



INSTALLATION INSTRUCTIONS



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DEHNventil®modular DV M TT 2P 255 (FM)

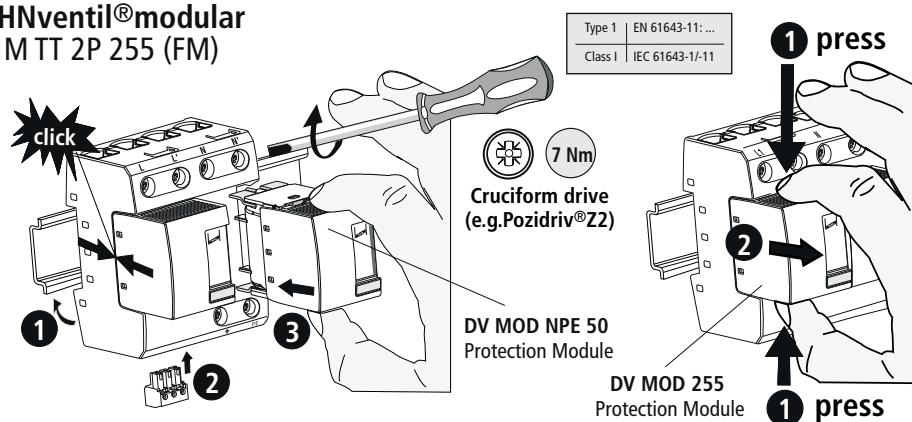


Fig. 1 TT 1+1 Series connection / Durchgangsverdrahtung

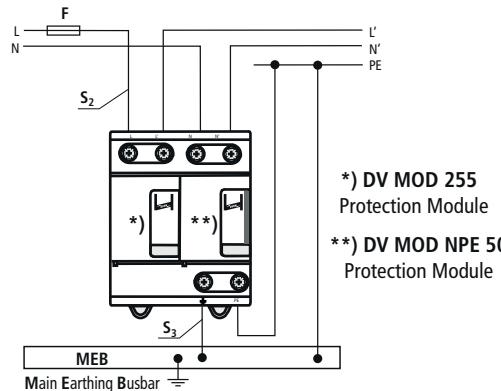
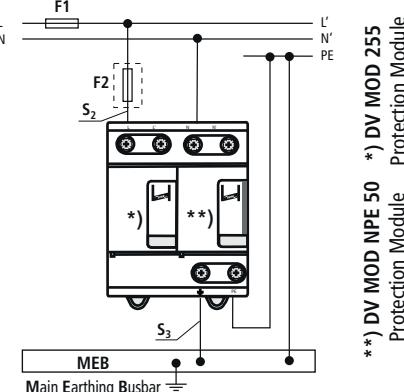


Fig. 2 TT 1+1 Parallel connection / Stichverdrahtung



Backup fuse / Vorsicherung

| DEHNventil modular DV M TT 2P 255 (FM) | Fuse F1 A gL / gG | S ₂ / mm ² | S ₃ / mm ² | Fuse F2 A gL / gG |
|-----------------------------------------|-------------------|----------------------------------|----------------------------------|-------------------|
| F1 > 315 A gL / gG | | | | |
| F1 <= 315 A gL / gG | | | | |
| F1 <= 315 A gL / gG | | | | |
| I _k <= 100 kA _{rms} | | | | |
| | 25 | 10 | 16 | --- |
| | 35 | 10 | 16 | --- |
| | 40 | 10 | 16 | --- |
| | 50 | 10 | 16 | --- |
| | 63 | 10 | 16 | --- |
| | 80 | 10 | 16 | --- |
| | 100 | 16 | 16 | --- |
| | 125 | 16 | 16 | --- |
| | 160 | 25 | 25 | --- |
| | 200 | 35 | 35 | --- |
| | 250 | 35 | 35 | --- |
| | 315 | 50 | 50 | --- |
| | >315 | 50 | 50 | 315 |

Technical data / Technische Daten

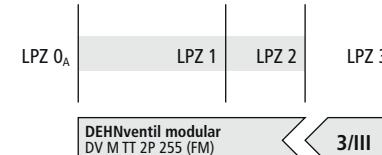
| | |
|----------------------------------------|-------------------------------------------------|
| U _c | 255 V / 50 Hz |
| I _{f1} *) | 50 kA _{rms} |
| I _{imp} (10/350μs) | 25 kA (L → N); 50 kA (N → PE); 50 kA (L+N → PE) |
| max. \overline{I} | 125 A gL/gG (Series connection, see Fig. 1) |
| max. \overline{I} | 315 A gL/gG (Parallel connection, see Fig. 2) |
| 9 °C | -40°C ... +80°C (... +60°C see Fig. 1) |
| IP Code | 20 |
| | 15.5 mm 15.5 mm 15.5 mm |
| min. □ L, L', N, N', PE, $\frac{1}{2}$ | 10 mm ² |
| max. □ L, N, PE | 35 mm ² 50 mm ² |
| max. □ L, N', $\frac{1}{2}$ | 25 mm ² 35 mm ² |
| □ | 16 mm ² Cu $I \geq 15.5$ mm |

*) additional test by the German VDE: Limitation / extinction of mains follow currents up to 100 kA_{rms}

*) zus. Prüfung durch VDE: Begrenzung / Löschung von Netzfolgesträmen bis 100 kA_{eff}

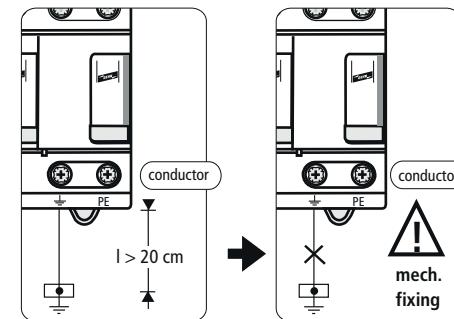
Coordination / Koordination

DIN VDE 0185-305-4
IEC 62305-4: ...



SPD Type 3
acc. to EN 61643-11: ...

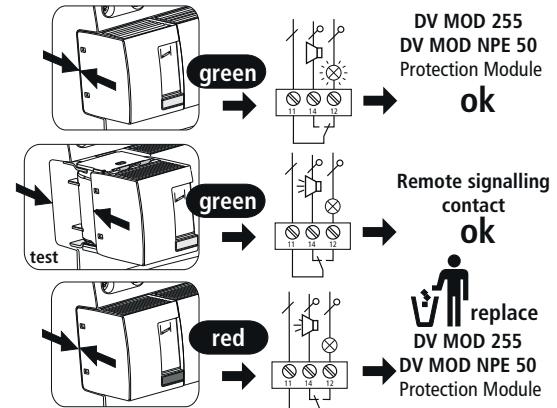
Mechanical fixing / Mechanische Befestigung



Backup fuse / Vorsicherung

| DEHNventil modular DV M TT 2P 255 (FM) | Fuse F A gL / gG | S ₂ / mm ² | S ₃ / mm ² |
|----------------------------------------|------------------|----------------------------------|----------------------------------|
| F ≤ 125 A gL / gG | ok | | |
| F > 125 A gL / gG | see Fig. 2 | | |
| TT Parallel connection | | | |

Fault indication / Defektanzeige



| DEHNventil modular DV M TT 2P 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 |

p.t.o.
Safety Instructions

**Instruções de segurança****PT**

A ligação e a montagem do aparelho apenas devem ser efectuadas por electricistas. Cumprir as normas nacionais e as disposições de segurança (IEC 60364-5-53 (VDE 0100 Teil 534:...)).

Antes da montagem, controlar se o aparelho apresenta danos exteriores. Não se pode proceder à montagem do aparelho, se for detectado um dano ou qualquer outro defeito. A utilização do aparelho só é permitida no âmbito das condições referidas e indicadas no presente manual de montagem. No caso de cargas superiores aos valores indicados, podem ser causados danos no aparelho, assim como nos meios de produção eléctricos ligados a este. As intervenções e as alterações no aparelho causam a perda do direito à garantia.

Veiligheidsvoorschriften**NL**

Aansluiting en montage van het apparaat mogen enkel door een erkend elektricien uitgevoerd worden.

De nationale voorschriften en veiligheidsbepalingen dienen opgevolgd te worden (IEC 60364-5-53 (VDE 0100 Teil 534:...)).

Voor de montage dient het apparaat op uitwendige schade nagekeken te worden. Indien schade van een andere fout vastgesteld wordt, mag het apparaat niet gemonterd worden. Het gebruik van het apparaat is alleen toegelaten binnen het kader van de in deze montagehandleiding opgenomen en getoond omstandigheden. Bij belastingen die hoger liggen dan de getoonde waarden, kunnen zowel het apparaat als de aangesloten elektrische werktuigen beschadigd worden.

Verkeerd gebruik en veranderingen aan het apparaat leiden tot het verlies van het recht op waarborg.

Informazioni di sicurezza**IT**

L'allacciamento ed il montaggio dell'apparecchiatura possono essere effettuati solo da personale qualificato. Sono da osservare le prescrizioni e le disposizioni di sicurezza nazionali (IEC 60364-5-53 (VDE 0100 Teil 534:...)).

Prima del montaggio, controllare che l'apparecchiatura non presenti danneggiamenti all'esterno. Nel caso in cui dovesse essere constatato un danneggiamento o un altro difetto, non montare l'apparecchiatura. L'impiego dell'apparecchiatura è consentito esclusivamente in presenza delle condizioni menzionate ed indicate in queste istruzioni sul montaggio. In caso di carico superiore ai valori dimostrati, l'apparecchiatura e l'impianto elettrico collegativi possono subire gravi danneggiamenti. Interventi o modifiche all'apparecchiatura comportano la perdita del diritto di garanzia.

Sikkerhedshenvisninger**DK**

Tilsnitning og montering af aflederen må kun udføres af en fagkyndig. De nationale forskrifter og sikkerhedsbestemmelser skal efterkommes. Se også (IEC 60364-5-53-534). For monteringen skal aflederen kontrolleres for udvendige skader. Hvis der konstateres skader eller andre mangler, må aflederen ikke monteres.

Anvendelse af aflederen er kun tilladt i forbindelse med betingelserne, der er nævnt og vist i montagevejledningen. Ved belastninger, der overskider de anførte værdier, kan aflederen såvel som de tilsluttede installationer og apparater ødeleægges.

Åbning og indgreb i aflederen medfører bortfald af enhver garanti.

Indicaciones de seguridad**ES**

La conexión y el montaje del aparato sólo deben ser realizados por un electricista especializado. Deben observarse las normativas y disposiciones de seguridad nacionales (IEC 60364-5-53 (VDE 0100 Teil 534:...)).

Antes de iniciar el montaje, debe comprobarse que el aparato no presente daños externos. En caso de observar daños u otros defectos, no debe efectuarse el montaje del aparato. El empleo del aparato está limitado a las condiciones indicadas y mostradas en estas instrucciones de montaje. Si las cargas superan los valores indicados, puede dañar tanto el aparato como los medios de producción eléctricos conectados al mismo. La manipulación interior o la modificación del aparato invalidan el derecho de garantía.

Säkerhetsföreskrifter**SE**

Apparaten får endast anslutas och monteras av behörig elektriker. Nationella föreskrifter och säkerhetsbestämmelser måste beaktas (IEC 60364-5-53 (VDE 0100 Teil 534:...)).

Kontrollera apparaten på ytter skador innan den monteras. Om skador eller andra brister föreligger, får apparaten inte monteras.

Apparaten får endast användas under de villkor som nämnts och åskådliggörs i denna monteringsanvisning. Vid belastningar, som sträcker sig över nämnda värden, kan apparaten samt anslutna elektriska driftenheter förstöras.

Ingrepp i och förändringar av apparaten ledar till att alla garantianspråk bortfaller.

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Consignes de sécurité**FR**

Montage et branchement de l'appareil à faire effectuer exclusivement par un électricien qualifié. Respecter les normes et les prescriptions de sécurité en vigueur localement (IEC 60364-5-53 (VDE 0100 Teil 534:...)).

Avant montage, procéder à un contrôle visuel extérieur de l'appareil. Ne pas monter celui-ci en cas de dommage manifeste ou si tout autre défaut est présent.

La mise en œuvre de l'appareil n'est autorisée que pour la destination et aux conditions présentées et explicitées dans les présentes instructions de service. Des charges non comprises dans les plages de valeurs indiquées pourront abîmer l'appareil ainsi que les matériaux électriques qui lui sont raccordés.

Toute revendication en garantie sera exclue dans le cas d'une intervention sur l'appareil ou d'une transformation de celui-ci.

Turvaohjeet**FI**

Tämän laitteen liittäminen saa suorittaa vain sähköalanammattimais. Maakohtaisia määräyksiä ja turvallisuusmääräyksiä on noudatettava (IEC 60364-5-53 (VDE 0100 Teil 534:...)).

Kone on tarkastettava ennen asennusta mahdollisten ulkoisten vaurioiden varalta. Todettaessa vaurio tai muu puute, ei laitetta saa asentaa.

Koneen käyttö on sallittua vain näissä asennushojeissa mainitutissa ja osoitetuissa olosuhteissa. Laite sekä siihen liitetty sähkökäytövaline saattavat vaurioitua kuormituksilla, jotka ylittävät annetut arvot.

Kajoaminen laitteeseen ja muutokset siinä johtavat takuuvaatimuksen mitätöitymiseen.

Υποδείξεις ασφαλείας**GR**

H σύνδεση και η συναρμολόγηση της συσκευής επιτρέπεται να δεξαχούν μόνο από κάποιουν κάποιο πλεκτρολόγο.

Πρέπει να τηρούνται οι εθνικές διατάξεις και οδηγίες ασφαλείας (IEC 60364-5-53 (VDE 0100 Teil 534:...)).

Πριν τη συναρμολόγηση της συσκευής σε περίπτωση για τυχόν εξωτερικές βλάβες, Δεν επιτρέπεται η συναρμολόγηση της συσκευής σε περίπτωση που εξακολύνεται κάποια ζημιά ή άλλο ελάττωμα. Η χρήση της συσκευής επιτρέπεται μόνο στο πλαίσιο των όρων που αναφέρονται στην αυτές τις οδηγίες συναρμολόγησης. Σε περίπτωση επιβεβύνεται που υπερβαίνουν τις προδιαγραμμένες τιμές μπορεί να καταστρέφονται η συσκευή και οι συνδεθέμενοι μ' αυτήν πόροι.

Επεμβάσεις και μετατροπές στη συσκευή οδηγούν στην απώλεια των αριθμών που απορρέουν από την εγγύηση.

Sicherheitshinweise**DE**

Der Anschluss und die Montage des Gerätes darf nur durch eine Elektrofachkraft erfolgen. Die nationalen Vorschriften und Sicherheitsbestimmungen sind zu beachten (siehe auch IEC 60364-5-53 (VDE 0100 Teil 534:...)). Vor der Montage ist das Gerät auf äußere Beschädigung zu kontrollieren. Sollte eine Beschädigung oder ein sonstiger Mangel festgestellt werden, darf das Gerät nicht montiert werden.

Der Einsatz des Gerätes ist nur im Rahmen der in dieser Einbauanleitung genannten und gezeigten Bedingungen zulässig. Bei Belastungen, die über den ausgewiesenen Werten liegen, können das Gerät sowie die daran angeschlossenen elektrischen Betriebsmittel zerstört werden.

Eingriffe und Veränderungen am Gerät führen zum Erlöschen des Gewährleistungsanspruchs.

Special technical information referred to UL 1449 3rd edition:**1. Safety Instructions**

The DEHNventil series SPD is to be installed only by a qualified personnel and to be done so in compliance with all local and National Electrical Code requirements. For proper system protection coordination with other SPD's must be considered; contact our application engineer for assistance if in doubt. Installation and connection to service must be done only when the system is de-energized. Its application is to be compliant with its rating and therefore must not be installed in a more severe environment subjecting it to higher voltages, currents or energy levels than for which its technical specifications provide. It is designed for indoor applications and must be placed in a suitable rated NEMA enclosure if the system is to be in a harsher environment. Opening or tampering with the thermoplastic enclosure may damage the effective operation of the SPD and is inadvisable and will void the warranty.

2. General installation Instructions

Section 250 of the NEC and IEEE Green Book, Standard 142 should be consulted. Local electrical codes and/or the Canadian Electrical code have to be considered. **System voltage:** Make sure that the SPD is correctly rated for the system where the SPD should be applied. The maximum continuous operating voltage (MCOV) must not be exceeded. **Mounting:** Make sure that the SPD is installed as close as possible to the device to be protected. The conductor length for these connections must be kept as short and as straight as possible. The SPDs are to be mounted on the 35 mm DIN rail. The DIN rail is to be securely mounted to the back of the interior of the panel using 1/4 inch bolts every 8 inches (200 mm). The SPDs can either be slid on the DIN rail from open end or put on the DIN rail by compressing the spring loaded clamping device on the lower back of each unit. The SPDs shall permit sufficient clearance for conductor power and signaling connections. **Conductor Connections:** Phase connections to the SPD and ground side connections from the SPD to the ground bus must be of the wire size indicated in the technical specifications. Insulation should be stripped back as described on the previous page. All conductor terminal screws shall be tightened to the torque indicated in the technical data. **Grounding:** Make sure that the grounding of the SPD is as short and straight as possible with the specified wire size according to the technical data. Use a local equipotential bonding bar if possible. For proper operation the SPD must be connected to a low impedance ground. **Remote Contact Signaling:** In case of a device with remote contact signaling make sure that the torque is as indicated in the technical data. **Problem Diagnostics:** If there should be any problem please contact your local DEHN representative.

| Type | DV M TT 2P 255 (FM) | | |
|---------------------------|---------------------------------------------------|------|------|
| Rated Voltage [V] (60 Hz) | 230 | | |
| Mode | L-N | L-G | N-G |
| MCOV [V] | 255 | 255 | 255 |
| VPR [V] | 1500 | 4000 | 3000 |
| Amperage [A] | 115 | | |
| In [kA] | 20 | | |
| 9 | 0°C...+85°C | | |
| Conductors AWG | 8 Cu Stranded | | |
| Torque | 65 Lbs-in | | |
| Remote AWG | 14-22 Cu | | |
| Indicator Torque | 3 Lbs-in | | |
| SPD classification | Component (Type 4) SPD for SPD Type 2 application | | |