

Input

Input voltage range refer to the table of types in the various series
Ripple (DC)-input <15% p-p allowed
Inrush current typ. 20-30 times nominal input current - also see "General Information"
limit: option H, HE

No-load input current 20-30W depending on type
Switch-on time typ. 1s
Hold-up time typ. 2-5ms depending on type - also see "General Information"
Turn on/off $\leq 95\% U_{min} \geq 105\% U_{max}$
Spikes acc. EN 61000-4-5, Class 3 also see "Quality Control"
Bursts acc. EN 61000-4-4, Level 3 also see "Quality Control"

Output

Output voltage adjustable - refer to the table of types in the various series
Output current refer to the table of types in the various series
Line regulation 0,1%, measured directly at the connection terminal
Load regulation 0,2%, measured directly at the connection terminal
with options E, R, C: combined 2% or 1V (the lower value is applicable)
Ripple <1%+30mV p-p typ. - see "General Information"
Response time typ. 10ms
Load transient 10-90-10% typ. 6%
On/off overshoot none
Overload protection electronic - adjustable UI-characteristic, automatic return
Over voltage protection electronic - adjustable, pulse frequency app. 2Hz, automatic return,
switching off after 5-10s →Reset button.
no effect on external over voltage - also see "General Information"
Remote sensing standard, up to 10% U_{nenn} for output < 60VDC, up to 6V U_{nenn} for output > 60VDC - also
see "General Information"
Parallel operation possible (options E, R, C, Ci)
Series operation possible (option U)

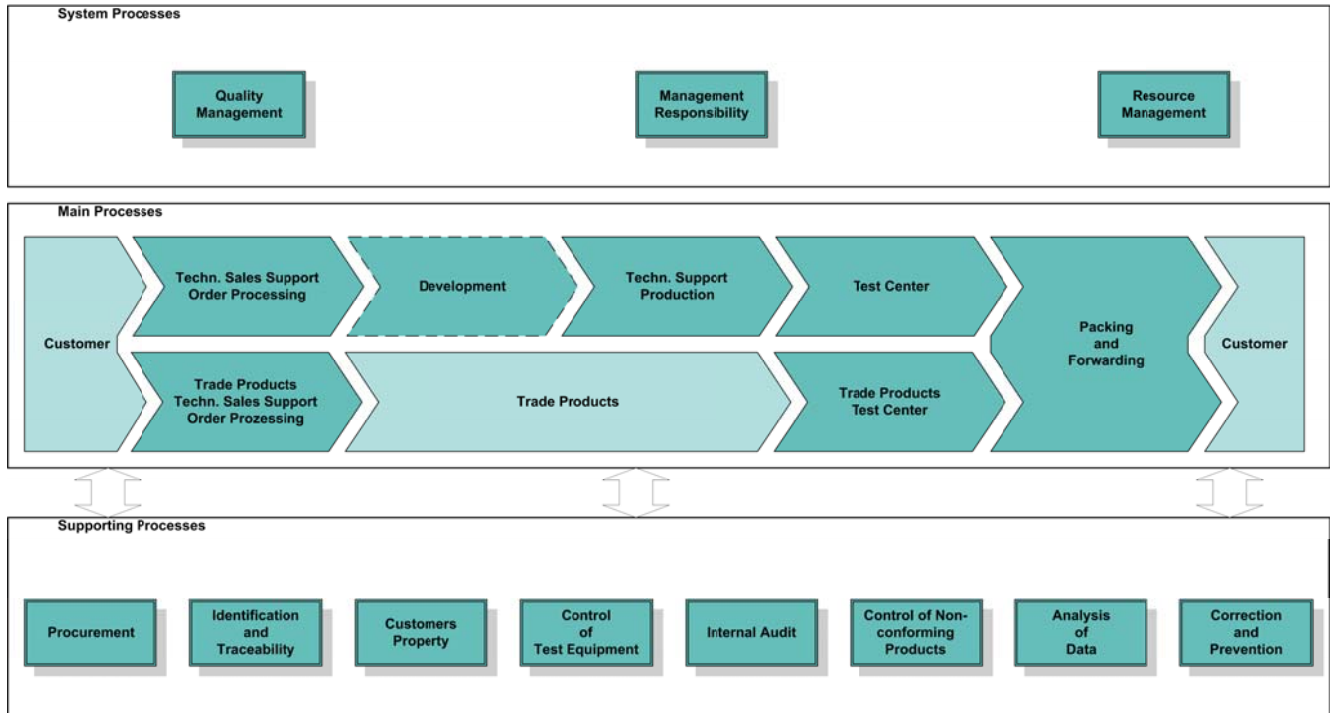
General

Temperature coefficient typ. 0,02%/°C
Operating temperature -20°C to +70°C
Current derating from +55°C to +70°C by 2,5%/°C (no automatic derating)
Cooling internal temperature-controlled fans
Over-temperature protection unit switches off, automatic return after cooling down
Storage temperature -40°C to +85°C
Humidity 95% without condensation, option T for higher values
Efficiency at full load 85%-92%, depending on type, - also see table "Efficiency"
Switching frequency typ. 20kHz
MTBF at 40°C depending on type, app. 70 000h acc. MIL-HDBK217
app. 2700 fit acc. SN29500

Construction

Isolation acc. EN 50178, EN 60950, Class I
Creepage distances acc. EN 50178, EN 60950 - also see "Quality Control"
Air distances in/out, in/ground: 6,5mm
RFI-interference in/out, in/ground: 5mm
EMC / CE acc. EN 55011 Class "A", optionally "B" upon inquiry
EN 61000-6-4, EN 61000-6-2
Grounding of input and/or output potentials and/or connecting input to output may cause
changes of EMC and/or ripple values.
Connectors terminals

Structure of the process and quality management to ISO 9001



Quality Control System

- All the testing processes are defined, registered and the results recorded.
- The testing and measuring equipment is carefully maintained and officially calibrated in given intervals.
- All components go through an incoming quality inspection.
- During the manufacturing process the single sub-assemblies are tested, the results are recorded and the sub-assemblies are marked accordingly.
- The sub-assemblies and units are manufactured according to written instructions given in the form of drawings, technical descriptions and photos.
- All the items are carefully handled during the manufacturing process, so that they are not damaged and their quality is maintained.
- Only the units with tested and marked sub-assemblies go through the end quality inspection. The end quality inspection follows a written procedure and the results are recorded.
- The test reports of the intermediate and end tests are evaluated.

All units are put through the following end tests before delivery:

Isolation test (the designated terminals are shorted). This test can only be made after consulting Powertronic!

Test voltage input against outputs and case - 2s	at input voltages <160VDC at input voltages >160VDC / all AC	2800VDC 3500VDC
Test voltage outputs against case - 2s	at output voltages <60VDC at output voltages >60VDC	700VDC 2100VDC
Test voltage outputs against outputs - 2s		700VDC
Test voltage alarm contacts against all - 2s	at input/output voltages <160VDC at input/output voltages >160VDC	2100VDC 2800VDC
EMC-Test	surges according to EN 61000-4-5 symmetrical asymmetrical bursts according to EN 61000-4-4	± 1000V ± 2000V ± 2000V
Earthed conductor test		< 0.1Ω 10A
Earth leakage test		< 3,5mA
Burn-in		up to 12h

Electrical parameter

Naturally other parameters can be tested if required.