



Miniature surface mounted DC/DC Converters are an ideal and economical solution for many applications where noise reduction, voltage isolation, voltage conversion in distributed power systems is required. these converters are qualified for the higher temperatures requested by lead-free reflow solder processes, especially for automated SMD production lines.



### FEATURES:

- RoHS compliant
- Efficiency up to 80%
- Single isolated output
- 3KVDC isolation
- Custom solutions available
- Power density 1.8W/cm<sup>3</sup>
- UL 94V-0 package material
- Operating temperature: -40 to +105°C
- Input voltage: 3.3V, 5V, 12V, 15V, 24V
- Output voltage: 3.3V, 5V, 9V, 12V, 15V
- Optional: Continuous short circuit protection

HM2-XXYYSS10Z30/X/P	Nominal Input Voltage (V)	Output Voltage (V)	Output Current (Max./Min) mA	Efficiency %
HM2-0303S10Z30	3,3	3,3	303/30.3	72
HM2-0305S10Z30	3,3	5	201/20.1	77
HM2-0309S10Z30	3,3	9	111/11.1	77
HM2-0312S10Z30	3,3	12	83/8.3	77
HM2-0315S10Z30	3,3	15	67/6.7	77
HM2-0503S10Z30	5	3,3	303/30.3	74
HM2-0505S10Z30	5	5	200/20	69
HM2-0509S10Z30	5	9	111/11.1	75
HM2-0512S10Z30	5	12	84/8.4	78
HM2-0515S10Z30	5	15	66/6.6	78
HM2-1203S10Z30	12	3,3	303/30.3	74
HM2-1205S10Z30	12	5	200/20	67
HM2-1209S10Z30	12	9	111/11.1	73
HM2-1212S10Z30	12	12	83/8.3	74
HM2-1215S10Z30	12	15	66/6.6	75
HM2-1505S10Z30	15	5	201/20.1	77
HM2-1515S10Z30	15	15	66/6.6	75
HM2-2403S10Z30	24	3,3	303/30.3	74
HM2-2405S10Z30	24	5	200/20	67
HM2-2409S10Z30	24	9	111/11.1	73
HM2-2412S10Z30	24	12	83/8.3	74
HM2-2415S10Z30	24	15	66/6.6	75

Package Unit: Reel Quantity: 500 pcs

Optional: suffix "X" = has no Pin 5, 10, 12 e.g.: HM2-1212S10Z30X  
 Optional: suffix "P" = continuous short circuit protection, e.g.: HM2-1212S10Z30XP

The models listed above is just for standard type. If you need the special specification product, please contact our specialists: sales@haufe-power.de

The information and specifications contained in this data sheet are believed to be correct at time of publication. However, HAUFE GmbH & Co. KG accepts no responsibility for consequences arising from printing errors or inaccuracies. Specifications are subject to change without notice. No rights under any patent accompany the sale of any such product(s) or information contained herein.



### INPUT CHARACTERISTICS (Min./Typ./Max.):

Voltage range 3.3V input types (V):	2.9 / 3.3 / 3.6
Voltage range 5V input types (V):	4.5 / 5 / 5.5
Voltage range 12V input types (V) :	11 / 12 / 13.3
Voltage range 15V input types (V):	13.4 / 15 / 16.4
Voltage range 24V input types (V):	22 / 24 / 26.6

### ISOLATION CHARACTERISTICS:

Isolation test voltage (VDC):	3000 / - / - (Tested for 1 second)
Resistance (Viso = 1000 VDC) (GΩ):	1 / - / -

### ABSOLUTE MAXIMUM RATINGS:

Short-circuit protection:	1 sec.
Lead temperature 1.5mm from case for 10 seconds:	300°C
Internal power dissipation :	610mW
Input voltage Vin:	03= 5.5V / 05=7V / 12=15V / 15=18V / 24=28V

### Comment on AMS:

All specs typ. at TA=25°C, nominal input voltage and rated output current unless otherwise specified

### OUTPUT CHARACTERISTICS (Min. / Typ. / Max.):

Rated Power TA= -40°C to 85°C:	- / - / 1.0
Voltage Set Point Accuracy (%):	See tolerance envelope
Line regulation High VIN to low VIN (%):	/ 1.0 / 1.2
Load regulation:	
03XX, 0503, 1203, 2403	- / 10 / 14
0505, 1205, 2405	- / 13 / 15
0509, 1209, 2409	- / 8.0 / 9.0
0512, 1212, 2412	- / 6.5 / 7.5
0515, 1215, 1515, 2415	- / 6 / 7.0

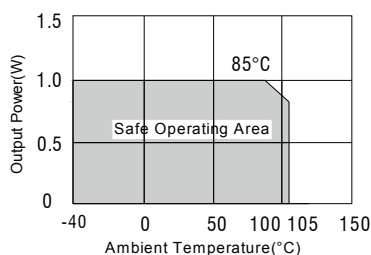
### GENERAL CHARACTERISTICS (Min. / Typ. / Max.)

Switching frequency (all output types) (kHz):	- / 120 / -
---	-------------

### TEMPERATUR CHARACTERISTICS (Min. / Typ. / Max.)

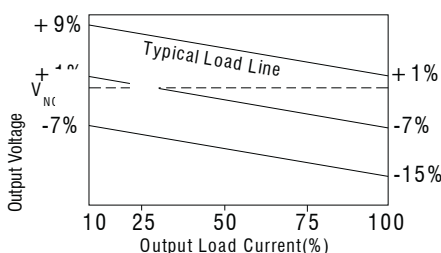
Derating if the temperature is ≥85°C (°C):	-40 / - / 105
Storage temperature (°C):	-55 / - / 125
Cooling:	Free air convection

### TEMPERATURE DERATING GRAPHS

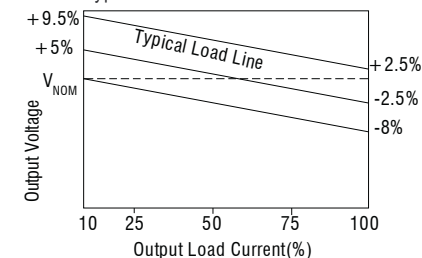


### TOLERANCE ENVELOPES

3.3V output types



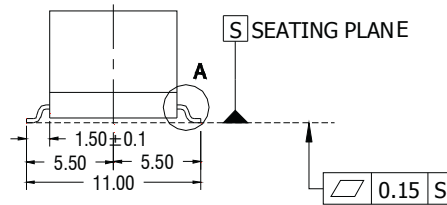
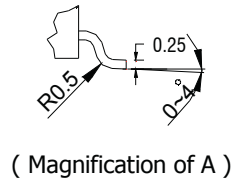
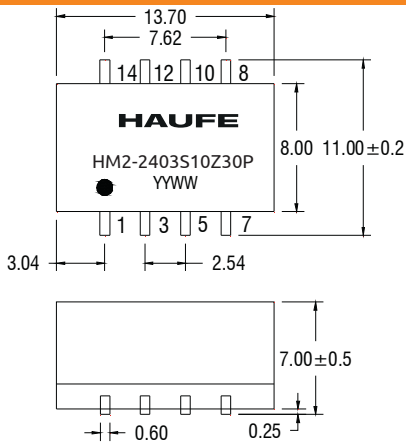
All other types



INDUKTIVITÄTEN  
 STROMVERSORGUNGEN  
 BLECHBEARBEITUNG  
 MAGNETISCHE ABSCHIRMUNGEN



**MECHANICAL DIMENSION**



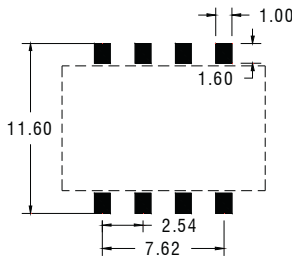
All dimensions in mm ± 0.25mm. All pins on a 2.54mm pitch and within ± 0.25mm of true position.  
Weight: 1.21g

**PIN CONNECTIONS**

8 PIN SMD		
Pin	Function	Add suffix "X" function
1	-Vin	-Vin
3	+Vin	+Vin
5	NA	No Pin
7	-Vout	-Vout
8	+Vout	+Vout
10	NA	No Pin
12	NA	No Pin
14	NA	NA

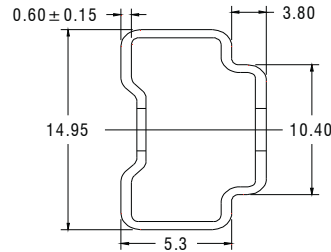
NA - Not available for electrical connection.

**RECOMMENDED FOOTPRINT DETAILS**



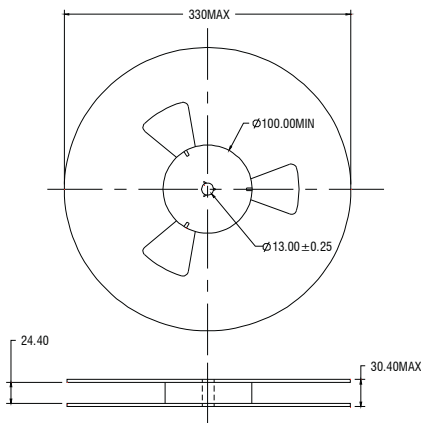
All pins on a 2.54mm pitch.  
Unless otherwise stated all dimensions in mm ± 0.5mm.

**TUBE OUTLINE DIMENSIONS**

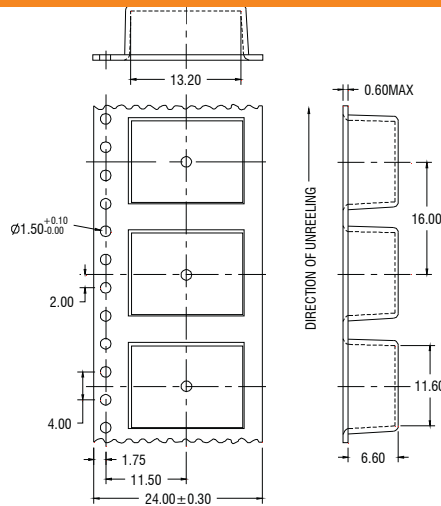


Unless otherwise stated all dimensions in mm ± 0.25mm.  
Tube length: 475mm ± 2.0mm Tube Quantity: 35PCS

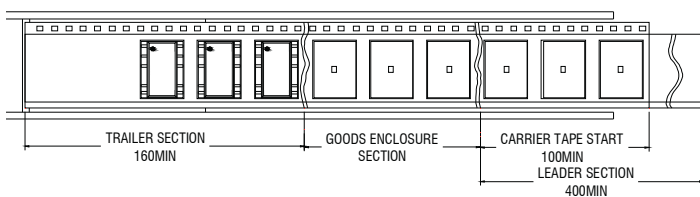
**REEL OUTLINE DIMENSIONS**



**TAPE OUTLINE DIMENSIONS**



**REEL PACKING DETAILS**



Product Orientation Pin 1 located nearest to carrier drive sprocket. REEL Quantity: 500pcs