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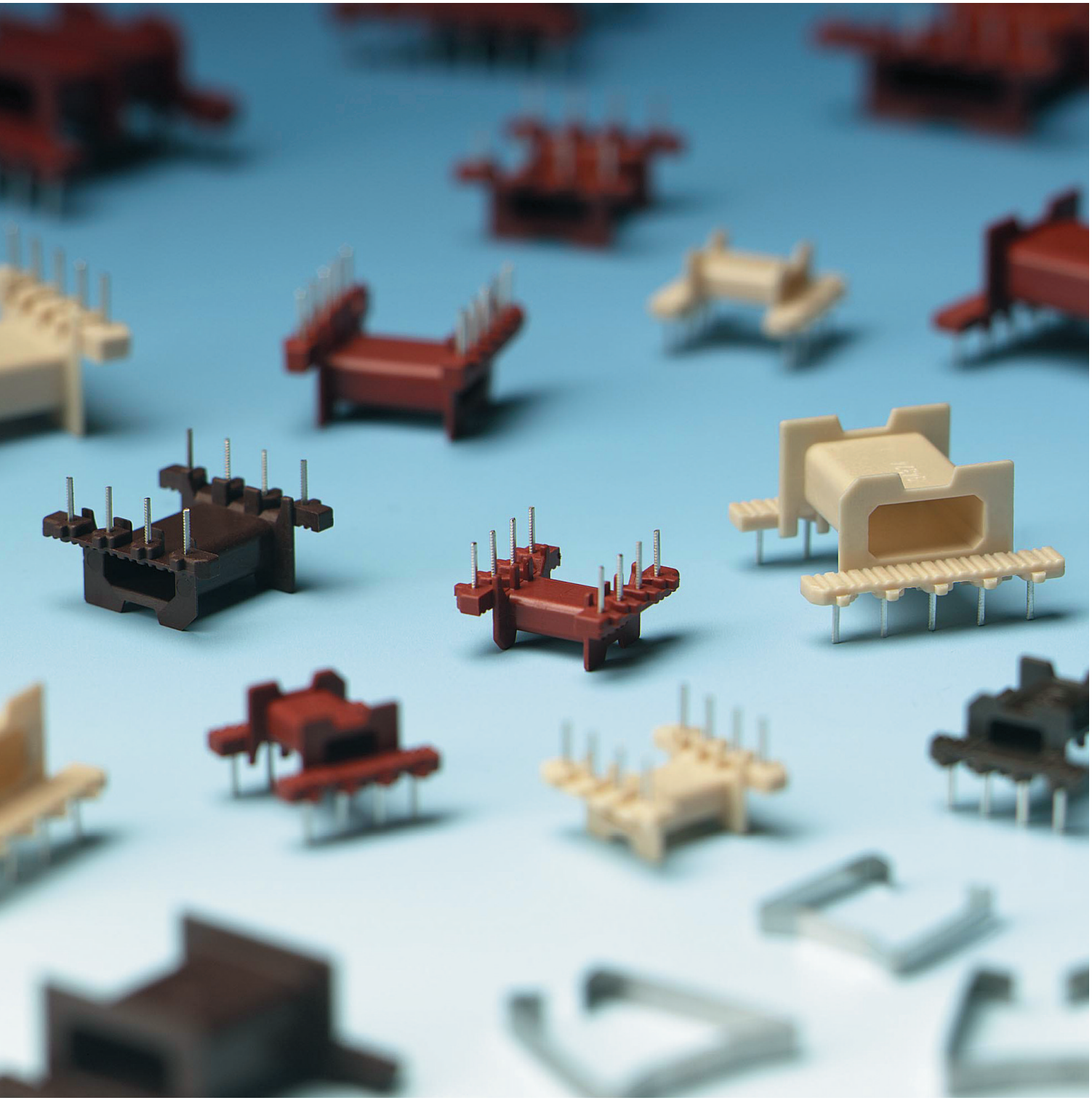
Components for Power Conversion EFD-Series



This catalogue contains information on all our products of the EFD – Series (Economic Flat Design)

The EFD-series (Economic Flat Design) was developed for applications requiring low-profile transformers. The ferrite cores are similar to the classic E-cores, but have a flatter and lower profile inner core. This, together with the coilformer, results in a lower winding section. We supply coilformers made in high quality plastics, matching your production requirements. This catalogue also contains data of EFD-clips, which may be required to secure the ferrites.

Fully pinned coilformers – in small quantities – are usually available from stock. We can quote for coilformers with pins fitted to customers specification. Again, leadtimes are relatively short.

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

In addition, our extensive range of modular tooling allows almost unlimited changes to accommodate customers specification. This tooling system also allows short tooling times and is very cost effective.

Should you need further assistance, technically or when ordering, please do not hesitate to contact us.

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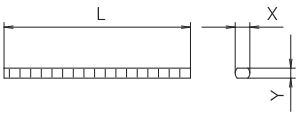
Solder-pins used for EFD Class Coilformers

The solder-pins matched to the coilformers are listed below. The material used is tin bronze, tinned.
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-pin	L	X	Y
z606/ua (7 3 2 6 2 - 2 1 2)	6 0.236	0.66 0.026	0.45 0.018
z607/ua (7 3 2 6 3 - 2 1 2)	7 0.275	0.66 0.026	0.45 0.018
z808/ua (7 3 2 9 4 - 2 1 2)	8 0.315	0.88 0.035	0.60 0.024
z809/ua (7 3 2 9 5 - 2 1 2)	9 0.345	0.88 0.035	0.60 0.024

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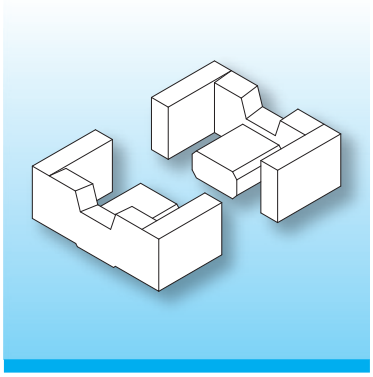
EFD-Ferrite Cores

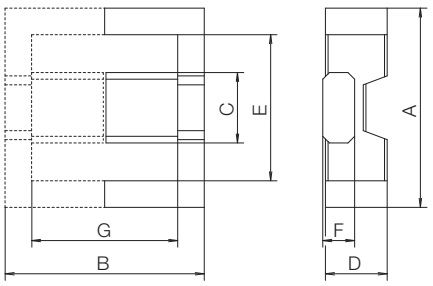
The tables below show the dimensions and the magnetic characteristics per set of the ferrite cores for the coilformers shown in this catalogue. The data can be used as an orientation in the design of application specific converters. Specific details on the ferrite cores and materials should be available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



- I/A - magnetic core factor
- l_e - effective length
- A_e - effective area
- A_{min} - core cross section
- V_e - effective volume

Ferrite Core	I/A	l_e	A_e	A_{min}	V_e
	mm^{-1}/$inch^{-1}$	mm/inch	mm^2/$inch^2$	mm^2/$inch^2$	mm^3/$inch^3$
EFD 15/8/5	2.27 0.089	34 1.339	15 0.023	12.2 0.019	510 0.031
EFD 20/10/7	1.52 0.060	47 1.850	31 0.048	31.0 0.048	1460 0.089
EFD 25/13/9	0.98 0.039	57 2.244	58 0.088	57.0 0.088	3310 0.202
EFD 30/15/9	0.99 0.039	68 2.677	69 0.107	69.0 0.107	4690 0.286

Ferrite Core	A	B	C	D	E	F	G
	mm/inch	mm/inch	mm/inch	mm/inch	mm/inch	mm/inch	mm/inch
EFD 15/8/5	15.0 ± 0.40 0.591 ± 0.016	15.0 ± 0.30 0.591 ± 0.012	5.3 ± 0.15 0.209 ± 0.006	4.65 ± 0.15 0.183 ± 0.006	11.0 ± 0.35 0.433 ± 0.014	2.4 ± 0.10 0.094 ± 0.004	11.0 ± 0.50 0.433 ± 0.020
EFD 20/10/7	20.0 ± 0.55 0.787 ± 0.022	20.0 ± 0.30 0.787 ± 0.012	8.9 ± 0.20 0.350 ± 0.008	6.65 ± 0.15 0.262 ± 0.006	15.4 ± 0.50 0.606 ± 0.020	3.6 ± 0.15 0.142 ± 0.006	15.4 ± 0.50 0.606 ± 0.020
EFD 25/13/9	25.0 ± 0.65 0.984 ± 0.026	25.0 ± 0.30 0.984 ± 0.012	11.4 ± 0.20 0.449 ± 0.008	9.10 ± 0.20 0.358 ± 0.008	18.7 ± 0.60 0.736 ± 0.024	5.2 ± 0.15 0.205 ± 0.006	18.6 ± 0.50 0.732 ± 0.020
EFD 30/15/9	30.0 ± 0.80 1.181 ± 0.031	30.0 ± 0.30 1.181 ± 0.012	14.6 ± 0.25 0.575 ± 0.010	9.10 ± 0.20 0.358 ± 0.008	22.4 ± 0.75 0.882 ± 0.030	4.9 ± 0.15 0.193 ± 0.006	22.4 ± 0.60 0.882 ± 0.024



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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
039	A3X2G5 sv.	PA66 Polyamide 66	A3X2G5 cross-linked Ultramid BASF AG	–	–	(+120° C)
087	rtg nat.	PET Polyethylene Terephthalate	FR 530 L Rynite DuPont	E 41938	V-0 (0.35)	+155° C
132	torA504	PPS Polyphenylensulfid	A504X90 natur Torelina Toray Industries Inc	E41797	V-0 (0.28)	+130° C
181	A3X2G10	PA66 Polyamide 66	A3X2G10 Ultramid BASF AG	E 41871	V-0 (1.50)	+115° C
243	Zen.6130L, black	LCP Liquid Crystal Polymer	6130L black Zenite TICONA	E 344082	V-0 (0.38)	+240° C

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