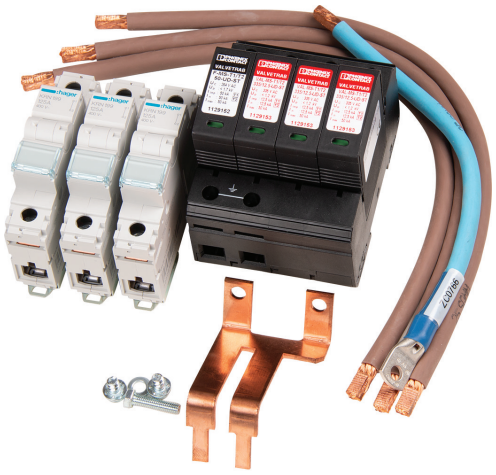
JKD101SPD
Surge Protection Kit

Type 1/2 Class I/II Surge Protection Kit for Hager 125A TP&N Power & Lighting Boards to aid compliance with 18th Edition BS 7671.



JKD101SPD

- Combination of high capacity voltage limiting varistors and N-PE spark gap
- Suitable for CT2 connection as per 534.4.3.2 BS7671 18th Edition
- Optical status indication for each cartridge
  Neutral = Healthy, Red = Replace
- Pluggable surge protection modules for ease of replacement
- Each cartridge incorporates its own thermal disconnect mechanism
- Cartridges are mechanically coded to prevent mis-connection
- Cartridges can be routinely checked and changed if required without interrupting supply to loads
- No secondary back-up protection required in distribution boards of 125A I_n or less

Product Description

A Surge protection device (SPD) kit specifically developed for Hager standard 125A Power & Lighting TPN (Type B) Distribution boards. Developed to ensure optimal performance of SPD technology within Hager distribution boards. SPD is CT2 type to ensure compatibility with all common UK Earthing arrangements e.g. TN-C-S (PME), TN-S and TT earthing arrangements. This is an IEC Type 1/2 class I/II SPD for 3 – phase power supply networks. A type 1 SPD is generally used in the primary board.

This SPD kit fits within the standard distribution board. Line, Neutral connections are via 25mm copper Cables and terminated through the first triple pole way on the bottom left hand side of the busbar stack using 3 x 125A terminals provided in the kit, with a copper earth link, minimising SPD conductor losses, maximising the effective performance of the SPD (U_p effective).

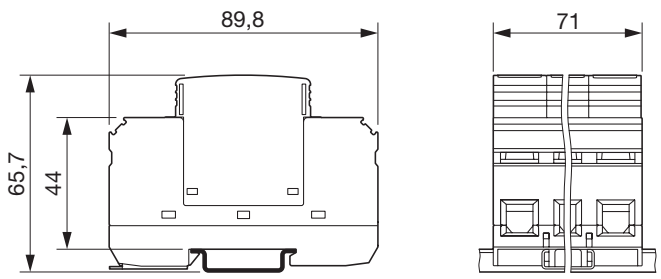
Key Specifications

- Power Supply System -TN / TT
- Requirement class -SPD class I/II acc. to IEC 61643-11; SPD Type 1/2 acc. to EN 61643-11
- Max. continuous operating voltage Uc -L-N: 275 V a.c. / N-PE: 260 V a.c.
- Nominal voltage U_n -230/400 V AC 50/60 Hz
- Impulse discharge curr. Iimp (10/350) µs L-N / N-PE 12,5 kA / 50 kA
- Nominal discharge current I_n (8/20) microseconds 20 kA
- Max. discharge current I max (8/20) microseconds 40 kA

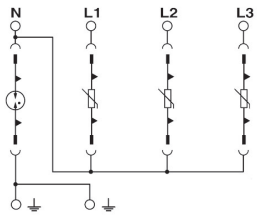
SPD Protection level U_p -L-N: < 1.35 kV/ N-PE: <1.5 kV

Solution Protection level U_p *effective* (measured at the main busbars on the TPN board) -L-N: <1.5kV/ N-PE: < 1.5kV
Short-circuit current rating I_{SCCR} -25kA
Degree of protection - IP20
Tightening torque - see installation instructions.

Dimensional Drawing



Circuit Diagram



General Data	
Standards/regulations	IEC 61643-11 2011 EN 61643-11 2012
IEC test classification	T1/2 I/II
EN type	T1/2 I/II
Mode of protection	L-N L-PE N-PE
Mounting type	DIN rail: 35 mm
Degree of pollution	2
Overvoltage category	III
Degree of protection	IP20
Shock (operation)	25g (Half-sine / 11 ms / 3x ±X, ± Y, ±Z)
Vibration (operation)	5g (10 ... 500 Hz/ 2.5 h / X, Y, Z)
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport) Permissible humidity (operation)	-40 °C ... 80 °C

Electrical Data	
Nominal voltage U_n	230 / 400 V AC (TN / TT)
Nominal frequency f_n	50 Hz (60 Hz)
Maximum continuous operating voltage Uc (L-N)	335 V AC
Maximum continuous operating voltage Uc (L-PE)	235 V AC
Maximum continuous operating voltage Uc (N-PE)	260V AC
Residual current I_{PE}	≤ 5 uA
Standby power consumption Pc	≤ 360 mVA
Impulse discharge curr. I_{imp} (10/350) µs L-N / N-PE	12,5 kA / 50 kA
Nominal discharge current In (8/20) µs	20kA
Maximum discharge current Imax (8/20) µs	50kA
Follow current interrupt rating I_{fi} (N-PE)	100A
Short-circuit current rating IsccR	25kA
Voltage protection level Up (L-N)	≤ 1.35kV
Voltage protection level Up (L-PE)	≤1.6 kV
Voltage protection level UP (N-PE)	≤ 1.5kV
Max. backup fuse	160 A (gG)
Max. backup fuse with V-type through wiring	80 A (gG)