

DFX1512A



- For industrial and residential applications
- Wide input range: 100 - 240 Vac
- Flexible power continuity up to 20 W
- Output: 12 Vdc 1.2A
- Wide temperature range: -25 to 70 °C
- Overload, overvoltage and short-circuit protection
- DIN Rail and wall mounted - IP20
- Extremely small size
- 3 years warranty

Input Data

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| Nominal Input Voltage (2 x Vac) | 100 – 240 – 277 Vac |
| AC Input Voltage range (Vac) | 85 – 305 |
| DC Input Range | 95 – 370 Vdc |
| AC Frequency | 45 – 65 Hz ± 5% |
| DC Frequency | 0 Hz |
| Current consumption (Approx..) | 0.3 A (120 Vac) 0.2 A (230 Vac) |
| Inrush Current limitation (Vn and In Load) I ² t | ≤ 15 A ≤ 5 msec. |
| Hold-up Time (Typ.) | >15 msec (120 Vac) >30 msec (230 Vac) |
| Internal Fuse (slow – blow, Internal) | 0.5 A |
| External Fuse (recommended) | 6 A curve B |
| External Circuit Breaker (recommended) | 6A curve B or 2A curve C |

Output Data

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| Output Voltage isolated DC Voltage (Vn) | 12 Vdc ± 3% |
| Adjustment range (Vadj) | 10.5 – 14.5 Vdc |
| Start up with Strong Load (capacitive load) | ≤ 30.000µF |
| Turn-On delay after applying mains voltage | 1 sec. (max) |
| Continuous Current -25 - +55°C In | 1.2 A |
| Continuous Current +55 - +70°C In | Derating 2%/K |
| Power Boost Current at 12 Vdc 55° C In | 2 A ≤ 3 min. |
| Max Short Circuit current (Icc) | 2 A |
| Enduring Short Circuit current RMS max. | 2 A |
| Residual Ripple (with nominal value) | ≤ 100 mV _{SS} |
| Peak | ≤ 150 mV _{SS} |
| Parallel connection to increase power | No |
| Series Connection | Yes (max four device) |
| Redundancy Connection | Yes |

Efficiency

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| Efficiency at Vout – Iout rated, approx. | 80 % |
| Power loss at Vout – Iout rated, approx. | 2.8 W |
| Power loss during no load operation max. | 0.3 W |
| Reliability: MTBF at 40°C IEC 61709 | > 500.000 h |

Closed-loop control

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| Dynamic mains compensation (Vin rated ±15 %), max. | -0.2 % |
| Dynamic load smoothing (Iout: 10/90/10 %), Uout ± typ. | 2 % |
| Load step setting time 10 to 90%, typ. | 1 ms |
| Load step setting time 90 to 10%, typ. | 1 ms |

Protection and Monitoring

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| Over temperature Protection | Hiccup. Shut-down output and automatic restart. |
| Short-circuit protection | Hiccup. Shut-down output and automatic restart. |
| Over Load capability | 150% In typ. 200ms |
| Over Voltage Output protection | Yes (typ. 16.5 Vdc) |
| Status output voltage OK | Green LED |

Environmental Conditions

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| Ambient Temperature operation | -25 up to +70 °C |
| Ambient Temperature Storage | -40 up to +85 °C |
| Humidity at 25 °C in acc. to EN 60721 | 95 % no condensation |
| Vibration (operation) IEC 60068-2-6 | <15 Hz, amplitude ± 2.5mm 2.5mm <15Hz-150Hz, 2.3g 90 min. |
| Shock IEC 60068-2-6 | 30g in all directions |

Safety

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| Primary/secondary isolation | Yes |
| Pollution Degree Environment | 2 |
| Insulation voltage (IN/OUT) | 4000 Vac |
| Insulation voltage (Input / Earth, PE) | 2000 Vac |
| Insulation voltage (Out Load / Earth, PE) | 500 Vac |
| Galvanic isolation to: EN62368 and EN 50178 | Safety extra-low output voltage Uout |
| Degree of protection (EN 60529) | IP20 |

Norms and Certifications

CE mark in conformity to EMC 2014/30/EU: Electromagnetic Compatibility Directive; 2014/35/EU: Low Voltage Directive; ROHS 2011/65/EU: Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS), as amended by 2015/863/EU; EMC Immunity: EN61000-6-2; EMC Emission: EN61000-6-3, EN 55022 Class B

Approval

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|-----------------------|--------------------------|
| CE mark | Yes |
| UL/cUL (CSA) approval | UL Listing 62368 pending |

Mechanics Data

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| Screw type connection | 0.6 - 0.8 Nm |
| Connections Supply Input: L, N: 1phase | 0.2 - 2.5 mm ² (24 – 12 AWG) |
| Connections Output: +, - | 0.2 - 2.5 mm ² (24 – 12 AWG) |
| Protection class | II |
| MTBF at 40°C | > 4.300.000 h |
| Housing material | Polycarbonate |
| Dimension (WxHxD) DIN 43880 | 18 x 90 x 55 mm |
| Weight (approx.) | 0.1 Kg |