

Dimension drawing DV M TNC 255 (FM)

Basic circuit diagram DV M TNC 255 FM

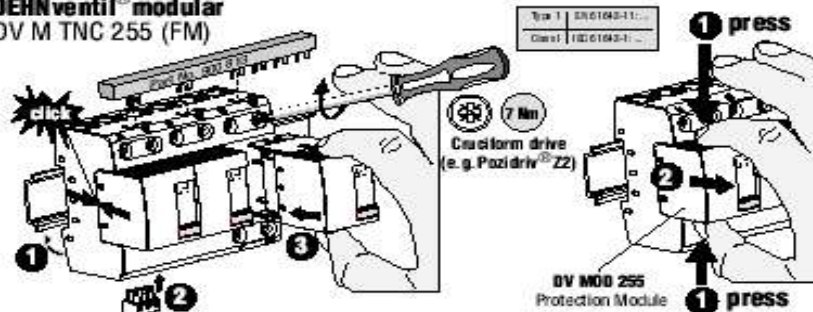
DV M TNC 255 (FM): Modular combined lightning current and surge arrester for use in TN-C systems

- **Prewired combined spark-gap-based lightning current and surge arrester, consisting of a base part and plug-in protection modules**
- **Maximum system availability due to RADAX Flow follow current limitation**
- **No tripping of 20 A gL/gG fuses up to 50 kA_{rms} short-circuit currents**
- **Lightning current discharge capacity: 75 kA (10/350 μs)**
- **Allows for protection of terminal equipment**
- **Fault indication by red mark in the inspection window**
- **Easy exchange of protection modules by module locking system with releasing button**
- **Tested for vibration- and shock-proofness acc. to EN 60068-2**

DV M TNC 255 FM

SPD classification acc. to EN 61643-11	Type 1
SPD classification acc. to IEC 61643-1	Class I
Nominal a.c. voltage [U _N]	230 / 400 V
Max. continuous operating a.c. voltage [U _C]	255 V
Lightning impulse current (10/350 μs) [L1+L2+L3-PEN] [I _{total}]	75 kA
Lightning impulse current (10/350 μs) [L-PEN] [I _{imp}]	25 kA
Nominal discharge current (8/20 μs) [I _n]	25 / 75 kA
Voltage protection level [U _p]	≤ 1.5 kV
Follow current extinguishing capability a.c. [I _{ff}]	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]	≤ 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 (L-L')	125 A gL/gG
Temporary overvoltage (TOV) [U _T]	440 V / 5 sec.
Operating temperature range (parallel connection) [T _{UP}]	-40°C...+80°C
Operating temperature range (series connection) [T _{US}]	-40°C...+60°C
Operating state/fault indication	green / red
Cross-sectional area (L1, L1', L2, L2', L3, L3', PEN, ÷) [min.]	10 mm ² solid/flexible
Cross-sectional area (L1, L2, L3, PEN) [max.]	50 mm ² stranded/35 mm ² flexible
Cross-sectional area (L1', L2', L3', ÷) [max.]	35 mm ² stranded/25 mm ² flexible
For 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 4

DEHNventil® modular
DV M TNC 255 (FM)



Technical data / Technische Daten

U_n	255 V / 50 Hz	
I_n	50 kA _{res}	
I_{imp} (10/350 µs)	25 kA (L → PE) / 75 kA (L1+L2+L3 → PE)	
max. I_{sc}	125 A gL/gG (Series connection, see Fig. 1)	
max. I_{sc}	315 A gL/gG (Parallel connection, see Fig. 2)	
$\theta^{\circ}C$	-40°C ... +80°C (... +60°C see Fig. 3)	
IP Code	20	

min. U_n L1, L2, L3, L3', L3''	10 mm ²	
max. U_n L1, L2, L3, PE	35 mm ²	50 mm ²
max. U_n L1', L2', L3', ↓	25 mm ²	35 mm ²
	16 mm ² Cu	$l_{min} \geq 15.5$ mm

Coordination / Koordination

DIN V VDE V0185-4-...
IEC 62305-4-...

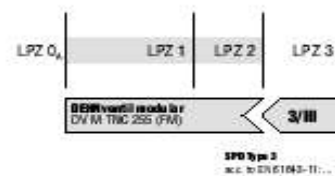


Fig. 1 TNC Series connection / Durchgangsverdrahtung

Backup fuse / Versicherung

DEHNventil modular DV M TNC 255 (FM)	F < 125 A gL / gG 	25 35 40 50 63 80 100 125	10 10 10 10 10 16 25 35	16 16 16 16 16 16 16 16
	F > 125 A gL / gG see Fig. 2 TNC Parallel connection			

Mechanical fixing / Mechanische Befestigung

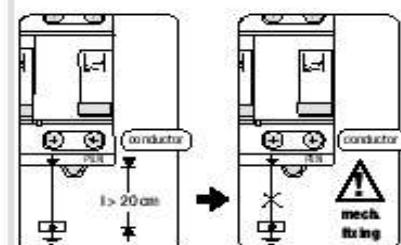
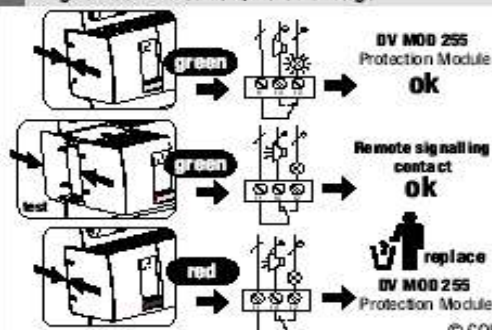


Fig. 2 TNC Parallel connection / Stichverdrahtung

Backup fuse / Versicherung

DEHNventil modular DV M TNC 255 (FM)	F1 > 315 A gL / gG 	25 35 40 50 63 80 100 125 160 200 250 315 >315	10 10 10 10 10 16 25 35 35 50 50	16 16 16 16 16 16 25 35 35 50 50	--- --- --- --- --- --- --- --- --- --- --- 315
	F2 < 315 A gL / gG 				

Fig. 3 Fault indication / Defektanzeige



DEHNventil modular DV M TNC 255 (FM)	
U_n / I_n	AC: 250 V / 0.5 A
	DC: 250 V / 0.1 A 125 V / 0.2 A 75 V / 0.5 A
	max. 1.5 mm ²

© COPYRIGHT 2006 DEHN + SÖHNE

