## 19" compatible AC/DC switched mode



## Triple, 100 W

■ 19" compatible AC/DC switched mode power supplies, pluggable 3 U

- Wide range mains input voltage ( $90-254 \mathrm{~V}_{\mathrm{AC}}$ and $100-360 \mathrm{~V}_{\mathrm{DC}}$ )
- Power factor correction (PFC) to EN 61000-3-2

■ 3 output voltages
■ Signalling: Output voltage OK
■ For industrial applications
■ International approvals EN 60950, UL

- High reliability and long life
- Cost-optimized



## Note

The front panel is not included in delivery.

| Output data at $\mathrm{T}_{\mathrm{U}}=0 \ldots 50^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  | Order No. ${ }^{17}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage in V |  |  | $\begin{aligned} & \text { Current } \\ & \text { (with } 190 \mathrm{~V}_{\mathrm{AC}} \text { ) } \\ & \text { in } \mathrm{A} \end{aligned}$ |  |  | Power output | Height | Width A | Power supply | Mains voltage | Front panel ${ }^{2)}$ EMC |
| $\mathrm{V}_{1}$ | $\mathrm{V}_{2}$ | $\mathrm{V}_{3}$ | $\mathrm{I}_{1}$ | $\mathrm{I}_{2}$ | $\mathrm{I}_{3}$ | in W | in U | in HP | Type | $90-254 \mathrm{~V}_{\mathrm{AC}}$ |  |
| +5 | +12 | -12 | 8 | 2.5 | 2.5 | 100 |  |  | MAX 312 | 13100-122 | 21006-945 |
| +5 | +15 | -15 | 8 | 2,0 | 2,0 |  | 3 | 8 | MAX 315 | 13100-123 | 100 |

1) Please order front panel separately
${ }^{2)}$ Front anodised, rear side chromated, slotted on both sides for mounting EMC contact strips in the event of increased EMC requirements
3 U EMC contact strips, Order No. 21101-705, 10 pieces
Mating connector H15F with FASTON connection, Order No. 69001-733

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## Technical data

| Input parameters |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Mainsvoltage | Nominal values $\mathrm{V}_{\mathrm{AC}}$ | $100-240 \mathrm{~V}_{\mathrm{AC}}$ |  |  |
|  | Operatingranges | $\begin{aligned} & 90-254 \mathrm{~V}_{\mathrm{AC}} \\ & 100-360 \mathrm{~V}_{\mathrm{DC}} \\ & \hline \end{aligned}$ |  |  |
| Mains nominal current at $90 \mathrm{~V}_{\mathrm{AC}}$ |  | 1.4 A |  |  |
| Mains frequency range |  | $50-60 \mathrm{~Hz}$ |  |  |
| Power factor correction in accordance with |  | EN 61000-3-2 |  |  |
| Efficiency type |  | > 73 \% |  |  |
| Switch-on current $I_{P}$ (with $230 \mathrm{~V}_{\mathrm{AC}}$ ) |  | < 15 A |  |  |
| Output parameters at |  | 190/90 V ${ }_{\text {AC }}$ |  |  |
| Output power max. $\left(50^{\circ} \mathrm{C}\right)$ [W] |  | 40/35 | 60/38.4 |  |
| Output voltage [V] |  | $\mathrm{V}_{1}$ | $\mathrm{V}_{2}, \mathrm{~V}_{3}$ |  |
|  | factory set | 5 V | $\pm 12 \mathrm{~V}$ | $\pm 15 \mathrm{~V}$ |
|  | Adjustmentrange $\Delta \mathrm{V}$ | 4.95-5.5 | $\begin{gathered} 11.5- \\ 15.7 \end{gathered}$ | $\begin{gathered} \hline 11.5- \\ 15.7 \end{gathered}$ |
| Output current [A] | $0 \ldots 5{ }^{\circ} \mathrm{C}$ | 8/7 | 2.5/1.6 | 2/1.3 |
|  | $70^{\circ} \mathrm{C}$ | 6/5.5 | 1.5/1.2 | 1.2/1 |
| Current limitation shuts the output off after approx. 20 ms , automatically resets after approx. 0.5 s |  | Permanently short-circuit protected |  |  |
| Residual ripple/ interferencevoltage <br> (BW: 30 MHz ) $[\mathrm{mV} \mathrm{VPP}]$ |  | < 80 | < 150 |  |
| Mains and load control, static (load change $0-100 \%$ ) [ $\mathrm{mV}_{\mathrm{PP}}$ ] |  | <25 | < 120 |  |
| Temperature coefficient |  | -0.015 \%/K |  |  |

## Dynamic control deviations

(load change: $10 \ldots 100 \%$ with $100 \mathrm{~Hz} ; \mathrm{dl} / \mathrm{dt}=0.25 \mathrm{~A} / \mu \mathrm{s}$ )

| Control time at <br> $0.01 \times \mathrm{V}_{1 \text { Nominal }}[\mathrm{ms}]$ | $<0.8$ |
| :--- | :--- |
| Overshoot and undershoot <br> amplitude [ mV ] | $<250$ |


| Protection and monitoring facilities |  |  |  |
| :---: | :---: | :---: | :---: |
| Switch-on time |  | < 1.5 s |  |
| Mains fuse, high breaking sluggish |  | $4 \mathrm{~A} / 250 \mathrm{~V}_{\mathrm{AC}}, 5 \times 20 \mathrm{~mm}$, DIN EN 60127-2/V |  |
| Power failurebridging at $\mathrm{V}_{\mathrm{AC}}=90 \mathrm{~V}_{\mathrm{AC}}$ and $100 \%$ load $V_{1} / V_{2,3}$ |  | > $16 \mathrm{~ms} / 5 \mathrm{~ms}$ |  |
| Over-voltage protection OVP (shuts power supply off, diode alloyed through) set to |  | $<7.2 \mathrm{~V}$ | - |
| Remote sense compensated |  | Max. 0.5 V |  |
| "Output voltage ok" signalling |  | "Output OK" signal, active high |  |
| Test and environmental conditions |  |  |  |
| Climatic test to |  | IEC 68-2-38 |  |
| Shock and vibration test in accordance with acceleration of 2 g |  | EN 60068-2-6 |  |
| Height 3 U/depth 160 mm |  | Width 8 |  |
| Weight (mass) |  | 0.55 kg |  |
| CE | Interference emission | EN 50081-1,EN 55011 Class B, |  |
|  | interferenceimmunity, degree of severity 3 | EN 50082-2, <br> EN 61000-4-2, EN 61000-4-3, <br> EN 61000-4-4, EN 61000-4-5, <br> EN 61000-4-6, |  |
|  | Safety, class of protection 1 | EN 60950 |  |
| High voltage test to EN 60950 | Input-output | 4.3 kV DC |  |
|  | Input PE | 2.2 kV DC |  |
|  | Output PE | 0.7 kV DC |  |
| UL 1950 |  | applied for |  |
| Power supply maintenance-free |  | Yes |  |
| Cooling |  | Convection |  |
| Operation/storage ambient temperature |  | $0 \ldots 70^{\circ} \mathrm{C} /-20 \ldots+85^{\circ} \mathrm{C}$ |  |
| MTBF at full load,$\mathrm{T}_{U}=40^{\circ} \mathrm{C}$ |  | 220,000 h |  |

Schematic wiring diagram


