



DEHN (U.K.) LTD

**NEW**

# Red/Line





Complete prewired units for common system configurations and single-pole surge arrester for universal use

High discharge capacity and low protection level

Multifunctional terminals for connection of conductors and busbars in standardised distance of 1 module

Easy exchanging of the protection modules with module releasing button

High safety due to "Thermo Dynamic Control"





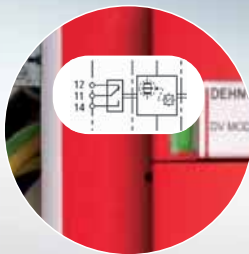
**All in One:**  
Lightning  
equipotential  
bonding and  
protection for  
terminal equipment  
in one device

Types available  
with floating  
changeover contact  
for remote signalling

Easy exchanging  
of the protection  
modules with  
module releasing  
button

Operating state  
indication of each  
module without  
operating current

Maximum system  
availability due to  
RADAX-flow spark gap  
technology with high  
follow current  
limitation



# DEHNventil<sup>®</sup> modular



**DEHNventil<sup>®</sup> M TN 255 (FM)**  
Part No.: 951 200 (951 205)

Modular combined lightning current and surge arrester for single-phase TN systems

DEHNventil M ... FM:  
With remote signalling contact for control device (floating changeover contact)



**DEHNventil<sup>®</sup> M TT 2P 255 (FM)**  
Part No.: 951 110 (951 115)

Modular combined lightning current and surge arrester for single-phase TT and TN systems ("1+1" circuit)

DEHNventil M ... FM:  
With remote signalling contact for control device (floating changeover contact)



**DEHNventil<sup>®</sup> M TNC 255 (FM)**  
Part No.: 951 300 (951 305)

Modular combined lightning current and surge arrester for TN-C systems

DEHNventil M ... FM:  
With remote signalling contact for control device (floating changeover contact)



**DEHNventil<sup>®</sup> M TNS 255 (FM)**  
Part No.: 951 400 (951 405)

Modular combined lightning current and surge arrester for TN-S systems

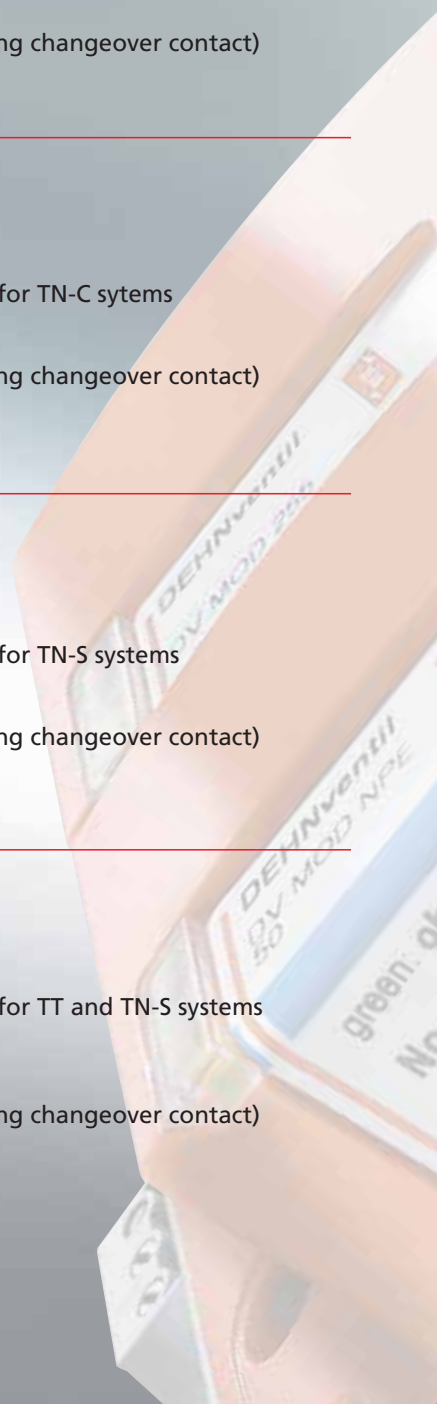
DEHNventil M ... FM:  
With remote signalling contact for control device (floating changeover contact)



**DEHNventil<sup>®</sup> M TT 255 (FM)**  
Part No.: 951 310 (951 315)

Modular combined lightning current and surge arrester for TT and TN-S systems ("3+1" circuit)

DEHNventil M ... FM:  
With remote signalling contact for control device (floating changeover contact)



## Technical data DEHNventil®

DEHNventil® M ...	TN	TT 2P	TNC	TNS	TT
SPD according to EN 61643-11			Type 1		
SPD according to EN 61643-1			Class I		
Energy-coordinated protection effect with regard to the terminal equipment			Type 1 + Type 2		
Energy-coordinated protection effect with regard to the terminal equipment ( $\leq 5\text{m}$ )			Type 1 + Type 2 + Type 3		
Nominal a.c. voltage $U_N$	230 V	230 V	230/400 V	230/400 V	230/400 V
Max. continuous a.c. voltage $U_C$			255 V		
Total lightning impulse current (10/350)	50 kA	50 kA	75 kA	100 kA	100 kA
Voltage protection level [L-N/PEN] $U_P$			$\leq 1.5\text{ kV}$		
Voltage protection level [N-PE] $U_P$	—	$\leq 1.5\text{ kV}$	—	—	$\leq 1.5\text{ kV}$
Follow current extinguishing capability [L-N/L-PEN] a.c. $I_{fi}$			50 $kA_{rms}$		
Follow current limitation/selectivity	No tripping of a 20 A gL/gG fuse up to 50 $kA_{rms}$ (prosp.)				
Response time $t_A$			$\leq 100\text{ ns}$		
Max. backup fuse (L) up to $I_K = 50\text{ kA}_{rms}$			315 A gL/gG		
Max. backup fuse (L) at $I_K > 50\text{ kA}_{rms}$			200 A gL/gG		
Max. backup fuse (L-L')			125 A gL/gG		
TOV voltage [L-N] $U_T$			440 V/5 sec.		
TOV voltage [N-PE] $U_T$	—	1200 V/200 ms	—	—	1200 V/200 ms
Operating temperature range (parallel wiring) $T_{UP}$			-40°C... + 80°C		
Operating temperature range (through-wiring) $T_{UP}$			-40°C... + 60°C		
Operating state/fault indicator			green/red		
Cross-sectional area			min. 10 mm <sup>2</sup> solid/flexible		
Cross-sectional area (L, (N), PEN)			max. 50 mm <sup>2</sup> stranded / 35 mm <sup>2</sup> flexible		
Cross-sectional area (L', N', $\varnothing$ )			max. 35 mm <sup>2</sup> stranded / 25 mm <sup>2</sup> 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 (DIN 43 880)	4 mods.	4 mods.	6 mods.	8 mods.	8 mods.
<b>Additional data for FM-types</b>					
Type of remote signalling contact			changeover contact		
Switching capacity a.c.			250 V/0.5 A		
Switching capacity d.c.			250 V/0.1 A; 125 V/ 0.2 A; 75 V/ 0.5 A		
Cross-sectional area for remote signalling terminals			max. 1.5 mm <sup>2</sup> solid/flexible		

# DEHNguard<sup>®</sup> modular

## DEHNguard<sup>®</sup> M TN 275 (FM)

Part No. 952 200 (952 205)

Modular surge arrester for single-phase 230 V TN systems,

DEHNguard M ... FM:  
With remote signalling contact for control device (floating changeover contact)



## DEHNguard<sup>®</sup> M TT 2P 275 (FM)

Part No. 952 110 (952 115)

Modular surge arrester for single-phase 230 V TT and TN systems ("1+1" circuit)

DEHNguard M ... FM:  
With remote signalling contact for control device (floating changeover contact)



## DEHNguard<sup>®</sup> M TNC 275 (FM)

Part No. 952 300 (952 305)

Modular surge arrester for TN-C systems,

DEHNguard M ... FM:  
With remote signalling contact for control device (floating changeover contact)



## DEHNguard<sup>®</sup> M TNS 275 (FM)

Part No. 952 400 (952 405)

Modular surge arrester for TN-S systems,

DEHNguard M ... FM:  
With remote signalling contact for control device (floating changeover contact)



## DEHNguard<sup>®</sup> M TT 275 (FM)

Part No. 952 310 (952 315)

Modular surge arrester for TT and TN-S systems ("3+1" circuit),

DEHNguard M ... FM:  
With remote signalling contact for control device (floating changeover contact)



## DEHNguard<sup>®</sup> S ... (FM)

Part No. 952 078 (952 098), 952 071 (952 091), 952 072 (952 092), 952 070 (952 090),  
952 073 (952 093), 952 074 (952 094), 952 075 (952 095), 952 076 (952 096)

Single-pole, pluggable surge arrester, consisting of a base part and plug-in protection module  
Available in different voltage ranges.

Max. continuous a.c. voltages of 48 V, 75 V, 150 V, 275 V, 320 V, 385 V, 440 V, 600 V

DEHNguard S ... FM:  
With remote signalling contact for control device (floating changeover contact)



## DEHNgap C S (FM)

Part No. 952 030 (952 035)

Single-pole, pluggable N-PE Surge arrester,

DEHNgap C S FM:  
With remote signalling contact for control device (floating changeover contact)



## Technical data DEHNguard®

DEHNguard® M ...	TN	TT 2P	TNC	TNS	TT	DEHNguard®S	DEHNgap®CS
SPD according to EN 61643-11				Type 2			
SPD according to IEC 61643-1				Class II			
Nominal a.c. voltage $U_N$	230 V	230 V	230/400 V	230/400 V	230/400 V	—	—
Max. continuous a.c. voltage [L-N/PEN] $U_C$	275 V	275 V	275 V	275 V	275 V	48/75/150/275/ 320/385/440/600 V	—
Max. continuous a.c. voltage [N-PE] $U_C$	—	255 V	—	—	255 V	—	255 V
Nominal discharge current (8/20) $I_n$				20 kA		see data sheet	
Max. discharge current (8/20) $I_{max}$				40 kA		see data sheet	
Lightning impulse current (10/350) [N-PE] $I_{imp}$	—	12 kA	—	—	12 kA	—	12 kA
Voltage protection level [L-N/PEN] $U_p$				< 1.25 kV		see data sheet	
Voltage protection level [L-N/PEN] at 5 kA $U_p$				< 1 kV		see data sheet	
Voltage protection level [N-PE] $U_p$	—	≤ 1.5 kV	—	—	≤ 1.5 kV	—	≤ 1.5 kV
Follow current extinguishing capability [N-PE] $I_{fi}$	—	100 A <sub>rms</sub>	—	—	100 A <sub>rms</sub>	—	100 A <sub>rms</sub>
Response time [L-N] $t_A$	≤ 25 ns	—	≤ 25 ns	≤ 25 ns	—	≤ 25 ns	—
Response time [N-PE] $t_A$	—	≤ 100 ns	—	—	≤ 100 ns	—	≤ 100 ns
Max. mains-side overcurrent protection				125 A gL/gG		see data sheet	
Short circuit withstand capability at max. mains-side overcurrent protection				50 kA <sub>rms</sub>		see data sheet	
TOV voltage [L-N/PEN] $U_T$				335 V/5 sec.		see data sheet	
TOV voltage [N-PE] $U_T$	—	1200 V/200 ms	—	—	1200 V/200 ms	—	1200 V/200 ms
Operating temperature range $T_U$				-40°C... + 80°C			
Cross-sectional area				min. 1.5 mm <sup>2</sup> solid / flexible			
Cross-sectional area				max. 35 mm <sup>2</sup> stranded / 25 mm <sup>2</sup> 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 (DIN 43880)	2 mods.	2 mods.	3 mods.	4 mods.	4 mods.	1 mod.	1 mod.
<b>Additional data for FM-types</b>							
Type of remote signalling contact				changeover contact			
Switching capacity a.c.				250 V/0.5 A			
Switching capacity d.c.				250 V/0.1 A; 125 V/ 0.2 A; 75 V/ 0.5 A			
Cross-sectional area for remote signalling terminals				max. 1.5 mm <sup>2</sup> solid/flexible			



**DEHN (U.K.) LTD**

**Technical data DEHNrail**

DEHNrail DR M ...	2P 30 (FM)	2P 60 (FM)	2P 75 (FM)	2P 150 (FM)	2P 255 (FM)	4P 255 (FM)
SPD acc. to EN 61643-11/ IEC 61643-1	Type 3 / Class III					
Max. continuous a.c./d.c. voltage $U_c$	30 V	60 V	75 V	150 V	255 V	255/440 V
Nominal load current a.c. $I_L$	25 A					
Nominal discharge current (8/20) $I_n$ [L-N]/[L+N-PE]	1/2 kA	1/2 kA	2/4 kA	2/4 kA	3/5 kA	3/8 kA
Voltage protection level $U_p$ [L-N]/[L/N-PE]	$\leq 180$ V / $\leq 630$ V	$\leq 350$ V / $\leq 730$ V	$\leq 400$ V / $\leq 730$ V	$\leq 640$ V / $\leq 800$ V	$\leq 1250$ V / $\leq 1500$ V	$\leq 1000$ V / $\leq 1500$ V
Max. mains-side overcurrent protection	25 A gL/gG or B 25 A					
Cross-sectional area min. – max.	0.5 mm <sup>2</sup> – 4 mm <sup>2</sup>					
Enclosure material	Red thermoplastic, UL 94 V-0					
Dimension (DIN 43880)	1 mod.	1 mod.	1 mod.	1 mod.	1 mod.	2 mod.

**Additional data for FM-types**

Type of remote signalling contact	changeover contact					
Part No. (FM)	953 201 (953 206)	953 202 (953 207)	953 203 (953 208)	953 204 (953 209)	953 200 (953 205)	953 400 (953 405)

**DEHNrail modular**



**DEHNrail M 2P ... (FM)**  
Part-No. 953 ... (953 ...)

Two-pole surge arrester for the protection of industrial electronic devices

DEHNrail M 2P ... FM:  
With remote signalling contact for control device (floating changeover contact)



**DEHNrail M 4P 255 (FM)**  
Part-No. 953 400 (953 405)

Surge arrester for the protection of industrial 3-phase systems

DEHNrail M 4P 255 FM:  
With remote signalling contact for control device (floating changeover contact)

**Lightning Protection  
Surge Protection  
Safety Equipment**

DEHN (U.K.) LTD  
Unit N8B  
Meltham Mills Industrial Estate  
Meltham Holmfirth  
West Yorkshire HD9 4DS

Tel. 01484 849 111  
Fax 01484 859 222  
www.dehn.co.uk  
info@dehn.co.uk



Two-pole surge arrester Type 3, consisting of a base part and plug-in protection module



Easy exchanging of the protection module with module releasing button