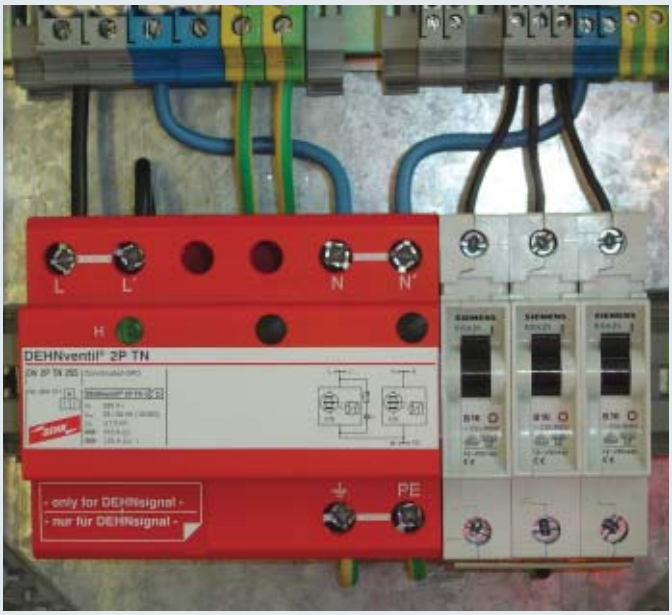
COMBINED SPDs – TYPE 1

SPD Type 1 according to EN 61643-11;
Classification B according to E DIN VDE 0675-6;
SPD Class I according to IEC 61643-1;



For protection of low voltage consumer's installations against surges, even at direct lightning strikes. For use according to the lightning protection zones concept at boundaries 0_A – 2.

Two-pole Combined Lightning Current and Surge Arrester

- Prewired combined spark-gap based arrester
- Max. follow current limitation thanks to RADAX Flow technology
- No tripping of 32/35 A gL/gG fuses up to short circuit currents of 50 kA_{rms}
- Lightning current discharge capacity 50 kA (10/350)
- Allows protection of terminal equipment
- Provides max. system availability
- 2-pole unit for ac voltage systems
- Replaces up to 6 single components of a conventional application

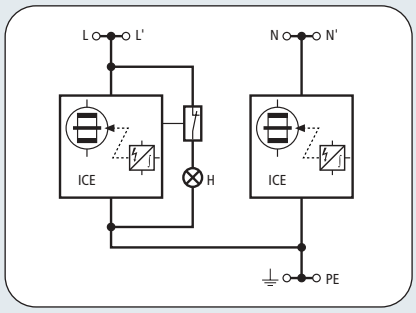
DV 2P TN 255: Combined lightning current and surge arrester for single-phase TN systems

DV 2P TT 255: Combined lightning current and surge arrester for single-phase TT systems

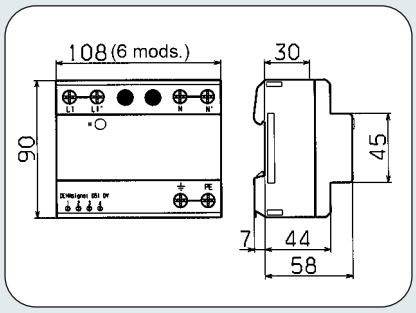
The multipole combined lightning current and surge arresters of the DEHNventil 2P product family offer an "all-in-one solution", i.e. lightning equipotential bonding and surge protection in one device.
Energy coordination with downstream Red/Line surge protective devices in low voltage consumer's installations is ensured without additional cable lengths or decoupling inductances.
In compact electrical installations and a short distance between DEHNventil and the consumers (≤ 5 m), DEHNventil 2P devices alone can protect the terminal equipment.
Especially the small dimension of the combined arresters allows multiple possibilities for the installation of switchgears or distribution boards.
Using encapsulated non-exhausting creepage discharge spark gaps, no additional safety distances need to be observed.
For expanded electrical installations, additional surge protective devices have to be provided in downstream distribution boards and directly upstream of the terminal equipment, according to the proceeding in the lightning protection zones concept.

Using the double terminals of DEHNventil devices, which are suitable for all types of conductors, allows a serial connection up to nominal currents of 125 A in a space- and cost-saving way, as preferred by standard IEC 60364-5-53.
DEHNventil devices can be chosen easily upon the system configuration of the existing low voltage consumer's installation in connection with the type description of the devices.
A high availability of the electrical consumer's installation to be protected is achieved by the patented RADAX Flow technology for follow current limitation and follow current extinction. Even at great short circuit currents up to 50 kA_{rms} , arising mains follow currents are reduced considerably to ensure the selectivity to small fuse values (e.g. 32 A gL/gG), i.e. upstream fuses do not trip upon arising mains follow currents.
For indicating the presence of phase voltages and readiness for operation of DEHNventil 2P on site, the devices have an integrated indication of operating voltages. Furthermore, the readiness for operation of the device and the existence of operating voltages can be signalised to a superior control system via the remote signalling module DEHNsignal DSI DV 2P.

DEHNventil 2P
DEHNventil 2P TN



Basic circuit diagram DV 2 P TN 255



Dimension drawing DV 2 P TN 255

DV 2 P TN 255: Combined lightning current and surge arrester for single-phase TN systems

	DV 2P TN 255
SPD according to EN 61643-11	Type 1
SPD according to IEC 61643-1	Class I
Classification according to E DIN VDE 0675-6	B
Nominal ac voltage U_N	230 V
Max. continuous ac voltage U_C	255 V
Lightning impulse current (10/350) [L+N-PE] I_{imp}	50 kA
Lightning impulse current (10/350) [L,N-PE] I_{imp}	25 kA
Nominal discharge current (8/20) I_n	25 / 50 kA
Voltage protection level [L-PE] U_P	≤ 1.5 kV
Voltage protection level [N-PE] U_P	≤ 1.5 kV
Follow current extinguishing capability ac	50 kA_{rms}
Follow current extinction/Selectivity	No tripping of a 32 A gL/gG fuse up to 50 kA_{rms} (prosp.)
Response time t_A	≤ 100 ns
Max. backup fuse (L) up to I_K = 50 kA_{rms}	315 A gL/gG
Max. backup fuse (L) at I_K > 50 kA_{rms}	200 A gL/gG
Max. backup fuse (I-L´)	125 A gL/gG
TOV voltage [L-N] U_T	335 V / 5 sec.
Operating temperature range (parallel wiring) T_{UP}	-40°C...+80°C
Operating temperature range (through-wiring) T_{US}	-40°C...+60°C
Cross-sectional area (L, L´, N, N´, PE, ⏚) min.	10 mm² solid / flexible
Cross-sectional area (L, N, PE) max.	50 mm² stranded / 35 mm² flexible
Cross-sectional area (L´, N´, ⏚) max.	35 mm² stranded / 25 mm² flexible
Mounting on	35 mm DIN rail acc. to EN 60715
Enclosure material	red thermoplastic, UL 94 V-0
Degree of protection	IP 20
Dimension	6 mods., DIN 43880
Certifications, Approvals	KEMA, VDE

Ordering information	
Type	DV 2P TN 255
Part No.	900 371
Packing unit	1 pc(s)

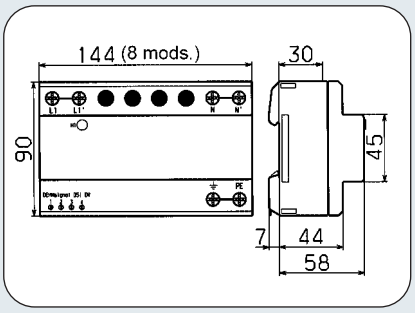
Accessory Part for DEHNventil 2P

DEHNsignal DV 2 P

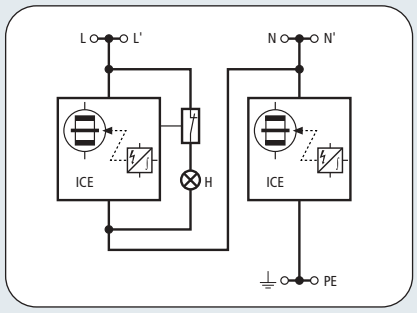
DSI DV 2P: Remote signalling module for two-pole SPDs with 2-wire interface "DSI DV 2P" (e.g. DEHNventil 2P TN / ... TT)

Type	PU pc(s)	Part No.
DSI DV 2P	1	910 621

DEHNventil 2P
DEHNventil 2P TT



Dimension drawing DV 2P TT 255



Basic circuit diagram DV 2P TT 255

DV 2P TT 255: Combined lightning current and surge arrester for single-phase TT- and TN systems

	DV 2P TT 255
SPD according to EN 61643-11	Type 1
SPD according to IEC 61643-1	Class I
Classification according to E DIN VDE 0675-6	B
Nominal ac voltage U_N	230 V
Max. continuous ac voltage U_C	255 V
Lightning impulse current (10/350) [L+N-PE] I_{imp}	50 kA
Lightning impulse current (10/350) [L-N] I_{imp}	25 kA
Lightning impulse current (10/350) [N-PE] I_{imp}	50 kA
Nominal discharge current (8/20) I_n	25 / 50 kA
Voltage protection level [L-N] U_P	≤ 1.5 kV
Voltage protection level [N-PE] U_P	≤ 1.5 kV
Follow current extinguishing capability [L-N] ac I_{fi}	50 kA_{rms}
Follow current extinguishing capability [N-PE] ac I_{fi}	100 A_{rms}
Follow current extinction/Selectivity	No tripping of a 32 A gL/gG fuse up to 50 kA_{rms} (prosp.)
Response time t_A	≤ 100 ns
Max. backup fuse (L) up to I_K = 50 kA_{rms}	315 A gL/gG
Max. backup fuse (L) at I_K > 50 kA_{rms}	200 A gL/gG
Max. backup fuse (I-L')	125 A gL/gG
TOV voltage [L-N] U_T	335 V / 5 sec.
TOV voltage [N-PE] U_T	1200 V / 200 ms
Operating temperature range (parallel wiring) T_{UP}	-40°C...+80°C
Operating temperature range (through-wiring) T_{US}	-40°C...+60°C
Cross-sectional area (L, L', N, N', PE, ⏚) min.	10 mm² solid / flexible
Cross-sectional area (L, N, PE) max.	50 mm² stranded / 35 mm² flexible
Cross-sectional area (L', N', ⏚) max.	35 mm² stranded / 25 mm² flexible
Mounting on	35 mm DIN rail acc. to EN 60715
Enclosure material	red thermoplastic, UL 94-V-0
Degree of protection	IP 20
Dimension	8 mods., DIN 43880
Certifications, Approvals	KEMA, VDE

Ordering information	
Type	DV 2P TT 255
Part No.	900 370
Packing unit	1 pc(s)

Accessory Part for DEHNventil 2P

DEHNsignal DV 2 P

DSI DV 2P: Remote signalling module for two-pole SPDs with 2-wire interface "DSI DV 2P" (e.g. DEHNventil 2P TN / ... TT)

Type	PU pc(s)	Part No.
DSI DV 2P	1	910 621