

## SAFETY

All equipment designed and manufactured by Sollatek (UK) Ltd complies with the latest safety codes of practice. You should still follow all safety instructions and use caution when installing and operating electrical equipment.

To avoid the risk of a shock, DO NOT expose this equipment to rain, moisture, or liquid spillage.



## OPERATION

The Sollatek DSP is available as a single-phase unit (DSP1P-0) or as a three-phase unit (DSP3P-0). Directly wired and panel-mounted, the DSP connects at the point of mains entry into the house, building, or factory, as well as at downstream sub-distribution boards, depending on the system requirements.

It effectively arrests typical short-duration voltage spikes, transients, and surges on the incoming mains supply or from downstream load switching activities generated inside the building, preventing damage to sensitive electrical and electronic equipment. The DSP has been designed to offer reliable protection against Class II transients.

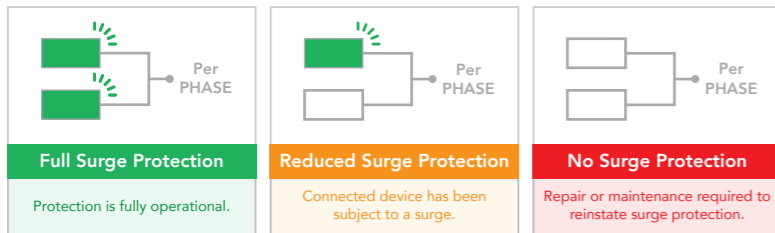
The DSP is shunt connected (not in series with the load) and is not current/load dependent, allowing it to protect any distribution panel. This makes it an extremely cost-effective way to protect the entire building. The Class II DSP employs Metal Oxide Varistor (MOV) technology to clamp the 8/20 $\mu$ S transients (between phases, phase to neutral, and earth to neutral) to a safe level. Each phase plus earth incorporates four MOVs, with each pair separately fused to maximise operational life and provide redundancy if one or more of the sixteen MOVs are damaged. Adding additional DSP units at downstream sub-distribution boards will further enhance protection.

For more information:

**Surge Protection: The Essential Guide 2024**  
[www.sollatek.com/surge-protection-guide](http://www.sollatek.com/surge-protection-guide)

## LED PANEL

The DSP has LEDs to indicate the status of the DSP and the level of surge protection offered. *The DSP1P has 2 LEDs and DSP3P has 6 LEDs in total, 2 LEDs per phase for indication of the protection for each phase.*



The 6 LEDs on the front of the panel indicate the present level of protection available on each of the three phases. On any phase, two LEDs illuminated indicates full protection available, one LED shows partial protection only and servicing is advised. If no LEDs are illuminated on a phase, it indicates that the protection on that phase is inoperative. In this case the unit should be returned for service as soon as possible.

## LIABILITY OF THE COMPANY

- The company shall not be liable, either in contract or in tort for any loss, injury or damage of whatsoever nature or to whomsoever or by whatsoever cause arising directly or indirectly from any defect in the Goods (whether latent or apparent) or as a result of the use of the Goods (save and except any liability for death of or injury to any person resulting directly from the negligence of the company) and the customer shall fully indemnify the company against all claims and demands made upon the company by reason of any such loss or injury or damage.
- Without prejudice to the provisions of the immediately preceding sub clause the company shall not in any event be liable for consequential or indirect loss or damage howsoever arising under the contract or in relation to the Goods.
- The customer hereby acknowledges that the restrictions in this clause are fair and reasonable in the circumstances.

## WARRANTY

Unless otherwise agreed with the company or where the company has notified the customer of special terms in respect of specified categories of goods the company agrees at its option either to refund the cost of or repair or replace goods proved to the company's reasonable satisfaction to have failed under proper storage and use within 24 months of delivery by reason of defects due to faulty design (other than any design made, furnished or specified by the customer) materials or workmanship provided that:

- The customer shall have followed any instruction issued by the company in relation to the goods and their storage.
- In the case of defects which would have been apparent to the customer on reasonable examination of the goods on delivery, 'the' customer shall notify the company of the defects within 14 days of delivery.
- In the case of any other defects the customer shall notify the company of the defects in writing within 7 working days of the date when the defect becomes apparent.
- Where in discharge of its obligation under this clause the company agrees that the customer may undertake any repair work on its behalf the cost of such work shall be agreed in writing between the customer and the company before the commencement of such work.

## RETURN OF GOODS

- Goods supplied in accordance with the customer's orders cannot be accepted for return without the prior written consent of the company and in accordance with the company's returns procedure.
- The company reserves the right to levy a handling, administration or other charge of such amount as it, in its absolute discretion, decides and may deduct this from any credit allowed unless the reason for any return by the customer is due to any fault or breach of these conditions on the part of the company.
- Returned goods must be sent carriage paid at the customer's risk to the company's trading premises or to such other address as the company may direct.
- The company will not allow credit in respect of returned goods not in fully re-saleable condition.



# DSP1P-0 DSP3P-0 USER MANUAL

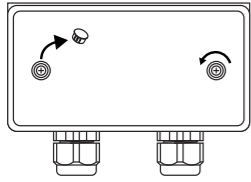
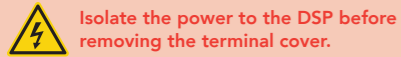


## DSP1P-0 / DSP3P-0 SINGLE PHASE / THREE PHASE DISTRIBUTION SURGE PROTECTION

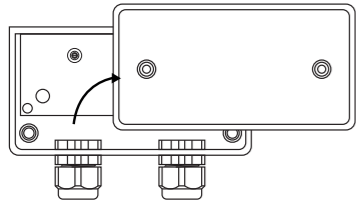


## TERMINAL COMPARTMENT

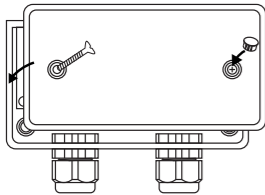
Within the terminal compartment, there are terminals for electrical connections and unit mounting holes.



- 1) Remove the screw hole covers.
- 2) Loosen the two fixing screws and remove them from the hole.



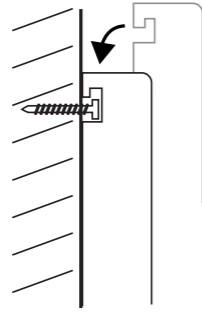
- 3) Lift the terminal cover to remove it.



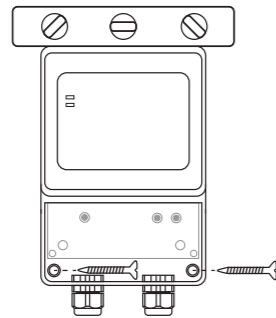
Ensure the terminal cover is replaced and securely fixed in position before powering ON the DSP.

## MOUNTING

- 1) Mark and drill the top mounting hole



- 2) If required, insert appropriate wall fixings into the hole and then fasten a screw into the hole. Leaving the screw extruding about 10 mm.
- 3) Hang the DSP on the protruding screw using the notch on the back of the enclosure.

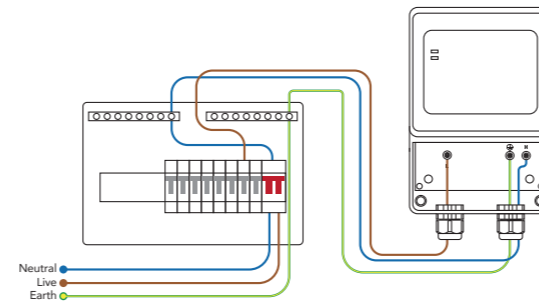


- 4) Ensure the unit is level before marking and drilling the two bottom mounting holes.
- 5) If wall fixings are required, remove the DSP from the wall and insert fixings into the wall. Replace the DSP on the top screw.
- 6) Tighten 2 screws into the bottom mounting holes to secure the DSP to the wall.

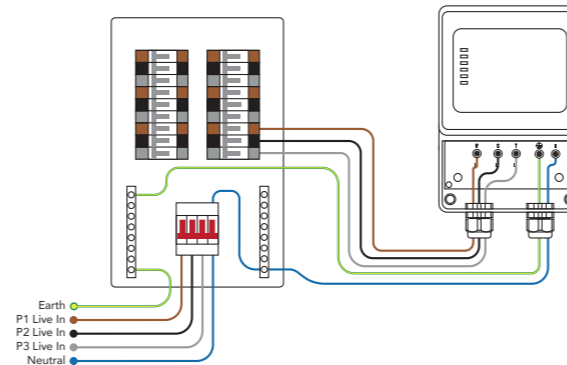
## ELECTRICAL CONNECTIONS

- The DSP should be situated as close as possible to the incoming supply using short cable runs of 6mm<sup>2</sup> cable and be no more than 0.5m in length.
  - It is recommended that the live connections to the DSP are protected by an HBC fuse or circuit breaker to protect the wiring. A spare breaker/fuse up to 32A on the main fuse board can be used if available.
  - The DSP should be installed before any RCD/GFR devices as the DSP can let a small amount of leakage current through which can trip these devices.
  - Live and neutral wires to the DSP should be kept close together to maintain good surge performance.
  - DSP and load should be fused separately.
- 1) Unscrew the cable gland and insert the cable through the gland nut.
  - 2) Insert the mains cable through the left gland.
  - 3) Loosen the terminal screws and insert the wires into the corresponding terminals. Fully tighten the terminal screws.
  - 4) Tighten the cable gland nut to secure the cable in place.
  - 5) Replace and securely fix the cover in position.

### DSP1P WIRING



### DSP3P WIRING

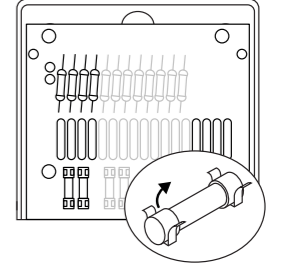
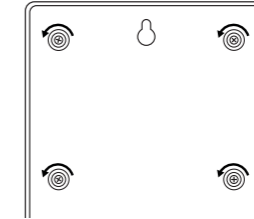


## REPAIR/MAINTENANCE

If the DSP is subject to a severe surge, the internal surge protection fuse may blow. Replacing the fuse alone may not provide full levels of surge protection as other components may also have become damaged during the surge, depending on the voltage level and duration of the surge.



Only a qualified person should carry out repairs. Ensure power is isolated before carrying out repairs.



- 1) Remove the 4 screws from the rear of the unit and then remove the cover.
- 2) Replace the blown fuse with a fuse of the same type and rating: 8.0A HBC anti-surge fuse (20x5mm)

- 3) Replace and securely fix the cover in position before powering ON.

Note: There are 8 small fuses on the DSP3P and 4 small fuses on the DSP1P.

## SPECIFICATION

|                             | DSP1P-0                                  | DSP3P-0   |
|-----------------------------|--|-----------|
| Protection Mode             | L-N, L-E, N-E                            |           |
| Nominal Voltage             | 220/240 V                                | 380/415 V |
| Total Energy Rating         | 1280 J                                   | 2560 J    |
| Maximum Surge Current       | 20 kA                                    |           |
| Response Time               | <10 ns                                   |           |
| Maximum Let-through Voltage | 750 V                                    |           |
| Connector                   | 6 mm <sup>2</sup> Screw Terminals        |           |
| Unit Dimensions             | 184 x 134 x 53 mm (without cable glands) |           |
| Unit Weight                 | 560 g                                    | 680 g     |

For more information on the Sollatek Voltage Suppressor Range, please refer to the Voltage Protection Catalogue or visit our website:

[www.sollatek.com](http://www.sollatek.com)

| Product Code | Description                    |
|--------------|--------------------------------|
| 91000200     | DSP1P-20-T2-230V DIRECT WIRING |
| 93000200     | DSP3P-80-T2-415V DIRECT WIRING |

ISO9001: 2015 accredited company  
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