

single, double, triple
up to 30 Watt

UC/DC-wide range-
power supplies isolated



- acc. to VDE 0160 (Option)
- PCB mounting
screw mounting
- radio interference suppression EN 55022.A
- Isolation test voltage 2,5 KV_{AC}
- Single output with sense lines
- Parallel operation

for telecommunications / automation and telecontrol technology



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Series NMO-U/B/T

(single / double / triple)

Main points:

Output 1 single / triple:

- Accuracy absolute $\pm 1\%$
- Regulation $\Sigma (U_{in} + I_{out} + T_U) < \pm 1\%$
- Current limitation $< 1,4 I_{omax}$
(triple) $1,3 \Sigma P_o / U_{o1}$
- Sense lines sense +/sense - $\Sigma 200mV$

Output double:

- Accuracy absolute $\pm 2\%$ (symm.)
- Regulation $\pm 4\%$ (unsymm.)
- Current limitation $1,3 \Sigma P_A / U_{ox}$

Outputs 1 up to 3 (general):

- Ripple $< 10 mV_{pp}$ (const. over T_U)
- Spikes $< 50 mV_{pp}$ (T 1:1/50MHz)
- Response time $\Delta I = 50\% \leq 250 \mu s$
- Output spike filter (C - L² - C)

Input:

- No-load power 0,6 Watt
- DC input is standard
- Input filter EN55011.A
- Input fuse internal

General:

- Over voltage protection (logic)
- Isolation test voltage 2,5 KV_{AC} 1 min
- Ambient temperature $-25^\circ C / +60^\circ C$
- Derating 2%/°C $> 60^\circ C$ up to $70^\circ C$
- Free air convection
- MTBF on request
- Fuse 500 mA T 82-264 V
400 mA T $> 164 V$

<u>U_{in}</u>	<u>U_{out}</u>	<u>I_{out}</u>	<u>Eff.</u>	Model
V	V	A	%	number
single	3,3	4,0	76	NMO-U 20-03-40 1)
90 - 264 AC	5,1	4,0	77	NMO-U 20-05-40 1)
110 - 350 DC	12	2,0	84	NMO-U 20-12-20
Surge 1kV/2Ω	15	1,7	84	NMO-U 20-15-17
	24	1,0	86	NMO-U 20-24-10
164 - 264 AC	5,1	4,0	74	NMO-U 22-05-40 1)
150 - 350 DC	12	2,0	80	NMO-U 22-12-20
660V dyn.	24	1,0	86	NMO-U 22-24-10
double	± 12	$\pm 1,0$	82	NMO-B 20-12-10
90 - 264 AC	± 15	$\pm 0,8$	82	NMO-B 20-15-08
110 - 350 DC				
triple	5,1	2,0	76	NMO-T 20-05-12-20-04
90 - 264 AC	± 12	0,4		
110 - 350 DC	5,1	2,0	76	
	± 15	0,3		NMO-T 20-05-15-20-03

Modification costs for possible changes above values:

1) For all 4A-types: derating 2%/°C $> 50^\circ C$

Higher DC input voltages on request

Other market standard pin assignments on request

2) The old NM.U/B/T series is just produced for repair/service use.

The new NMO.U/B/T series is compatible in pin-out and mechanics. The prices are reduced.

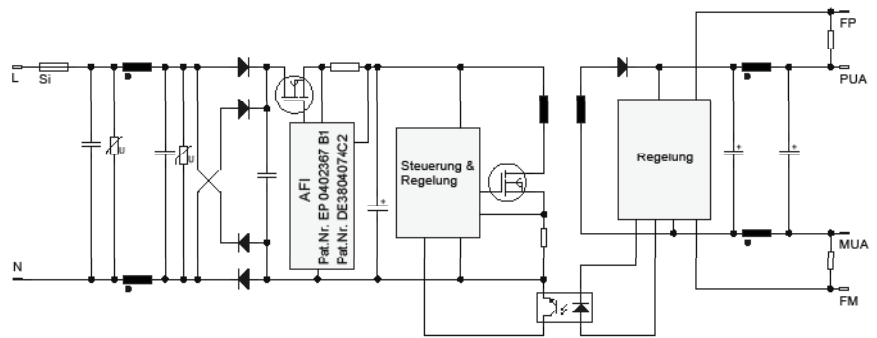
on request

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The PCB-modules of the NMO series (single, double, triple) in open build-up are equipped with a universal input (DC and AC) and wide input range without switchover. Input sided an emergency fuse (5 x 20mm) is integrated and the EMC-filter keeps the EN55011. Requirements. The active transient protection filter prevents high inrush currents and absorbs transients. The power stage's soft start prevents high run-up currents. The converter switches off and re-starts automatically after over load.



Ripple and spikes are reduced to system suitable values with an output filter. All outputs are over load and static short circuit proof. In the case on a short circuit the converter changes to a stand-by mode and can run up against defined capacitive loads. Single and double output types with equal nominal voltages can operate parallel with derating (option).

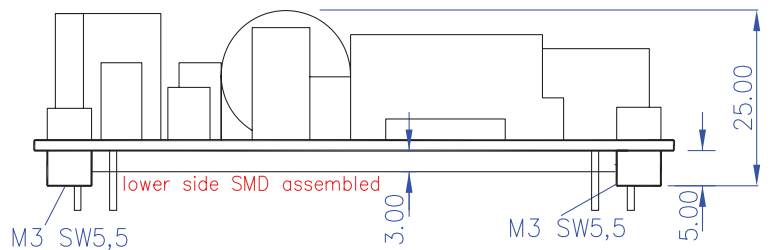
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Pin assignment

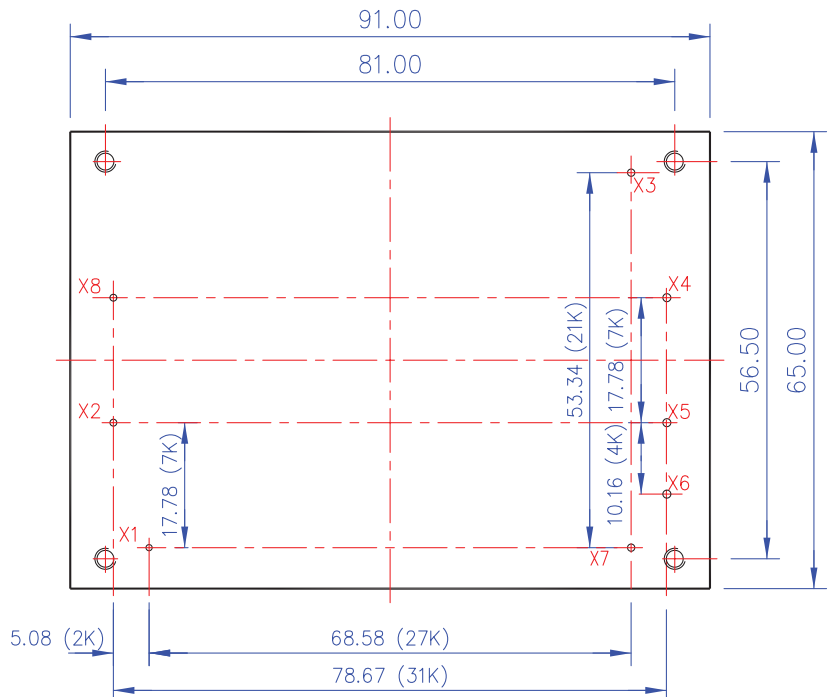
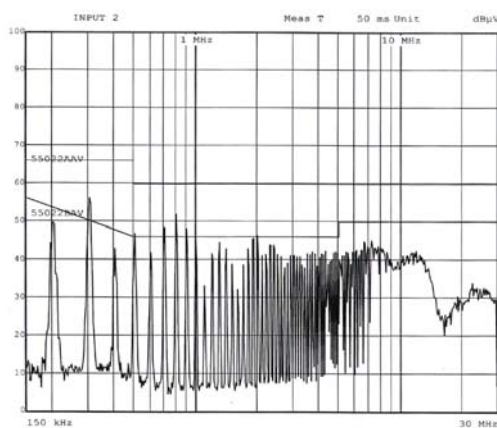
X	NMO-U	NMO-B	NMO-T
1	DC/AC in	DC/AC in	DC/AC in
2	DC/AC in	DC/AC in	DC/AC in
3	+Uo	+Uo1	+Uo1
4	-Uo	-Uo1	-Uo1
5	sense +	+Uo2	+Uo2
6	NC	NC	0VA
7	sense -	-Uo2	-Uo2
8	Ground	Ground	Ground

Mechanics

Warning: Keep security distance and protection because of open style



Measurement of radio interference



Efficiency

