



# SURGE & LIGHTNING PROTECTION

Protect your equipment from electrical disturbances with Dehn Surge & Lighting Protection solutions. Our advanced products safeguard against voltage spikes and electromagnetic interference, ensuring the stability and longevity of your electronic devices.



THINK ELECTRICAL

## SURGE PROTECTION DEVICES



### Integrated Lightning Arrester with Backup Fuse: Class 1

Fixed format with flag indication.

Code	Description	$I_{imp}$ (10/350 $\mu$ s)	Aux	Poles Protected	Up	Un	Uc
961200	DEHNvenCI 1	25kA	-	1PH	$\leq 1500V$	230V	255V
961205	DEHNvenCI 1 FM	25kA	1C/O	1PH	$\leq 1500V$	230V	255V
961180	DEHNgap (Spark Gap)	100kA	-	N-E	$\leq 1500V$	-	255V
961185	DEHNgap FM (Spark Gap)	100kA	1C/O	N-E	$\leq 1500V$	-	255V

Busbar for connection of multiple arrestors to earth: **900411** (3P), **900417** (4P)



### Combined Lightning & Surge Protection : Class 1+2

Over Current Protection Required. Plug-in with flag indication. Maximum backup fuse: 125A / 315A

Code	Description	$I_n$ (8/20 $\mu$ s)	$I_{imp}$ (10/350 $\mu$ s)	Aux	Poles Protected	Up	Un
951315	DEHNventil M TT FM	25/100kA*	25/100kA*	1C/O	3PH + N	$\leq 1500V$	230/400V
951115	DEHNventil M TT 2P FM	25/50kA*	25/50kA*	1C/O	1PH + N	$\leq 1500V$	230V

Spare plug-in modules: 1PH: **951001**, N-E: **951100** \*L-N / N-E

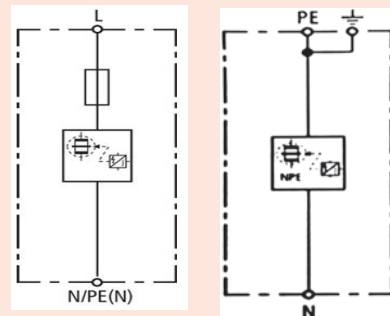
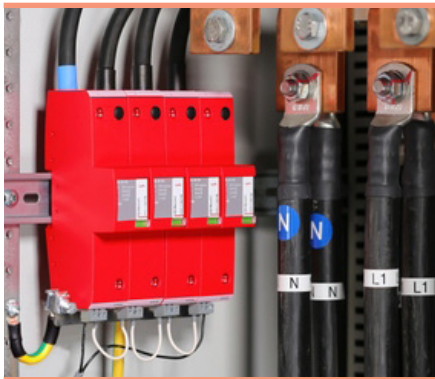


### Combined Lightning & Surge Protection: Class 1+2

Over Current Protection Required. Plug-in with flag indication. Maximum backup fuse: 160A.

Code	Description	$I_n$ (8/20 $\mu$ s)	$I_{imp}$ (10/350 $\mu$ s)	Aux	Poles Protected	Up	Un
941110	DEHNshield d TT 2P	12.5/25kA*	12.5/25kA*	-	1PH + N	1.5kV	230V
941310	DEHNshield d TT	12.5/50kA*	12.5/50kA*	-	3PH + N	1.5kV	230/400V

\* L-N / N-E

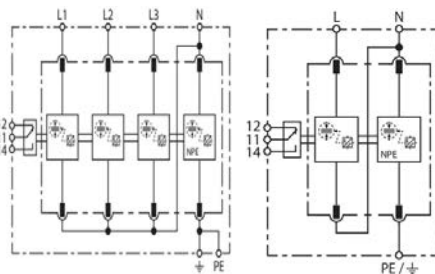


#### DEHNVEN CI

- Spark-gap based combined lightning and surge arrester with an integrated backup fuse Capable of carrying lightning currents.
- High Lightning Discharge capacity up to 25kA (10/350)  $\mu$ S
- Maximum system availability due to radax flow follow current limitation.

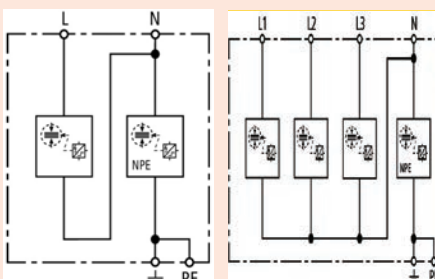
#### DEHNGAP

- Total current arrester specifically designed for insatllation in 3+1 and 1+1 configurations of TT systems.
- Creepage discharge spark gap technology.



#### DEHNVENTIL M TT FM

- Prewired spark-gap based type 1 and type 2 combined lightning arrester and surger arrester consisting of a base plug and a single plug-in protection module.
- Easy replacement of protection modules.
- Capable of protecting terminal equipment .
- RAC spark gap technology that is powerful yet gentle on terminal devices.



#### DEHNSHIELD D TT

- Application-optimised and prewired spark-gap based type1 + type2 combined lightning current and surge arrester.
- Compact design due to space saving spark gap technology with a width of only one module /pole
- High follow current exstinguishing capacity ( $I_n = 25 \text{ kA}_{rms}$ )

## PHOTOVOLTAIC SYSTEM PROTECTION

### Photovoltaic Arrester with Integrated DC Fuse: Class 2

Combined disconnection and short circuiting device with safe isolation in the plug-in module prevents fire damage caused by DC arcing (patented SCI principal).



952515

Code	Description	In (8/20 $\mu$ s)	Imax (8/20 $\mu$ s)	Aux	Up	UcPV	Replacement Modules	
							+/-	
952518	DEHNGuard M YPV SCI 150 FM	10kA	20kA	Yes	$\leq 0.8$ kV	150V	952055	952045
952515	DEHNGuard M YPV SCI 1000 FM	12.5kA	25kA	Yes	$\leq 4$ kV	1000V	952051	952041
952517	DEHNGuard M YPV SCI 1200 FM	12.5kA	25kA	Yes	$\leq 4.5$ kV	1200V	952054	952044

### Photovoltaic Arrester: Class 2

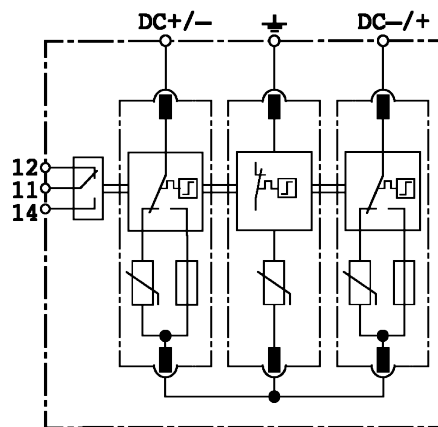
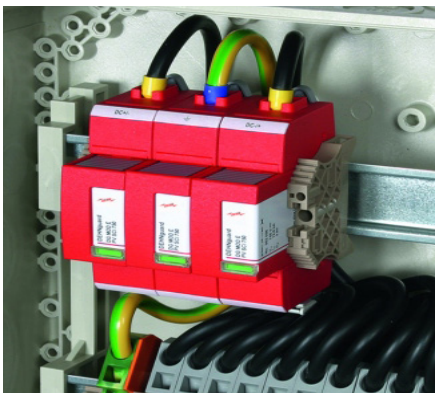
Plug-in with flag indication. High reliability due to "Thermo-dynamic Control" SPD monitoring device.



952565

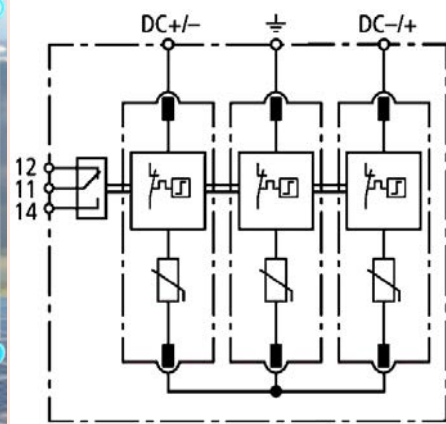
Code	Description	In (8/20 $\mu$ s)	Imax (8/20 $\mu$ s)	Aux	Up	UcPV	Replacement Modules	
							+/-	
952565	DEHNGuard M YPV 1200 FM	20kA	40kA	Yes	$\leq 4$ kV	1170V	952048	
952567	DEHNGuard M YPV 1500 FM	15kA	40kA	Yes	$\leq 5$ kV	1500V	952049	

### DEHNGUARD YPV SCI



- Prewired modular complete unit for use in photovoltaic systems consisting of a base part and plug-in protection modules
- Combined disconnection and short-circuiting device with safe electrical isolation in the protection module (patented SCI principle)
- Tried and tested fault-resistant Y circuit of DEHNGuard M YPV SCI (FM) prevents damage to the surge protective device in case of insulation faults in the generator circuit

### DEHNGUARD M YPV



- Prewired complete unit for photovoltaic systems consisting of a base part and plug-in protection modules
- Fault-resistant Y circuit with three heavy-duty varistors prevents damage to the surge protective device in case of insulation faults in the generator circuit
- High reliability due to "Thermo Dynamic Control" disconnecter
- Fault indication by red indicator flag in the inspection window



## SURGE PROTECTION DEVICES

### Surge Arrester: Class 2

Over Current Protection Required. Plug-in with flag indication. Maximum backup fuse: 125A.



Code	Description	In (8/20µs)	I <sub>max</sub> (8/20µs)	Aux	Poles Protected	U <sub>p</sub>	U <sub>c</sub>
952070	DEHNGuard S 275	20kA	40kA	-	1PH (L-N/E)	≤1500V	275V
952090	DEHNGuard S 275 FM	20kA	40kA	1C/O	1PH (L-N/E)	≤1500V	275V
952030	DEHNgap C S (Spark Gap)	20kA	40kA	-	N-E	≤1500V	255V
952035	DEHNgap C S FM (Spark Gap)	20kA	40kA	1C/O	N-E	≤1500V	255V
952094	DEHNGuard S 385 FM	20kA	40kA	1C/O	1PH (L-E)	≤1750V	385V
952075	DEHNGuard S 440	20kA	40kA	-	1PH (L-E)	≤1700V	585V
952095	DEHNGuard S 440 FM	20kA	40kA	1C/O	1PH (L-E)	≤1700V	585V

Spare plug-in Modules: 275V - 952010, Spark Gap: 952060

### Surge Arrester: Class 2

Over Current Protection Required. Fixed format with flag indication. Maximum backup fuse: 125A.



NEW

Code	Description	Mounting Rail	In (8/20µs)	I <sub>max</sub> (8/20µs)	Poles Protected	U <sub>p</sub>	U <sub>n</sub>
900453	DEHNGuard Basic TT 2P	DIN/Samite	5kA	10kA	2	≤1.2kV	230V
900463	DEHNGuard Basic	DIN	10kA	20kA	4	≤1.3kV	230V/400V

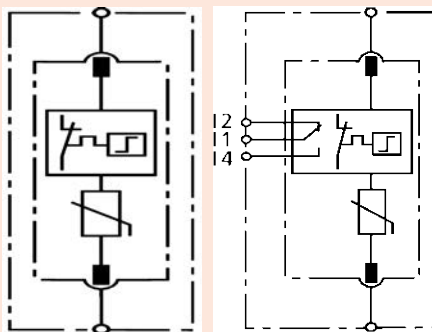
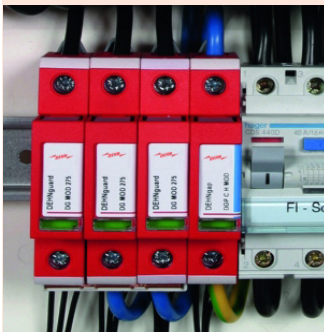
### Surge Arrester: Class 2

Ideal for Gate Motor, Alarm Protection or Protection of LED Lighting.

Fixed format with flag indication. Maximum backup fuse: 25A.

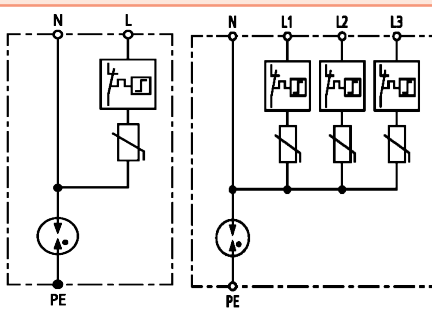


Code	Description	In (8/20µs)	I <sub>max</sub> (8/20µs)	Poles Protected	U <sub>p</sub>	U <sub>c</sub>
900430	DEHNcord L 2P	5kA	10kA	1PH +N	≤1500V	230V



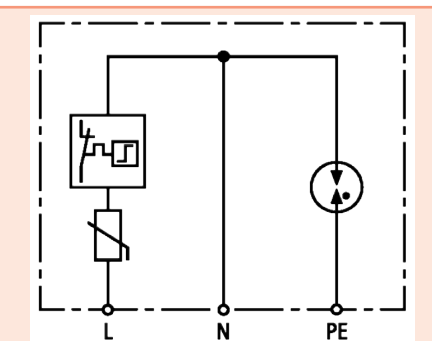
#### DEHNGUARD S

- Multi-purpose surge arrester consisting of a base part and a plug-in protection module.
- High discharge capacity due to heavy-duty zinc oxide varistor
- High reliability due to "Thermo Dynamic Control" SPD monitoring device
- Energy coordination with other arresters of the Red/Line product family
- Operating state / fault indication by green / red indicator flag in the inspection window
- Easy replacement of protection modules due to module locking system with module release button



#### DEHNGUARD BASIC

- High reliability due to "Thermo Dynamic Control" monitoring system
- Easy installation and retrofitting thanks to narrow design (width of 18 / 36 mm)
- Application-optimised discharge capacity of 5 kA (I<sub>n</sub>) / 10/20 kA (I<sub>max</sub>) (8/20 µs) per pole
- Energy coordination with other arresters of the Red/Line family
- Operating state / fault indication by green / red indicator flag in the inspection window



#### DEHNCHORD L

- Single-pole surge protective device with monitoring system and disconnecter
- Visual fault indication
- Compact design also for outdoor use
- Can be fitted in junction boxes, flush-mounted systems, cable ducts and flush-type boxes

## SURGE PROTECTION DEVICES

### Surge Arrester: Class 2

Over Current Protection Required. Plug-in with flag indication. Maximum backup fuse: 125A.



952110



952310

Code	Description	In (8/20μs)	I <sub>max</sub> (8/20μs)	Aux	Poles Protected	Up	Un
952310	DEHNGuard M TT	20kA	40kA	-	3PH + N	≤1500V	230/400V
952315	DEHNGuard M TT FM	20kA	40kA	1C/O	3PH + N	≤1500V	230/400V
952110	DEHNGuard M TT 2P	20kA	40kA	-	1PH + N	≤1500V	230V
952115	DEHNGuard M TT 2P FM	20kA	40kA	1C/O	1PH + N	≤1500V	230V

Spare plug-in modules: 1PH: 952010, N-E: 952050

### Surge Arrester with ACI: Class 2

Plug-in with flag indication.



952121



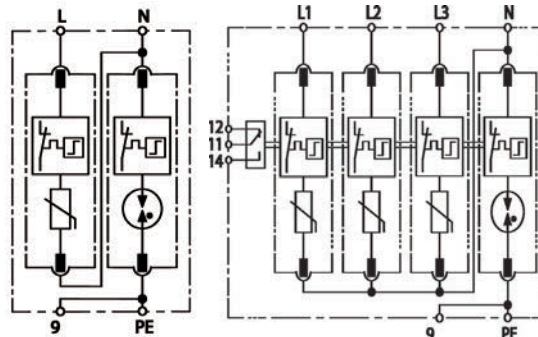
952341

Code	Description	In (8/20μs)	I <sub>max</sub> (8/20μs)	Aux	Poles Protected	Up	Un
952121	DEHNGuard M TT ACI FM	20/80KA	-	1C/O	1PH + N	≤1500V	230V
952341	DEHNGuard M TT ACI FM	20/80KA	-	1C/O	3PH + N	≤1500V	230/400V

Spare plug-in modules: 1PH: 952024, N-E: 952083 \*L-N / N-E

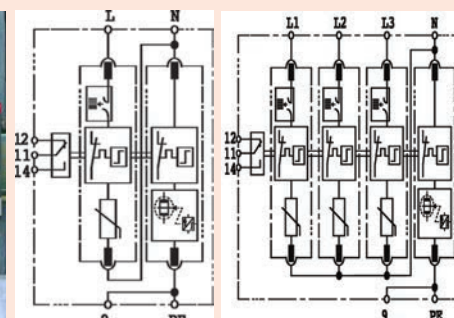
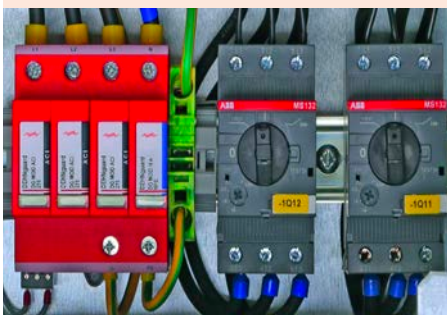
- ACI Switch/spark gap combination integrated in protection module
- No backup protection device required due to ACI technology
- Prewired complete unit consisting of a base part and plug-in protection modules
- High reliability due to "Thermo Dynamic Control" SPD monitoring device and ACI technology

### DEHNGUARD M TT



- Prewired complete unit consisting of a base part and plug-in protection modules.
- Energy coordination with other arresters of the Red/Line product family
- High discharge capacity due to heavy duty zinc oxide varistors/spark gaps
- High device reliability due to "Thermo Dynamic Control" arrester monitoring
- Easy replacement of protection modules without tools
- Vibration and shock-tested according to EN 60068-2

### DEHNGUARD ACI FM



- New technology "Advanced Circuit Interruption" (ACI) integrated in the protection module, consists of a switch / spark gap combination.
- TOV withstand also at 440V (AC)
- High system reliability, no tripping of 32 A gG fuses
- Zero leakage current due to galvanic isolation by ACI switch unit.
- Energy coordination with other arresters of the Red/Line product family
- Vibration and shock-tested according to EN 60068-2

## PHOTOVOLTAIC SYSTEM PROTECTION

NEW



900070

### Photovoltaic Arrester with Integrated DC Fuse: Class 1+2

≤1200V Combined lightning and surge arrester for use in photovoltaic power supply systems. Fault-resistant Y circuit prevents damage to the surge protective device in case of insulation faults in the generator circuit.

Code	Description	In (8/20μs)	I <sub>max</sub> (8/20μs)	I <sub>imp</sub> (10/350μs)	I <sub>tot</sub> (10/350μs)	Aux	Up	U <sub>cpv</sub>
900070	DEHNcombo DCB YPV 1200	20kA	40kA	6.25kA	12.5kA	No	≤3.8kV	≤1200V
900075	DEHNcombo DCB YPV 1200 FM	20kA	40kA	6.25kA	12.5kA	Yes	≤3.8kV	≤1200V
900071	DEHNcombo DCB YPV 1500	20kA	40kA	6.25kA	12.5kA	No	≤4.5kV	≤1500V
900076	DEHNcombo DCB YPV 1500 FM	20kA	40kA	6.25kA	12.5kA	Yes	≤4.5kV	≤1500V

NEW



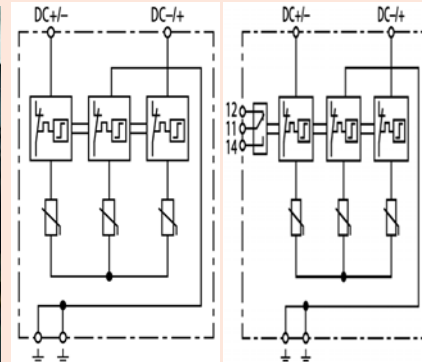
950530

### Photovoltaic Arrester: Class 2

Multipole surge arrester with three-step D.C. switching device for use in PV systems.

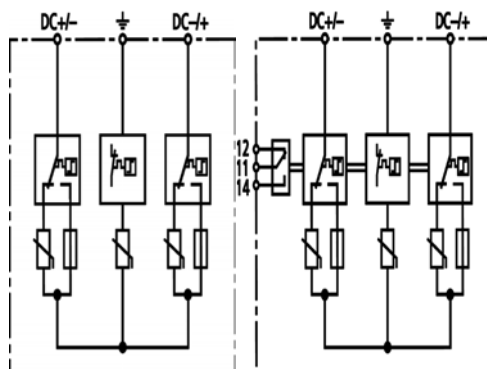
Code	Description	In (8/20μs)	I <sub>max</sub> (8/20μs)	Aux	Up	U <sub>CPV</sub>
950530	DEHNguard YPV SCI 1000	12.5kA	25kA	No	≤ 4kV	1000V
950531	DEHNguard YPV SCI 600	12.5kA	25kA	No	≤ 2.5kV	600V
950535	DEHNguard YPV SCI 1000 FM	12.5kA	25kA	Yes	≤ 4kV	1000V
950536	DEHNguard YPV SCI 600 FM	12.5kA	25kA	Yes	≤ 2.5kV	600V

### DEHNCOMBO



- Prewired type 1 + type 2 combined lightning current and surge arrester for use in photovoltaic generator circuits
- Rated voltage is the same for all modes of protection and, therefore, the arrester can also be used in earthed systems
- Space-saving enclosure with a width of only four modules for up to 1500 VDC
- Operating state / fault indication by green / red indicator flag in the inspection window

### DEHNGUARD YPV SCI



- Prewired complete unit for use in photovoltaic systems
- Combined disconnection and short-circuiting device with safe electrical isolation (patented SCI principle)
- Tried and tested fault-resistant Y circuit of DEHNguard Y PV SCI prevents damage to the surge protective device in case of insulation faults in the generator circuit



# SURGE PROTECTION DEVICES

## DIN Mount Base - for Protection Modules

Code	Description
920300	Base Blitzductor 4P - Without Signal Interruption
926304	Base Blitzductor 4P - Signal Interrupted if Module Removed

## Blitzductor Protection Modules

Code	Description	I imp Tot. (10/350µs)	In (8/20µs)	Cut-off Freq.	Poles Protected	Un	Uc
<b>Class 1 BD - 1 Pair of unearthed balanced interfaces with direct or indirect shield earthing</b>							
920240	Blitzductor XT ML2 BD S5	9kA	20kA	1.0MHz	4	5V	6V
920242	Blitzductor XT ML2 BD S12	9kA	20kA	2.8MHz	4	12V	15V
920244	Blitzductor XT ML2 BD S24	9kA	20kA	7.8MHz	4	24V	33V

## Class 1 BD - 2 Pairs of unearthed balanced Interfaces

920340	Blitzductor XT ML4 BD 5	10kA	20kA	1.0MHz	4	5V	6V
920342	Blitzductor XT ML4 BD 12	10kA	20kA	2.8MHz	4	12V	15V
920344	Blitzductor XT ML4 BD 24	10kA	20kA	7.8MHz	4	24V	33V

## Class 2 BE - Unbalanced Interfaces or 4 lines with common reference potential

926324	Blitzductor SP M4 BE 24	1kA	20kA	6.8MHz	4	24V	33V
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## Class 2 BD - 1 Pair of balanced interfaces with galvanic isolation

926242	Blitzductor SP M2 BD 12	1kA	20kA	2.8MHz	2	12V	15V
926244	Blitzductor SP M2 BD 24	1kA	20kA	7.8MHz	2	24V	33V

## Class 2 BD - 2 Pairs of unearthed balanced Interfaces

926344	Blitzductor SP M4 BD 24	1kA	20kA	7.8MHz	4	24V	33V
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Application

## Protection for Telecommunication and Data Networks (PoE IEEE 802.3at)

Code	Description	I imp (10/350µs)	In (8/20µs)	Cut-off Freq.	Uc	Input/Output
929121	DEHNpatch M CLE RJ45B 48	0.5kA	10kA	250MHz	48V	RJ45 (Sockets)
929126	DEHNpatch M CLD RJ45B 48	0.5kA	10kA	100MHz	48V	RJ45 (Sockets)
<b>NEW</b> 929161	Dehnpatch CL8 EA 4PPOE	0.5kA	10kA	500MHz	3.3 V	RJ45 (Sockets)

## Protection for Data Networks and Ethernet Applications Outdoor IP66

Code	Description	I imp (10/350 µs)	I tot (8/20 µs)	Cut-off freq	Uc	Input/Output
<b>NEW</b> 929221	DEHNpatch CLE IP66	0.8kA	10kA	250 MHz	6V	RJ45 Sockets

## Protection for Coaxial Equipment - BNC

Code	Description	In (8/20µs)	Freq.	Impedance	Mounting	Uc	Un
929010	UGKF BNC	2.5kA	0-300MHz	50/75Ω	In-Line	8V	5V
909711	DEHNgate BNC VC	2.5kA	0-300MHz	50Ω	DIN Rail Mount	8V	5V



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