# Product data sheet
## Characteristics

# SSP1A4125BDT
single phase relay, Harmony Solid State Relays, 125A, panel mount, zero voltage switching, thermal pad, input 4 to 32V DC, output 48 to 660V AC




## Main

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|---|---|
| Range of product | Harmony Solid State Relays |
| Provided equipment | Thermal pad |
| Product or component type | Panel mount relay |
| Device short name | SSP1 |
| Mounting support | Panel |
| Network number of phases | 1 phase |
| [In] rated current | 125 A |
| Solid state output type | Zero voltage switching<br>SCR output |
| Output switching mode | Zero voltage switching |

## Complementary

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|---|---|
| Control type | Without test button |
| [Uc] control circuit voltage | 4...32 V DC |
| Minimum switching voltage | 4 V DC turn-on |
| Maximum switching voltage | 1 V DC turn-off |
| Response time | 0.5 cycle (turn-on)<br>0.5 cycle (turn-off) |
| Input current limits | 7…12 MA |
| Output voltage | 48...660 V AC |
| Load current | 0.15…125 A |
| Absolute maximum voltage | 1200 V |
| Surge current | 1750 A for 16.6 ms |
| Maximum I²t for fusing | 12709 A².S for 8.33 ms at 60 Hz<br>13950 A².S for 10 ms at 50 Hz |
| Protection device type | Type 1 - 80 A miniature circuit breaker (MCB) - curve B<br>Type 2 - 63 A miniature circuit breaker (MCB) - curve B |
| Maximum leakage current | 1 MA off-state |
| Maximum voltage drop | <1.15 V on-state |
| DV/dt | 500 V/µs off-state at maximum voltage |
| Cos phi | 0.5 (with maximum load) |
| Motor power hp | 2 Hp 120 V AC<br>5 Hp 240 V AC<br>10 Hp 480 V AC |
| Insulation resistance | 1000 MOhm at 500 V DC |
| Capacitance unbalance | 8 PF for input/output |

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|---|---|
| Dielectric strength | 4 KV AC for input/output<br>4 KV AC for input or output to case |
| [Uimp] rated impulse withstand voltage | 6 KV output to case<br>6 KV input to output |
| Tightening torque | 1.5...1.7 N.m for input<br>2...2.2 N.m for output |
| Connections - terminals | Screw terminals: 0.2...3.3 mm², (24 AWG...12 AWG) with cable end for input<br>Screw terminals: 0.5...5.26 mm², (20 AWG...10 AWG) with cable end for output<br>Screw terminals: 0.2...3.3 mm², (24 AWG...12 AWG) without cable end for input<br>Screw terminals: 0.5...8.26 mm², (20 AWG...8 AWG) without cable end for output<br>Forked type tag connectors: 9.2 x 4 mm for input<br>Ring lugs: 9.2 x 4 mm for input<br>Forked type tag connectors: 11.7 x 4.5 mm for output<br>Ring lugs: 11.7 x 4.5 mm for output |
| Thermal resistance | 0.22 °C/W junction to case |
| Thermal impedance | 0.48 °C-in²/W at 25 psi |
| Local signalling | LED, green for input |
| IP degree of protection | IP20 |
| Safety reliability data | MTTFd = 1875.9 years<br>B10d = 1731395 |
| Net weight | 89.2 G |
| Device presentation | Complete product |

## Environment

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|---|---|
| Ambient air temperature for operation | -40…80 °C |
| Ambient air temperature for storage | -40…125 °C |
| Pollution degree | 2 |
| Overvoltage category | III |
| Product certifications | CSA[RETURN]CE[RETURN]UL[RETURN]EAC |
| Marking | CSA<br>UL<br>CE<br>EAC |
| Standards | IEC 60950-1<br>IEC 62314<br>CSA C22.2 No 14-13<br>UL 508 |

## Packing Units

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|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 3.800 Cm |
| Package 1 Width | 4.800 Cm |
| Package 1 Length | 6.500 Cm |
| Package 1 Weight | 102.000 G |
| Unit Type of Package 2 | S01 |
| Number of Units in Package 2 | 30 |
| Package 2 Height | 15 Cm |
| Package 2 Width | 15 Cm |
| Package 2 Length | 40 Cm |
| Package 2 Weight | 3.300 Kg |

## Offer Sustainability

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|---|---|
| Recyclability potential, in % | 56 |
| Total lifecycle Carbon footprint | 13 038 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 1.1098969072 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 1 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.0129020619 |
| Carbon footprint of the distribution phase [A4] | 0 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.0005607629 |

| | |
|---|---|
| Carbon footprint of the installation phase [A5] | 0 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 13036.6882619142 |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 13 037 kg CO2 eq. |
| Mercury free | Yes |
| Sustainable packaging | Yes |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.0236742268 |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0 kg CO2 eq. |
| Environmental Disclosure | Product Environmental Profile |
| Total lifecycle Carbon footprint | 13038 |
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| SCIP Number | 134201bc-d293-4667-9cca-10a7f11729e0 |
| REACh Regulation | Reference contains Substances of Very High Concern above the threshold |
| EU RoHS Directive | Compliant By Exemption |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, wh |
| End of life manual availability | End Of Life Information |
| Take-back | No |

## Contractual warranty

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|---|---|
| Warranty (in months) | 18 |

Product Life Status : Commercialised