Specifications AC Input

Input

Input voltage range	refer to the table of types in the various series
Frequency	40-70Hz, 16/400Hz possible upon inquiry
Power factor	0,65-0,75 capacitive, depending on type/load
Crest factor	2,0-2,5 depending on type
Inrush current	typ. 20-30 times nominal input current 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
Turn on/off	≤ 95% Umin ≥ 105% Umax
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
Response time	typ. 10ms
Load transient 10-90-10%	typ. 6%
On/off overshoot	none
Overload protection	electronical - adjustable UI-characteristic, automatic return
Over voltage protection	electronical - 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% Unenn for output < 60VDC, up to 6V Unenn for output > 60VDC - also see "General Information"
Parallel operation	possible (options E, R, C, Ci)
Series operation	possible (option U)

General

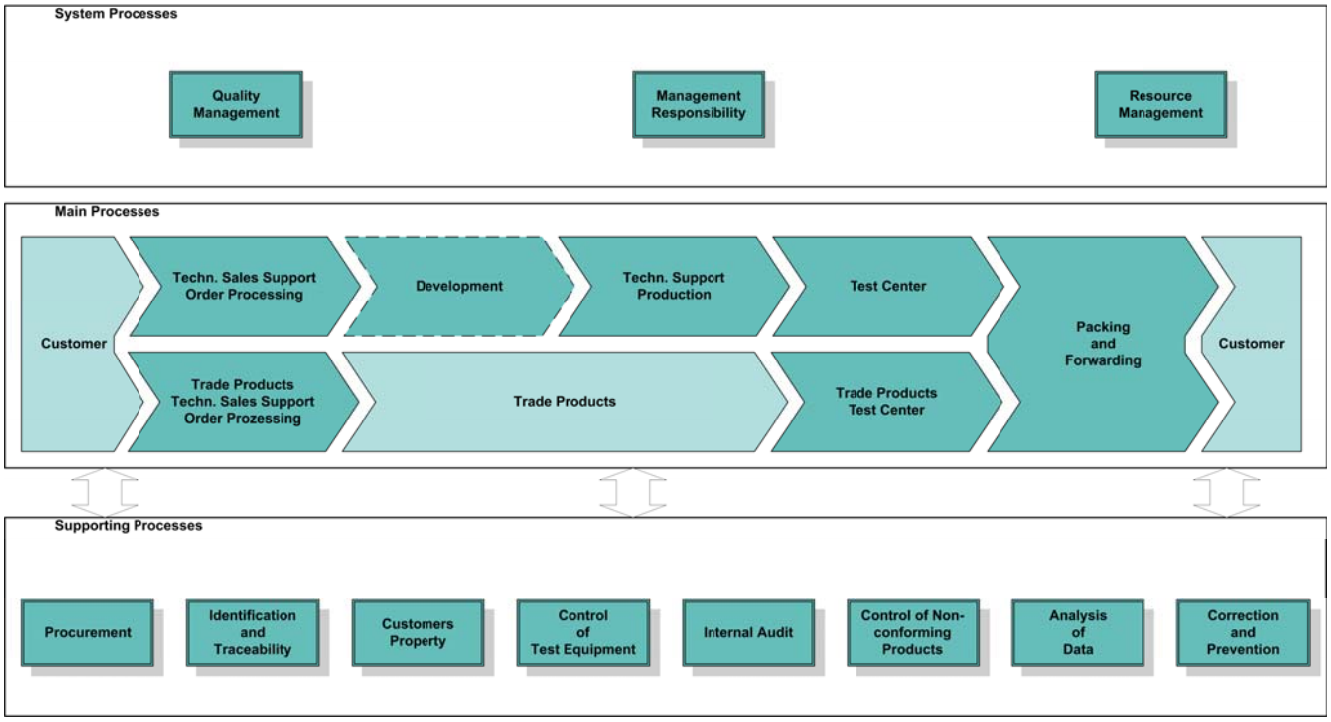
Temperature coefficient	typ. 0,02%/°C
Operating temperature	-20°C to +70°C
Current derating	from+55°C to+70°C by 2,5%/°C (no automatic derating)
Cooling	internal temperature-controlled fans
Over-temperature protection	unit switches off, automatic return after cooling down
Storage temperature	-40°C to+85°C
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

	acc. EN 50178, EN 60950, Class I
Isolation	acc. EN 50178, EN 60950 - also see "Quality Control"
Creepage distances	in/out, in/ground: 6,5mm
Air distances	in/out, in/ground: 5mm
RFI-interference	acc. EN 55011Class "A", optionally "B" upon inquiry
EMC / CE	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

Quality Control System

Structure of the process and quality management to ISO 9001



Quality Control System

- All the testing processes are definied, 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		**bis 12h**

Electrical parameter
Naturally other parameters can be tested if required.