Components for
Power Conversion RM-Series

This catalogue contains information on all our products of the RM-Series (Rectangular Module Cores)

The components of the RM-series, standard or low-profile, are of compact and almost closed design. They are especially suitable for pulse transformers, storage chokes, filter application, dc-converters etc.

We supply coilformers in high quality thermoplastics, exactly to meet your production requirements and product specification.

All dimensions in mm/inch. The permissible deviations according to DIN 16901 apply as tolerances.

Wherever high-temperature soldering processes are used in connection with RM-series coilformers, we recommend irradiation cross-linked plastics. This ensures that the mechanical properties – in particular those of gfr-polyamides – are maintained and breakages are reduced. For this reason NORWE offers all plastic components of the RM-series in irradiated cross-linked materials.

In the short term, the cross-linked materials can be exposed to very high temperatures. Apart from improved aspects in production there may be interesting cost advantages, and a discussion with us could be useful.

Should you need further assistance, be it technical or to assist when placing your order, we look forward to hearing from you.

Fully tagged or pinned coilformers are – in small quantities – usually available from stock. We can also quote for coilformers with pins or tags fitted to your requirements. All lead-times are relatively short.

Our extensive range of modular tooling allows almost unlimited constructional changes to meet customers specification, often by simple changes of tool inserts.

In addition the modular tooling system allows extremely short tooling times and can be very cost effective.

All dimensions in mm/inch

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NORWE GmbH

Paulstraße 5, Pernze
51702 Bergneustadt

Deutschland

Telefon +49 (0) 27 63-807-0
E-mail verkauf@norwe.de
Internet www.norwe.de
www.norwe.eu

NORWE Inc.

P.O. Box 25 11
North Canton, OH 44720-0511

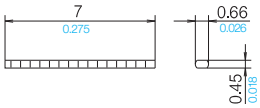
United States of America

Telefon +1-330 497-8113
E-mail usa@norwe.com
Internet www.norwe.com

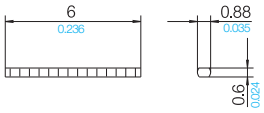
Solder-pins and Solder-tags used for RM Class Coilformers

The solder-pins and solder-tags matched to the coilformers are listed below. The material used is tin bronze, tinned (solder-pins) or brass, tinned (solder-tags). Further standard types are listed in our catalogue “Stamped and Pressed Components for Electronic Applications”. (Special materials and designs on request, dimensions in mm/inch).

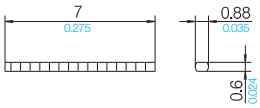
Solder-pins



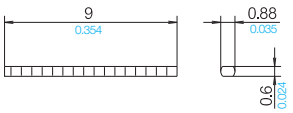
Solder-pin z607/ua (73263-212)



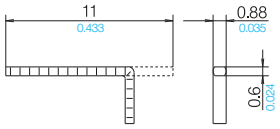
Solder-pin z806/ua (73292-212)



Solder-pin z807/ua (73293-212)

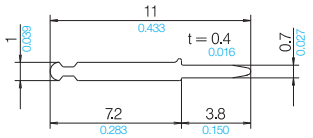


Solder-pin z809/ua (73295-212)

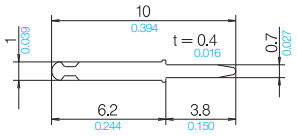


Solder-pin h811/ua (73497-212)

Solder-tags



Solder tag s25/wd (75519-261)



Solder tag s2/wd (75010-261)

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NORWE GmbH
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51702 Bergneustadt
Deutschland
Telefon +49 (0) 27 63-807-0
E-mail verkauf@norwe.de
Internet www.norwe.de
www.norwe.eu

NORWE Inc.
P.O. Box 25 11
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United States of America
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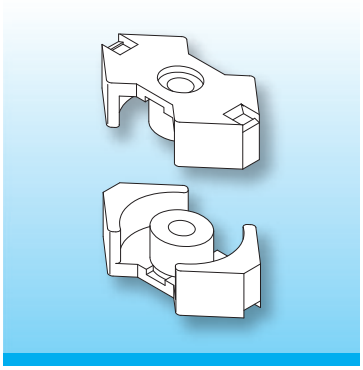
E-mail usa@norwe.com
Internet www.norwe.com

RM / RM-LP Ferrite Cores
The tables below show the dimensions and the magnetic characteristics per set of the ferrite cores for the coilformers shown in this catalogue. The data can be used as an orientation in the design of application specific converters. Specific details on the ferrite cores and materials should be available from the catalogues of the ferrite manufacturers.



l_e - effective length

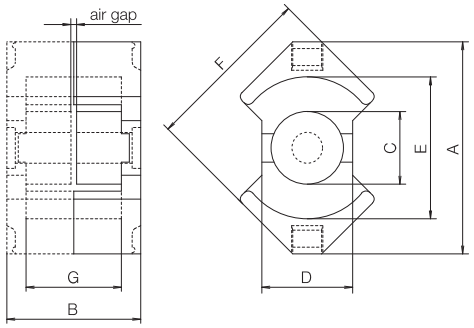
A_e - effective area

A_{min} - core cross section

V_e - effective volume

Dimensions in mm/inch.

Magnetic Characteristics per set	l_e mm	A_e mm²	A_{min} mm²	V_e mm³
RM 4	21.0 0.827	11.0 0.017	11.3 0.018	232 0.014
RM 5	20.8 0.819	20.8 0.032	18.0 0.028	430 0.026
RM 6 Low Profile	21.8 0.858	37.5 0.058	31.2 0.048	820 0.050
RM 6	26.9 1.059	31.3 0.049	31.2 0.048	840 0.051
RM 8 Low Profile	28.7 1.130	64.9 0.101	55.4 0.086	1860 0.114
RM 8	35.1 1.382	52.0 0.081	55.4 0.086	1840 0.112
RM 10 Low Profile	38.9 1.531	99.1 0.154	90.0 0.140	3360 0.205
RM 10	42.0 0.654	83.0 0.129	90.0 0.140	3470 0.212
RM 12 Low Profile	42.0 1.654	147.5 0.229	124.7 0.193	6195 0.378
RM 12	57.0 2.244	146.0 0.226	124.7 0.193	8340 0.509
RM 14 Low Profile	50.9 2.004	201.0 0.312	170.0 0.264	10230 0.624
RM 14	70.0 2.756	200.0 0.310	170.0 0.264	14000 0.854



Type	A	B	C	D	E	F	G
RM 4	11.0 -0.4 0.433 -0.016	10.5 -0.2 0.413 -0.008	3.90 -0.2 0.154 -0.008	4.6 -0.2 0.181 -0.008	8.0 +0.3 0.315 +0.012	9.8 -0.4 0.386 -0.016	7.0 +0.4 0.276 +0.016
RM 5	14.6 -0.6 0.575 -0.024	10.5 -0.2 0.413 -0.008	4.90 -0.2 0.193 -0.008	6.8 -0.4 0.268 -0.016	10.2 +0.4 0.402 +0.016	12.3 -0.5 0.484 -0.020	6.3 +0.4 0.248 +0.016
RM 6 Low Profile	17.9 -0.6 0.705 -0.024	9.0 -0.2 0.354 -0.008	6.40 -0.2 0.413 -0.018	8.2 -0.4 0.323 -0.016	12.4 +0.5 0.488 +0.020	14.7 -0.6 0.579 -0.024	4.5 +0.4 0.177 +0.016
RM 6	17.9 -0.6 0.705 -0.024	12.5 -0.2 0.492 -0.008	6.40 -0.2 0.413 -0.018	8.2 -0.4 0.323 -0.016	12.4 +0.5 0.488 +0.020	14.7 -0.6 0.579 -0.024	8.0 +0.4 0.315 +0.016
RM 8 Low Profile	23.2 -0.9 0.913 -0.035	11.6 -0.2 0.457 -0.008	8.55 -0.3 0.337 -0.008	11.0 -0.4 0.433 -0.016	17.0 +0.6 0.669 +0.024	19.7 -0.8 0.776 -0.031	5.9 +0.4 0.232 +0.016
RM 8	23.2 -0.9 0.913 -0.035	16.5 -0.2 0.650 -0.008	8.55 -0.3 0.337 -0.008	11.0 -0.4 0.433 -0.016	17.0 +0.6 0.669 +0.024	19.7 -0.8 0.776 -0.031	10.8 +0.4 0.425 +0.016
RM 10 Low Profile	28.5 -1.3 1.122 -0.051	13.0 -0.2 0.512 -0.008	10.90 -0.4 0.429 -0.008	13.5 -0.5 0.531 -0.020	21.2 +0.9 0.835 +0.035	24.7 -1.1 0.972 -0.043	6.7 +0.4 0.264 +0.016
RM 10	28.5 -1.3 1.122 -0.051	18.7 -0.2 0.736 -0.008	10.90 -0.4 0.429 -0.008	13.5 -0.5 0.531 -0.020	21.2 +0.9 0.835 +0.035	24.7 -1.1 0.972 -0.043	12.4 +0.6 0.488 +0.024
RM 12 Low Profile	37.6 -1.5 1.480 -0.059	16.8 -0.2 0.661 -0.008	12.80 -0.4 0.504 -0.008	16.1 -0.5 0.634 -0.020	24.9 +1.1 0.980 +0.043	29.8 -1.2 1.173 -0.047	9.0 +0.5 0.354 +0.020
RM 12	37.6 -1.5 1.480 -0.059	24.6 -0.2 0.969 -0.008	12.80 -0.4 0.504 -0.008	16.1 -0.5 0.634 -0.020	24.9 +1.1 0.980 +0.043	29.8 -1.2 1.173 -0.047	16.8 +0.6 0.661 +0.024
RM 14 Low Profile	42.2 -1.2 1.661 -0.047	20.5 -0.2 0.807 -0.008	15.00 -0.5 0.591 -0.008	19.0 -0.6 0.748 -0.024	29.0 +1.0 1.142 +0.039	34.8 -1.3 1.370 -0.051	11.1 +0.6 0.437 +0.024
RM 14	42.2 -1.2 1.661 -0.047	30.2 -0.2 1.189 -0.008	15.00 -0.5 0.591 -0.008	19.0 -0.6 0.748 -0.024	29.0 +1.0 1.142 +0.039	34.8 -1.3 1.370 -0.051	20.8 +0.6 0.819 +0.024

All dimensions in mm/inch

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NORWE GmbH
Paulstraße 5, Pernze
51702 Bergneustadt
Deutschland

Telefon +49 (0) 27 63-807-0
E-mail verkauf@norwe.de
Internet www.norwe.de
www.norwe.eu

NORWE Inc.
P.O. Box 25 11
North Canton, OH 44720-0511
United States of America

Telefon +1-330 497-8113
E-mail usa@norwe.com
Internet www.norwe.com

Thermoplastic Materials

The following survey contains supplementary information on the different thermoplastic-qualities.
The material quality orientates to the conventional use of the components. For technical reasons alternative materials cannot be used for all articles.
Consult our qualified specialists regarding your individual material requests – we will be pleased to check whether your material requirements can be realized.
Further information on the materials can also be obtained from our homepage (e.g. to call up the UL cards).

NORWE Mat.-Code	NORWE Mat.-Description	Chemical Symbol	Tradename Manufacturer	UL-File-No.	Flammability Rating acc. UL	RTI Elec acc. UL
024	p6g	PA66 Polyamide 66	PA66 30% GF black Compound	–	–	(+125°C)
039	A3X2G5 sv.	PA66 Polyamid 66	A3X2G5 cross-linked Ultramid BASF AG	–	–	(+120°C)
047	pcg	PBT Polybutylene Terephthalate	B4225 Pocan Lanxess AG	E 245249	V-0 (1.50)	+130°C
087	rtg nat.	PET Polyethylene Terephthalate	FR 530 L Rynite DuPont	E 41938	V-0 (0.35)	+155°C
106	A RV250 nat.	PA66 Polyamid 66	Radiflam A RV250 AF RADICINOVACIPS SPA	E116324	V-0 (0.75)	+115°C
132	torA504	PPS Polyphenylensulfid	A504X90 natur Torelina Toray Industries Inc	E41797	V-0 (0.28)	+ 130°C
243	Zen.6130L, black	LCP Liquid Crystal Polymer	6130L black Zenite TICONA	E 344082	V-0 (0.38)	+240°C

Explanations on the above survey of materials:

NORWE Mat.-Code . . . . . designates the number NORWE fixed for the material

NORWE Mat.-Description . . . . . names the NORWE-abbreviation for the material

Chemical Symbol . . . . . classifies the chemical product group of the material

Tradename . . . . . designates the product name or trade name fixed by the manufacturer

Manufacturer . . . . . name of manufacturer

UL-File-No. . . . . material quality tested and certified with respect to safety and flammability. The manufacturers of certified and approved products receive a so-called recognition card (yellow card) in which the product qualities are listed in detail. You find all relevant yellow cards – also called UL cards – for different material qualities on our homepage or you can obtain them from us.

Flammability Rating acc. UL . . . determines the flammability of thermoplastic materials based on burning tests in accordance with UL 94 considering the wall thickness of the material.

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Internet www.norwe.de
www.norwe.eu

NORWE Inc.
P.O. Box 25 11
North Canton, OH 44720-0511
United States of America
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E-mail usa@norwe.com
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Irradiation Cross-Linking of RM Coilformers

NORWE cannot only look back on more than 40 years of experience in the development and production of coilformers but has in the meantime also gained almost 10 years of experience in irradiation cross-linking.

All components of the RM-series can on request be supplied in cross-linked material. A cross-linking enhancing material is added to the thermoplast granulates. After moulding the components are irradiated with Beta- or Gamma rays – depending on the penetration required.
The material loses its thermoplast characteristics (but it is not a thermoset) and withstands very high temperature peeks for short periods without any problems.

- Depending on the degree of cross-linking the coilformers withstand solder temperatures of 450–480°C for about 1–3 seconds. Irradiated cross-linked components easily tolerate the higher solder temperatures required due to the contact elements being changed to be leadfree.

- Unlike high temperature polymers – also cost-effective granulates are suitable for irradiation cross-linking. The characteristic features of the coilformers do not change due to the cross-linking.

- In contrast to high temperature polymers lower temperatures of material and mould during the production process are required and thus the tool elements are less stressed resulting in longevity.
The lower temperature profiles during the moulding process provide a lower wear and tear of the tool elements as well as a perceptible saving of energy costs.

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Contact to NORWE

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NORWE – online

All informations, product specifications, latest news and as well our extensive service offering you find on out up-to-date websites.

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- comprehensive product survey
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Up-to-date information

- data and facts of the company
- presence on trade fairs all over the world
- product innovations
- material database with UL-cards

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www.carretes.eu

Individual special designs

- problem solutions orientated to industries' demands

www.carreteis.info

www.carcasses.info

Current certifications

- EN ISO 9001:2008
- UL 746 D
- EN ISO 14001:2005
- AEOC

www.spulenkoerper.info

www.karkasi-katushek.info

Services

- qualified advice
- cost neutral sample request
- individual quotation request
- mobile access via QR-Code

www.corpi-bobina.info

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Contact to NORWE

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Deutschland
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