



Figure similar

SIMATIC PS305/DC24-110V/24V/2A/OUTDOOR

SIMATIC S7-300 with Regulated power supply PS305 input: 24-110 V DC output: 24 V DC/2 A

| Input  |  |
|--|--|
| type of the power supply network   | DC voltage   |
| supply voltage   |  |
| • at DC  | 24 ... 110 V   |
| input voltage  |  |
| • at DC  | 16.8 ... 138 V   |
| design of input wide range input   | Yes  |
| overvoltage overload capability  | 154 V; 0.1 s   |
| operating condition of the mains buffering   | at $V_{in}$ rated  |
| buffering time for rated value of the output current in the event of power failure minimum | 10 ms  |
| operating condition of the mains buffering   | at $V_{in}$ rated  |
| input current  |  |
| • at rated input voltage 24 V  | 2.4 A  |
| • at rated input voltage 110 V   | 0.6 A  |
| current limitation of inrush current at 25 °C maximum                                      | 20 A   |
| duration of inrush current limiting at 25 °C   |  |
| • maximum  | 10 ms  |
| I <sup>2</sup> t value maximum   | 5 A <sup>2</sup> ·s  |
| fuse protection type   | T 6.3 A/250 V (not accessible)   |
| • in the feeder  | Recommended miniature circuit breaker: from 10 A characteristic C, suitable for DC |
| Output   |  |
| voltage curve at output  | Controlled, isolated DC voltage  |
| output voltage at DC rated value   | 24 V   |
| output voltage   |  |
| • at output 1 at DC rated value  | 24 V   |
| relative overall tolerance of the voltage  | 3 %  |
| relative control precision of the output voltage   |  |
| • on slow fluctuation of input voltage   | 0.2 %  |
| • on slow fluctuation of ohm loading   | 0.4 %  |
| residual ripple  |  |
| • maximum  | 150 mV   |
| • typical  | 30 mV  |
| voltage peak   |  |
| • maximum  | 240 mV   |
| • typical  | 150 mV   |
| product function output voltage adjustable   | No   |
| type of output voltage setting   | -  |
| display version for normal operation   | Green LED for 24 V OK  |

|   |   |
|---|---|
| behavior of the output voltage when switching on  | No overshoot of Vout (soft start)   |
| response delay maximum  | 3 s   |
| voltage increase time of the output voltage   |   |
| • typical   | 5 ms  |
| output current  |   |
| • rated value   | 2 A   |
| • rated range   | 0 ... 3 A; 3 A up to +60°C at Vin > 24 V  |
| supplied active power typical   | 48 W  |
| short-term overload current   |   |
| • on short-circuiting during the start-up typical   | 9 A   |
| • at short-circuit during operation typical   | 9 A   |
| duration of overloading capability for excess current   |   |
| • on short-circuiting during the start-up   | 270 ms  |
| • at short-circuit during operation   | 270 ms  |
| product feature   |   |
| • bridging of equipment   | Yes   |
| number of parallel-switched equipment resources for increasing the power  | 2   |
| <b>Efficiency</b>   |   |
| efficiency in percent   | 75 %  |
| power loss [W]  |   |
| • at rated output voltage for rated value of the output current typical   | 16 W  |
| <b>Closed-loop control</b>  |   |
| relative control precision of the output voltage with rapid fluctuation of the input voltage by +/- 15% typical | 0.3 %   |
| relative control precision of the output voltage load step of resistive load 50/100/50 % typical                | 2.5 %   |
| setting time  |   |
| • load step 50 to 100% typical  | 2.5 ms  |
| • load step 100 to 50% typical  | 2.5 ms  |
| setting time  |   |
| • maximum   | 5 ms  |
| <b>Protection and monitoring</b>  |   |
| design of the overvoltage protection  | Additional control loop, shutdown at approx. 30 V, automatic restart  |
| response value current limitation   | 3.3 ... 3.9 A   |
| property of the output short-circuit proof  | Yes   |
| design of short-circuit protection  | Electronic shutdown, automatic restart  |
| enduring short circuit current RMS value  |   |
| • maximum   | 2 A   |
| display version for overload and short circuit  | -   |
| <b>Safety</b>   |   |
| galvanic isolation between input and output   | Yes   |
| galvanic isolation  | Safety extra low output voltage Vout according to EN 60950-1 and EN 50178, creepage distances and clearances > 5 mm |
| operating resource protection class   | Class I   |
| protection class IP   | IP20  |
| <b>Approvals</b>  |   |
| certificate of suitability  |   |
| • CE marking  | Yes   |
| • UL approval   | Yes; UL-Listed (UL 508), File E143289; CSA (CSA C22.2 No. 142)  |
| • CSA approval  | Yes; UL-Listed (UL 508), File E143289, CSA (CSA C22.2 No. 142)  |
| • cCSAus, Class 1, Division 2   | No  |
| • ATEX  | No  |
| certificate of suitability  |   |
| • IECEx   | No  |
| • NEC Class 2   | No  |
| • ULhazloc approval   | No  |
| • FM registration   | No  |
| type of certification CB-certificate  | No  |
| certificate of suitability  |   |
| • EAC approval  | Yes   |

|  |   |
|--|---|
| certificate of suitability shipbuilding approval         | No  |
| shipbuilding approval                                    | -   |
| Marine classification association                        |   |
| • American Bureau of Shipping Europe Ltd. (ABS)          | No  |
| • French marine classification society (BV)              | No  |
| • DNV GL   | No  |
| • Lloyds Register of Shipping (LRS)                      | No  |
| • Nippon Kaiji Kyokai (NK)                               | No  |
| <b>EMC</b>   |   |
| standard   |   |
| • for emitted interference                               | EN 55011 Class A  |
| • for mains harmonics limitation                         | not applicable  |
| • for interference immunity                              | EN 61000-6-2  |
| <b>environmental conditions</b>                          |   |
| ambient temperature                                      |   |
| • during operation                                       | -25 ... +70 °C; with natural convection   |
| • during transport                                       | -40 ... +85 °C  |
| • during storage   | -40 ... +85 °C  |
| environmental category according to IEC 60721            | Climate class 3K5, transient condensation permitted   |
| <b>Mechanics</b>   |   |
| type of electrical connection                            | screw-type terminals  |
| • at input   | L+1, M1, PE: 1 screw terminal each for 0.5 ... 2.5 mm <sup>2</sup> single-core/finely stranded    |
| • at output  | L+, M: 3 screw terminals each for 0.5 ... 2.5 mm <sup>2</sup>                                     |
| • for auxiliary contacts                                 | -   |
| width of the enclosure                                   | 80 mm   |
| height of the enclosure                                  | 125 mm  |
| depth of the enclosure                                   | 120 mm  |
| required spacing   |   |
| • top  | 50 mm   |
| • bottom   | 50 mm   |
| • left   | 0 mm  |
| • right  | 0 mm  |
| net weight   | 0.57 kg   |
| product feature of the enclosure housing can be lined up | Yes   |
| fastening method   | Can be mounted onto S7 rail   |
| mechanical accessories                                   | Mounting adapter for standard mounting rail (6ES7390-6BA00-0AA0)                                  |
| MTBF at 40 °C  | 964 506 h   |
| other information  | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |

