

Technical data sheet

Power supply · regulated, 20 W

Switchmode power supply, Single-phase

Input: wide-range input AC 85–264 V, DC 120–375 V

Output: DC 5 V, adjustable



Identification

Type DRS1-05A
Part No. [722702](#)

Product version

Datasheet version 00

Input

Number of phases 1
Rated voltage U_N AC 100–240 V
Operation voltage range AC 85–264 V / DC 120–375 V
Frequency range 47 Hz – 63 Hz
Rated current I_N 335 mA @ AC 115 V / 210 mA @ AC 230 V
Inrush current 20 A @ AC 115 V / 40 A @ AC 230 V
Internal fuse T2A / AC 250 V
External protection Mini-circuit breaker: C 4 A

Output

Output voltage/current DC 5 V/4 A
Rated voltage U_N DC 5 V
Rated current I_N 4 A
Power Dissipation 5 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$ 4.75–5.5 V
Accuracy $\pm 1\%$
Load regulation $\pm 1\%$
Line regulation $\pm 1\%$
Rise time 150 ms
Temperature coefficient $\pm 0.03\% / ^\circ\text{C}$
Ripple and noise 100 mV
Hold up time 20 ms @ 115 V / 50 ms @ 230 V

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SYSTEMATIC TECHNOLOGY

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| | |
|----------------------------|--------------|
| Efficiency | 82 % |
| Over voltage protection | DC 6.5–8.5 V |
| Rated over load protection | 140 % |
| Short circuit | Hiccup Mode |

Status indication

| | |
|-----------------------------------|------------|
| Status indication DC ON LED green | DC 4–4.5 V |
|-----------------------------------|------------|

General

| | |
|------------------------------------|---|
| Switching frequency | 65 kHz |
| Insulation voltage input / output | AC 3 kV / DC 4.2 kV |
| Insulation voltage input / ground | AC 1.5 kV / DC 2.1 kV |
| Insulation voltage output / ground | AC 500 V / DC 710 V |
| Insulation resistance at DC 500 V | 100 MΩ |
| Derating | 2.5 %/°C starting 51 °C |
| Cooling | Air convection, 25 mm clearance all-round |
| Housing material | Plastic |
| Mounting | DIN rail mountable TS35 (EN 60715) |
| Max. altitude operation | 5000 m (EN 62368-1) |
| Installation position | Vertical |
| MTBF | 704000 h |
| Degree of protection | IP20 |
| Protection class | I |
| Weight/unit | 0.14 kg |
| Connection type | Screw terminal 0.20 mm ² – 2.5 mm ² AWG 26 – AWG 12 |
| Dimensions (w × h × d) | 22.5 mm × 90.0 mm × 100.0 mm |
| PU (units) | 1 |

General ambient conditions

| | |
|-----------------------------|------------------------------|
| Operation temperature range | -25 °C ... +71 °C (Derating) |
| Storage temperature range | -40 °C ... +85 °C |
| Over voltage category | II |
| Degree of pollution | 2 |
| Relative air humidity | 20 – 95 % RH, not condensing |

Approvals/Standards

| | |
|-----------|--|
| Approvals | UL 508 Listed (E249179) UL 1310 Class 2 (E320708) UL 62368-1 CE UKCA |
|-----------|--|

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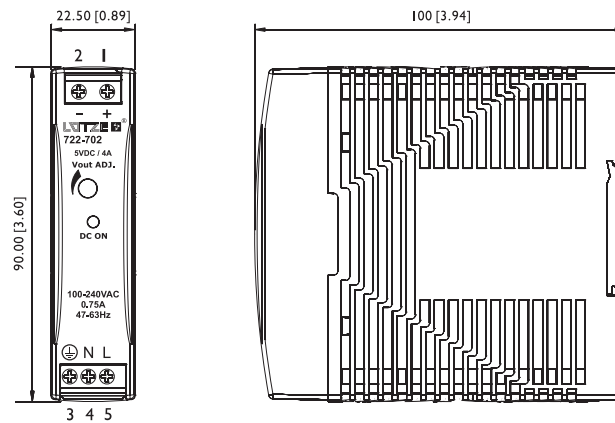
Power supply · regulated, 20 W

Standards

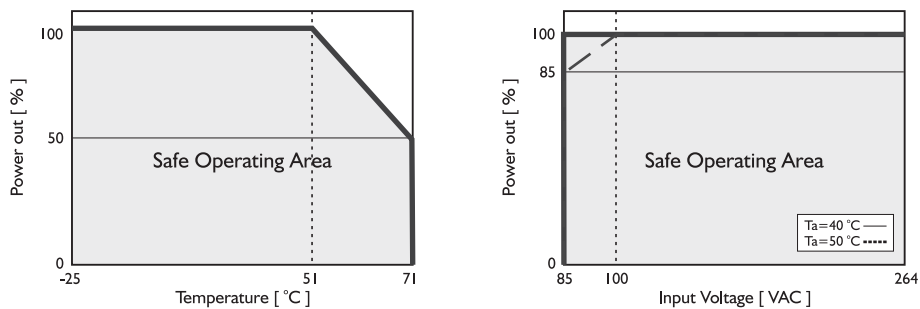
EN 62368-1
EN 61000-6-3
EN 55032 Class B
EN 61000-3-2
EN 61000-3-3
EN 61000-6-2
EN 55024
EN 61000-4-2 Level 4
EN 61000-4-3 Level 3
EN 61000-4-4 Level 4
EN 61000-4-5 L-N Level 3
L/N-FG Level 4
EN 61000-4-6 Level 3
EN 61000-4-8 Level 4
EN 61000-4-11 ENV 50204 Level 2
EN 61204-3

Dimensions

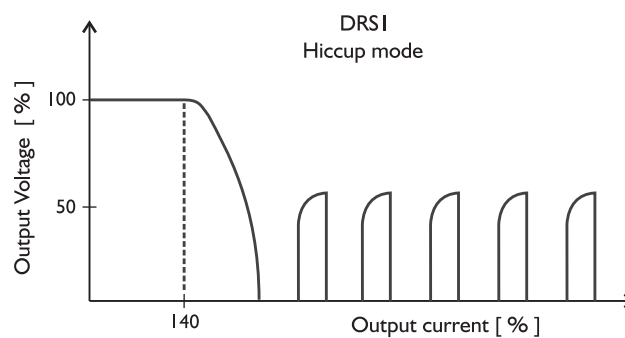
mm [inch]



Derating



Short circuit characteristics



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Pin assignment

| PIN NO. | Designation | Description | |
|---------|-------------|-------------|--|
| 1 | OUT | V + | Positive output terminal |
| 2 | | V - | Negative output terminal |
| 3 | IN | ⊕ | Ground this terminal to minimize high-frequency emissions |
| 4 | | N | Input terminals (neutral conductor, no polarity at DC input) |
| 5 | | L | Input terminals (phase conductor, no polarity at DC input) |
| | OTHER | DC ON | Operation indicator LED |
| | | Vout ADJ. | Trimmer-potentiometer for Vout adjustment |

Circuit diagram

