kA (8/20  $\mu\text{s}$ )
- Maximum continuous operational voltage  $U_c$  275 V AC
- Open circuit voltage  $U_{oc}$  10 kV



Max. oper. voltage $U_c$	Connection	Signaling contact	Article No.	Type	Packing
275 V AC	1+1	no	106858	Ex9UE3 10 275	1/60
275 V AC	1+1	yes	106857	Ex9UE3 10R 275	1/60

## Type 3 SPDs (Class III, T3, D) - spare modules



Max. oper. voltage $U_c$	Max. discharge current $I_{max}$	Article No.	Type	Packing
275 V AC	10 kA	106859	Ex9UE3 10 275 M	1

# Technical Data Ex9UE3

## Surge Protection Devices Type 3, $U_{oc} = 10 \text{ kV}$

### General parameters

Suitable for protection of electrical installation and devices against transient overvoltage
Plug-in module design
Indication window helps users to know the status of device
Optional remote-signaling contact

### Electrical parameters

Tested according to	EN 61643-11
Classified type (test class)	Type 3 (Class III, D, T3)
Technology	MOV (Varistor) + Spark gap
Protection function	overcurrent
Protection mode	L → N L → PE N → PE
Connection configuration	Y
Nominal voltage $U_n$	230 / 400 V AC
Max. continuous oper. voltage $U_c$	275 V AC
Nominal frequency $f$	50 / 60 Hz
Nominal discharge current $I_n$ (8/20 $\mu\text{s}$ )	5 kA per pole
Max. discharge current $I_{max}$ (8/20 $\mu\text{s}$ )	10 kA per pole
Nominal load current $I_L$	25 A
Open circuit voltage $U_{oc}$	10 kV
Protection voltage $U_p$ at $U_{oc}$	
L-N	1.25 kV
N-PE	1.5 kV
N-PE follow current $I_n$	-
Residual current $I_{pE}$	< 1 mA
Temporary overvoltage $U_t$ (withstand)	
L-N, 5 s	335 V
N-PE, 200 ms	440 V
MOV voltage of 1mA point	387 - 473 V
Max. back-up fuse	10 A MCB with C characteristic
Type of LV system	TN or TT
SPD overload behaviour mode	OCM
Remote contact (optional)	1 changeover (CO)
Number of ports	1
Remote contact op. voltage / current	
AC $U_{max} / I_{max}$	250 V AC / 1 A
DC $U_{max} / I_{max}$	30 V DC / 1 A

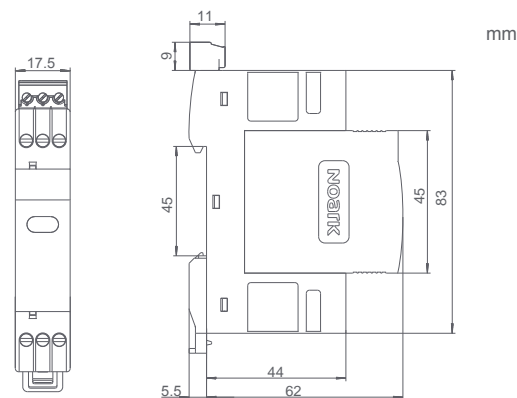
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## Surge Protection Devices Type 3, $U_{oc} = 10$ kV

### Mechanical parameters

Device width	17.5 mm
Device height	83 mm (89 including rail clip)
Frame size	45 mm
Mounting method	fixed
Mounting	easy fastening onto 35 mm device rail (DIN)
Mounting position	arbitrary
Degree of protection	IP40, terminals IP20
Terminals	lift
Terminal capacity	1 — 4 mm <sup>2</sup>
Fastening torque of terminals	0.3 — 0.5 Nm
Remote contact terminal capacity	0.14 — 1.5 mm <sup>2</sup>
Location	indoor
Installation class	III
Pollution degree	2
Accessibility	inaccessible
Ambient temperature	-5 — +40 °C
Altitude	≤ 2000 m
Relative humidity	30 — 90 %
Weight	0.08 kg

### Dimensions



### Connection diagrams, protection mode

