

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.

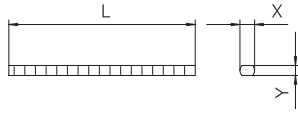
All dimensions in mm.
The permissible deviations according to DIN 16901 apply as tolerances.

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.

Solder-pins used for EFD Class Coilformers

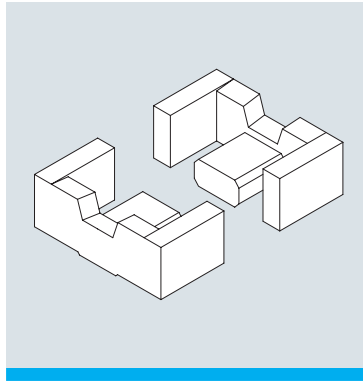
The solder-pins matched to the coilformers are listed below. The material used is tin bronze, tinned. Further standard types are listed in our catalogue "Stamped and Pressed Components for Electronic Applications". (Special materials and designs on request. Dimensions in mm/*inch*).



Solder-pin	L	X	Y
z606/ua (73262-212)	6 0.236	0.66 0.026	0.45 0.018
z808/ua (73294-212)	8 0.315	0.88 0.035	0.60 0.024

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.



l/A - magnetic core factor

l_e - effective length

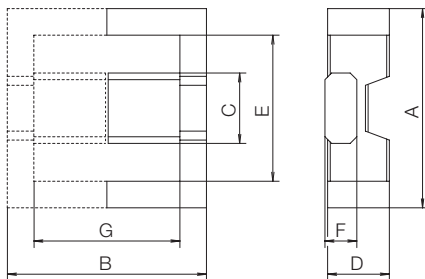
A_e - effective area

A_{min} - core cross section

V_e - effective volume

Ferrite Core	l/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 0.591	12.2 0.480	510 20.079
EFD 20/10/7	1.52 0.060	47 1.850	31 1.220	31.0 1.220	1460 57.480
EFD 25/13/9	0.98 0.039	57 2.244	58 2.283	57.0 2.244	3310 130.315
EFD 30/15/9	0.99 0.039	68 2.677	69 2.717	69.0 2.717	4690 184.645

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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All dimensions in mm/inch

The permissible deviations according to DIN 16901 apply as tolerances

Warranties:
refer to Terms and Conditions of Sale

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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
039	A3X2G5 sv.	PA66 Polyamide 66	Ultramid A3X2G5, cross-linked BASF AG	–	–
074	ryg	PPS Polyphenylene Sulfide	Ryton R-4 CHEVRON PHILLIPS CHEMICAL	E 54700 (N)	V-0 (0.38)
087	rtg nat.	PET Polyethylene Terephthalate	Rynite FR 530 L DuPont	E 69578 (M)	V-0 (0.35)
181	A3X2G10	PA66 Polyamide 66	Ultramid A3X2G10 BASF AG	E 41871	V-0 (1.70)
243	Zen. 6130L, black	LCP Liquid Crystal Polymer	Zenite 6130L, black DuPont	E 123598	V-0 (0.38)

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