

E12/E32

Line reactor



Further descriptions, that relate to this document:

UL:



none at the moment

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Made in Germany, 2005

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The most important thing first

Thanks for your confidence choosing our product.

These operating instructions present themselves as an overview of the technical data and features.

Please read the operating instructions before operating the product.

If you have any questions, please contact your nearest SSD Drives representative. Improper application of the product in combination with dangerous voltage can lead to injuries.

In addition, damage can also occur to motors or other products.

Therefore please observe our safety precautions strictly.

Safety precautions

We assume that, as an expert, you are familiar with the relevant safety regulations, especially in accordance with VDE 0100, VDE 0113, VDE 0160, EN 50178, the accident prevention regulations of the employers liability insurance company and the DIN regulations and that you are able to use and apply them.

As well, relevant European Directives must be observed.

Depending on the kind of application, additional regulations e.g. UL, DIN are subject to be observed.

If our products are operated in connection with components from other manufacturers, their operating instructions are also subject to be observed strictly.

1 General

1.1 Description

The following reasons make the application of line reactors useful.

a) Supply distortion

The distortion of the supply voltage, those originate through current peaks in the supply voltage vertex, reduce itself by the use of line reactors..

For that by the converter caused harmonics, there are limits in accordance with VDE 160 5.3.1.2.

However, these limits become exceeded through several resources, so the line reactors with a $U_k \geq 4\%$ must be used. (see VDE 0160 4.3.1)

b) Load converter components

A reduction of the input current peaks affects load of the net rectifier and the intermediate circuit capacitors. The components with shortest working life on a converter are intermediate circuit capacitors.

Line reactors reduce the ripple current up to 30%. This reduction of the ripple current has considerable effect on the working life of the capacitors. No general information about working life increase can be hit by the use of a line reactor, because further factors for this have a role to play.

General, devices with which one or several of the following factors agreeing, should be operated with line reactors:

- Device is operated to limit of performance.
- High ambient temperature.
- High service life (3- shift operating).
- Most efficient devices of their design or devices operated as a single phase.

c) Current rate of rise

Further, the current rate of rise is reduced by the use of a line reactor in starting torque.

General

1.2 Possible applications

If you use some of the following components it will be better to take a line reactor !

a) SSD Drives digital drive

Regulator model	Supply voltage	Line reactor
637/K D6R 06-3	1-phase, 230V AC	E12-0018
637/K D6R 10-3 ... -7	3-phase, 230V AC or 400V AC	E32-0011
637/K D6R 30-3 ... -7	3-phase, 230V AC or 400V AC	E32-0031
635/K DER 05	1-phase, 230V AC	E12-0018
635/K DER 07	1-phase, 230V AC	E12-0018
631/002/230	1-phase, 230V AC	E12-0008
631/006/230	1-phase, 230V AC	E12-0018

b) SSD Drives power-supply-module (only in rack versions)

Power-supply-module	Supply voltage	Line reactor
NEB 17-3 ... -7, ventilated	3-phase, 230V AC oder/or 400V AC	E32-0031
NEB 40-3 ... -7	3-phase, 230V AC oder/or 400V AC	E32-0046
NEB 40-3 ... -7, ventilated **	3-phase, 230V AC oder/or 400V AC	E32-0074
NEB 10	1-phase, 230V AC	E12-0018
NEB 15	1-phase, 230V AC	E12-0036
NEB 15	3-phase, 230V AC	E32-0018
NEB 25..-C	3-phase, 230V AC	E32-0031

** max. acceptable rated current (ventilated) = 75A

General

1.3 Key to the models

Standard					
Marking	a	b	c	d	e
Model:	E	X	X	XXXX	XX

Marking	Description
a	E = Line reactor
b	1 – 3 = phase
c	2 = Generation
d	Rated current A 0008 bis 0074
e	KL = terminal

1.2 Typical example

A typical example of an order corresponding to the model key would be:

Typ: E12 – 0008 KL

E = Line reactor

3 = 3 - phase

2 = Generation

0008 = 8 Ampere

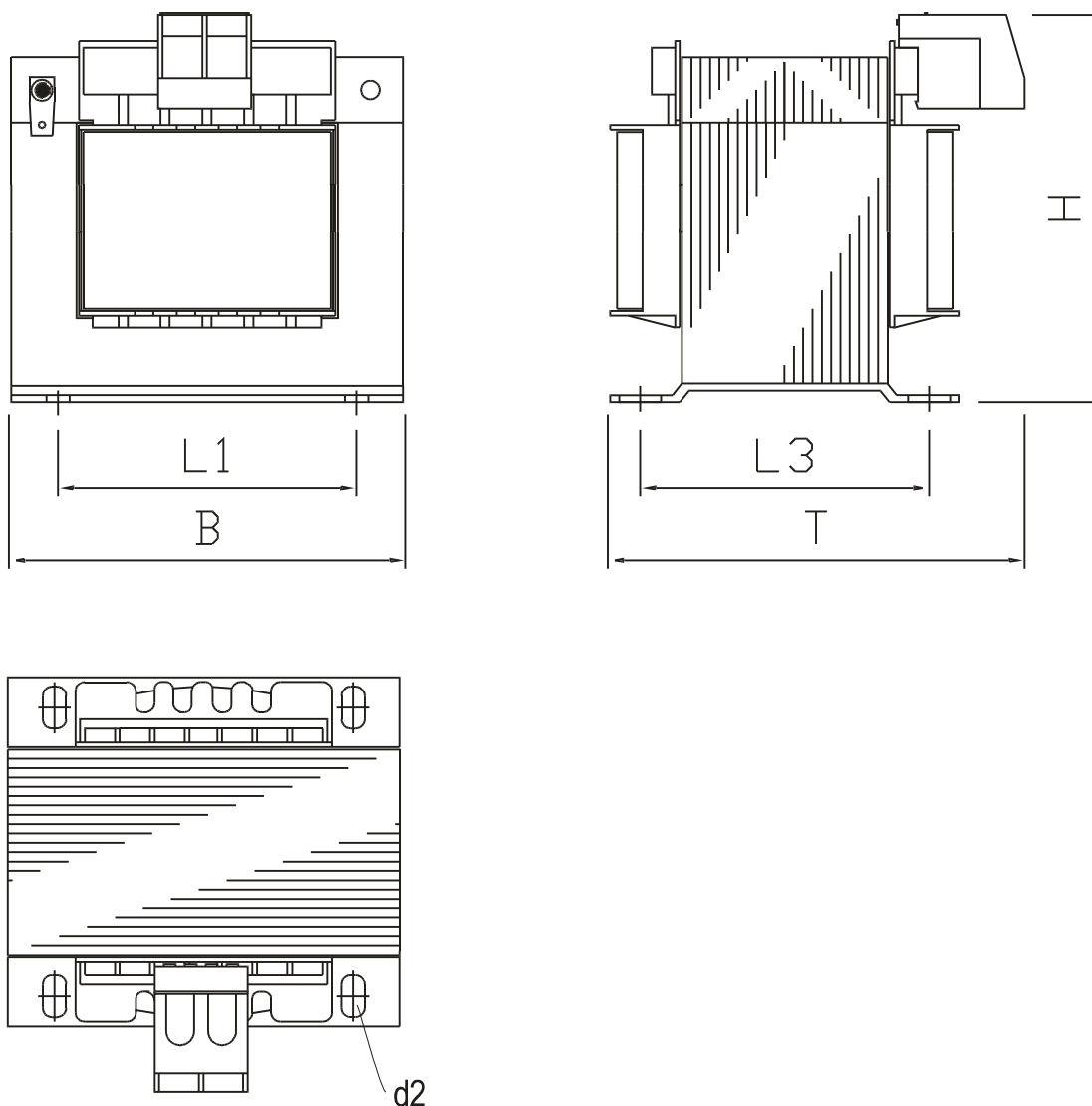
KL = terminal

2 Technical data

Line reactor - model	Supply voltage	Rated current	Thermic current	Inductance	Weight	terminal
		I_N (A)	I_{TH} (A)	L (mH)	m (kg)	(mm ²)
E12-0008	1-phase	8,0	8,0	3,7	1,2	2,5
E12-0018	1-phase	18,0	18,0	1,7	2,1	4,0
E12-0036	1-phase	36,0	36,0	0,815	3,5	10,0
E32-0011	3-phase	11,0	12,0	2,67	2,5	2,5
E32-0018	3-phase	18,0	19,6	1,53	5,4	2,5
E32-0031	3-phase	31,0	34,0	0,87	5,5	4,0
E32-0046	3-phase	46,0	50,0	0,62	11,0	10,0
E32-0074	3-phase	74,0	80,0	0,37	15,0	16,0

3 Dimensions

3.1 Model: E12

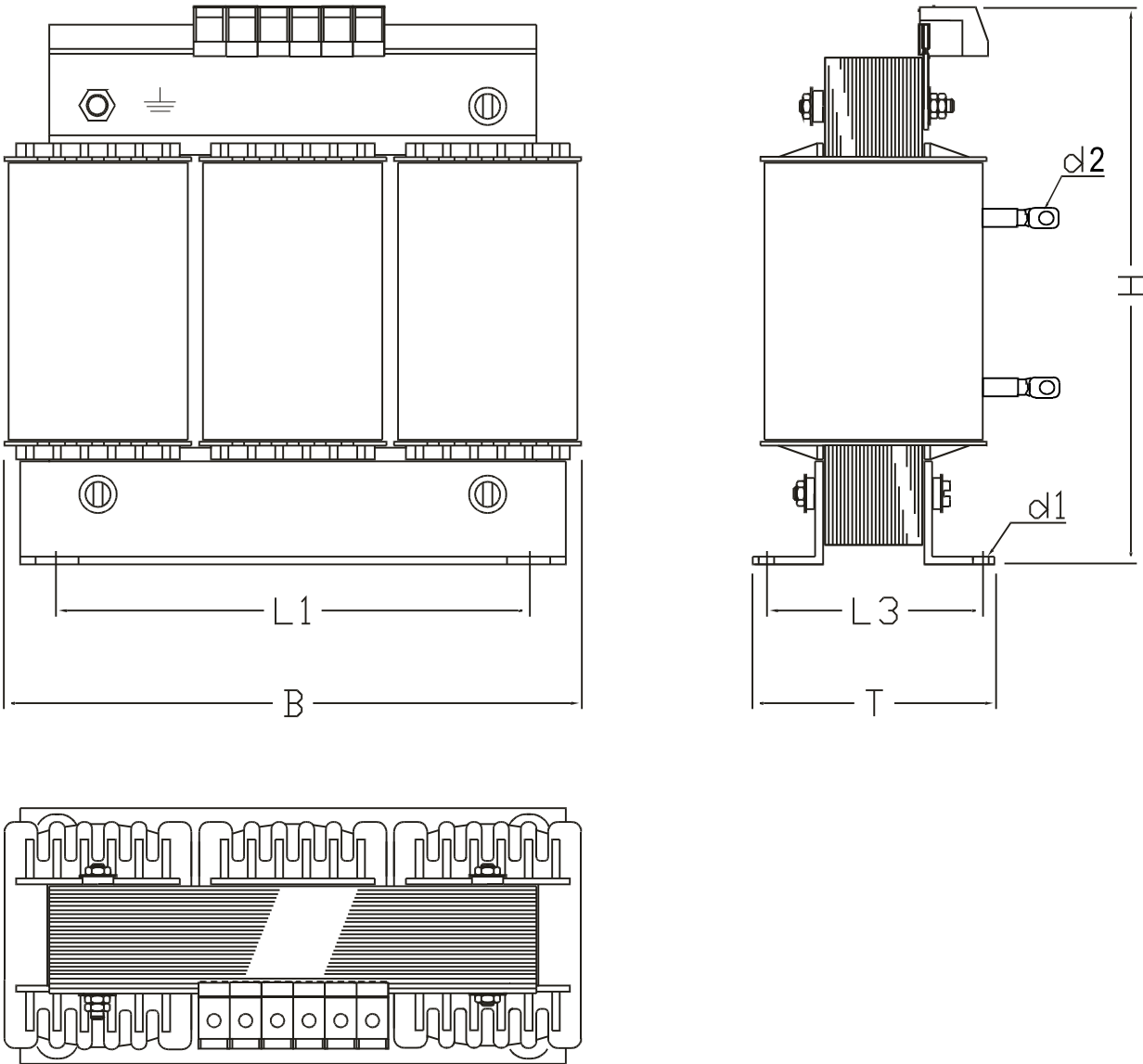


Specifications in "mm"

model	B	T	H	L1	L3	d2	terminal
E12-0008 KL	66	87	70	50	51	4,8 x 9	2,5 mm ²
E12-0018 KL	84	96	86	64	62	4,8 x 9	4,0 mm ²
E12-0036 KL	96	111	116	84	72	5,8 x 11	10,0 mm ²

Dimensions

3.2 Model: E32



Specifications in "mm"

model	B	T	H	L1	L3	d1	d2	terminal
E32-0011 KL	125	75	130	100	55	5 x 7	-	2,5 mm ²
E32-0018 KL	155	95	150	130	70	8 x 12	-	2,5 mm ²
E32-0031 KL	155	100	150	130	70	8 x 12	-	4,0 mm ²
E32-0046 KL	190	145	165	170	78	7x 11	6	10,0 mm ²
E32-0074 KL	210	160	185	175	95	8 x 12	8	16,0 mm ²

Ground connection: M6

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