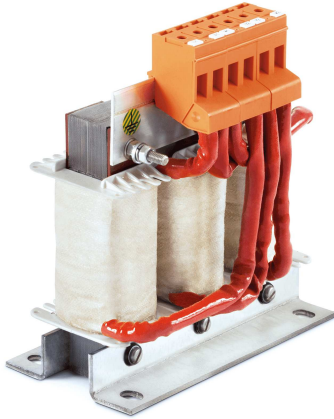


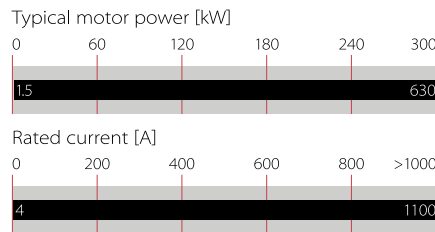
# Three-phase dv/dt Reactor for Efficient Motor Protection



- Reduction of drive output voltage dv/dt
- Reduction of motor temperature
- Increase of motor service life
- Compact and economic open frame design
- Standard catalog reactors up to 1100 A
- UL rated materials used



### Performance indicators



### Approvals



UL 508C up to 182 A. For use with AC or DC drives (power conversion equipment) only

### Features and benefits

- Efficient reduction of high output voltage dv/dt from IGBT motor drives
- Protection of motor coil insulation from premature aging and destruction
- Significantly increased service life of electric motors
- High reliability and secured production up time for mission critical applications
- Reduced converter pulse load
- Less interference propagation towards neighboring equipment of lines
- „Output filter“ with low impedance, ideal for processes requiring exceptional precision and reproducibility of movements
- Vacuum impregnation for reduced humming noise and high durability

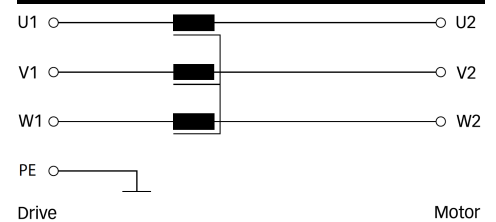
### Technical specifications

<b>Maximum continuous operating voltage</b>	3 x 500/288 VAC
<b>Motor frequency</b>	60 Hz
<b>Switching frequency</b>	2 to 16 kHz
<b>Rated currents</b>	4 to 1100 A @ 40°C
<b>Motor cable length</b>	30 m max. @ 16 kHz (derating curve next page)
<b>Impedance (uk)</b>	0.8% @ 400 VAC, 50 Hz & rated current
<b>Typical dv/dt reduction</b>	≥factor 5
<b>High potential test voltage</b>	P → E 3000 VAC for 3 sec P → P 3000 VAC for 3 sec
<b>Protection category</b>	IP 00 (KL types according to VBG 4)
<b>Overload capability</b>	2 x rated current at switch on for 30 seconds 1.5 x rated current for 1 minute, once per hour
<b>Temperature range (operation and storage)</b>	-25°C to +100°C (25/100/21)
<b>Insulation class</b>	T40/N (200°C) for ≤182 A types T40/F (155°C) for ≥230 A types
<b>Flammability corresponding to</b>	UL 94 V-2 or better
<b>Design corresponding to</b>	EN 61558-2-20 (VDE 0570-2-20), UL 508C, CSA C22.2 NO. 14
<b>MTBF @ 40°C/400 V (Mil-HB-217F)</b>	>500,000 hours


### Typical applications

- Servo drives
- Close loop vector drives
- Motor drive applications with short motor cables
- Machinery comprising servo or torque motors
- Robots
- Pick and place machines

### Typical electrical schematic



### Reactor selection table

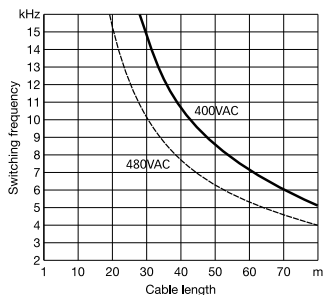
Reactor	Rated current @ 40°C	Typical motor power rating*	Nominal inductance	Typical power loss**	Input/Output connections			Weight Total
	[A]	[kW]	[mH]	[W]				[kg]
RWK 305-4-KL	4	1.5	1.47	22	KL			1.2
RWK 305-7.8-KL	7.8	3	0.754	25	KL			1.2
RWK 305-10-KL	10	4	0.588	30	KL			1.8
RWK 305-14-KL	14	5.5	0.42	34	KL			2.2
RWK 305-17-KL	17	7.5	0.346	38	KL			2.5
RWK 305-24-KL	24	11	0.245	45	KL			2.5
RWK 305-32-KL	32	15	0.184	55	KL			3.9
RWK 305-45-KL	45	22	0.131	60	KL			6.1
RWK 305-60-KL	60	30	0.098	65	KL			6.1
RWK 305-72-KL	72	37	0.082	70	KL			6.1
RWK 305-90-KL	90	45	0.065	75	KL			7.4
RWK 305-110-KL	110	55	0.053	90	KL			8.2
RWK 305-124-KS	124	55	0.047	110		KS		8.2
RWK 305-143-KS	143	75	0.041	115		KS		10.7
RWK 305-156-KS	156	75	0.038	120		KS		10.7
RWK 305-170-KS	170	90	0.035	130		KS		10.7
RWK 305-182-KS	182	90	0.032	140		KS		16
RWK 305-230-KS	230	132	0.026	180		KS		22
RWK 305-280-KS	280	160	0.021	220		KS		29
RWK 305-330-KS	330	160	0.018	240		KS		32
RWK 305-400-S	400	200	0.015	330			S	34
RWK 305-500-S	500	250	0.012	340			S	35
RWK 305-600-S	600	355	0.01	380			S	37
RWK 305-680-S	680	400	0.009	410			S	38
RWK 305-790-S	790	450	0.007	590			S	43
RWK 305-910-S	910	500	0.006	740			S	49
RWK 305-1100-S	1100	630	0.005	760			S	66

\* General purpose four-pole (1500 r/min) AC induction motor rated 400 V/50 Hz.

\*\* Exact value depends upon the motor cable type and length, switching frequency, motor frequency and further stray parameters within the system.

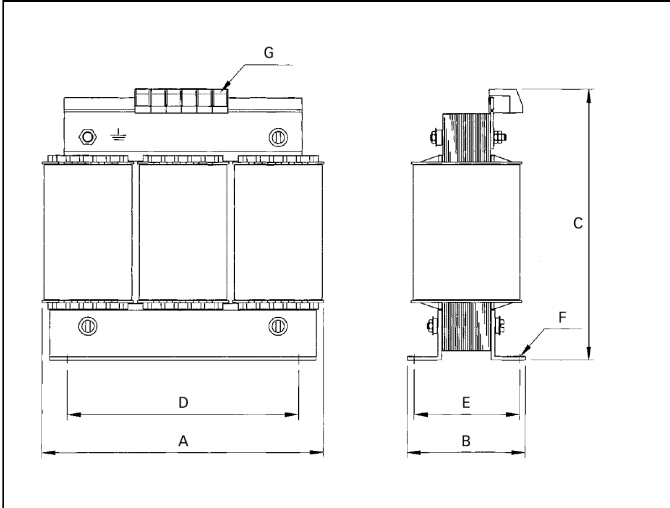
### Reactor derating

The maximum admissible motor cable length depends mainly on the switching frequency and the drive output voltage. The applicable value for a given application can be found in the derating curve below.

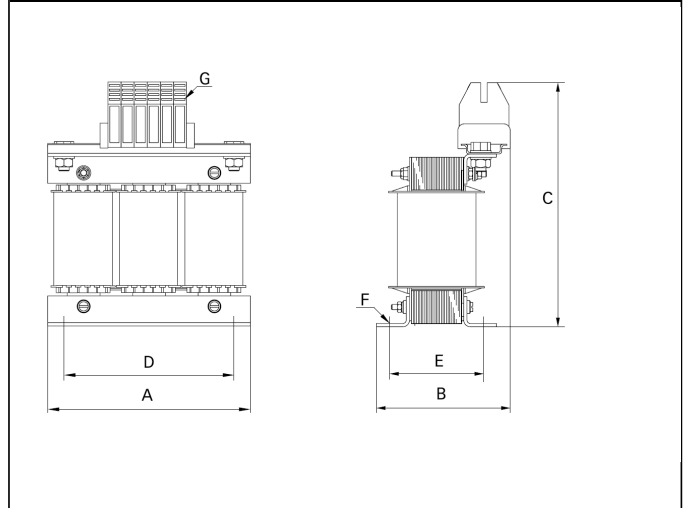


**Mechanical data**

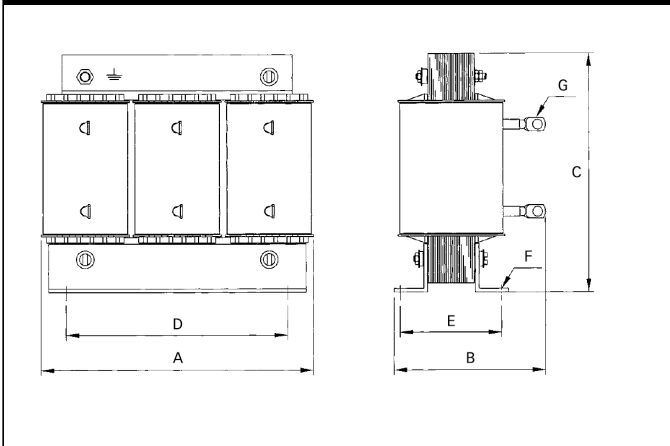
4 to 45A types



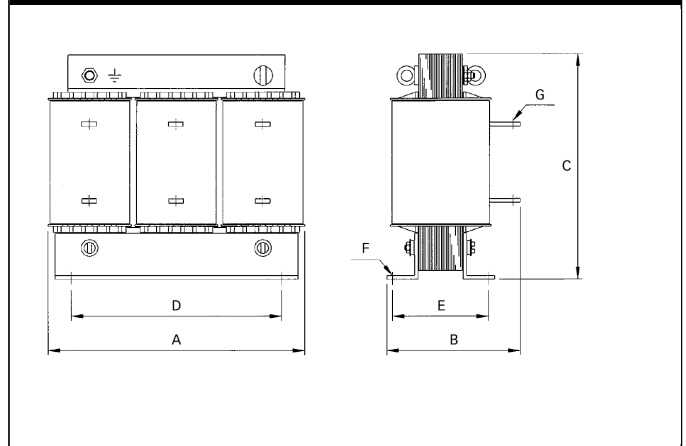
60 to 110 A types



124 to 330 A types



400 to 1100 A types



## Dimensions

	A	B	C	D	E	F	G
<b>4 and 7.8 A</b>	100	max. 60	max. 115	56	34	4.8 x 9	2.5 mm <sup>2</sup>
<b>10 A</b>	100	max. 70	max. 115	56	43	4.8 x 9	2.5 mm <sup>2</sup>
<b>14 A</b>	125	max. 70	max. 135	100	45	5 x 8	2.5 mm <sup>2</sup>
<b>17 A</b>	125	max. 75	max. 135	100	55	5 x 8	2.5 mm <sup>2</sup>
<b>24 A</b>	125	max. 75	max. 135	100	55	5 x 8	4 mm <sup>2</sup>
<b>32 A</b>	155	max. 95	max. 170	130	56	8 x 12	10 mm <sup>2</sup>
<b>45 A</b>	155	max. 110	max. 190	130	72	8 x 12	10 mm <sup>2</sup>
<b>60 and 72 A</b>	155	max. 125	max. 190	130	70	8 x 12	16 mm <sup>2</sup>
<b>90 A</b>	190	max. 115	max. 225	170	57	8 x 12	35 mm <sup>2</sup>
<b>110 A</b>	190	max. 130	max. 220	170	67	8 x 12	35 mm <sup>2</sup>
<b>124 A</b>	190	max. 180	max. 160	170	67	8 x 12	Ø 8
<b>143 A</b>	190	max. 180	max. 160	170	77	8 x 12	Ø 8
<b>156 AND 170 A</b>	190	max. 180	max. 160	170	77	8 x 12	Ø 10
<b>182 A</b>	210	max. 180	max. 185	175	95	8 x 12	Ø 10
<b>230 A</b>	240	220	220	190	119	11 x 15	Ø 12
<b>280 A</b>	240	235	220	190	133	11 x 15	Ø 12
<b>330 A</b>	240	240	220	190	135	11 x 15	Ø 12
<b>400 and 500 A</b>	240	220	325	190	119	11 x 15	Ø 11
<b>600 and 680 A</b>	240	230	325	190	128	11 x 15	Ø 14
<b>790 A</b>	300	218	355	240	136	11 x 15	2 x Ø 11
<b>910 A</b>	300	228	355	240	148	11 x 15	2 x Ø 11
<b>1100 A</b>	360	250	380	310	144	11 x 15	2 x Ø 11

All dimensions in mm; 1 inch = 25.4 mm  
Tolerances according: ISO 2768-m / EN 22768-m

Please visit [www.schaffner.com](http://www.schaffner.com) to find more details on filter connectors.



## Headquarters, global innovation and development

### Switzerland

#### Schaffner Group

Nordstrasse 11  
4542 Luterbach  
T +41 32 681 66 26  
[info@schaffner.com](mailto:info@schaffner.com)  
[www.schaffner.com](http://www.schaffner.com)



## Sales and application centers

### China

#### Schaffner EMC Ltd. Shanghai

T20-3 C, No 565 Chuangye Road,  
Pudong district  
201201 Shanghai  
T +86 21 3813 9500  
[cschina@schaffner.com](mailto:cschina@schaffner.com)  
[www.schaffner.com.cn](http://www.schaffner.com.cn)

### Finland

#### Schaffner Oy

Sauvonrinne 19 H  
08500 Lohja  
T +358 50 468 7284  
[finlandsales@schaffner.com](mailto:finlandsales@schaffner.com)

### France

#### Schaffner EMC S.A.S.

16-20 Rue Louis Rameau  
95875 Bezons  
T +33 1 34 34 30 60  
F +33 1 39 47 02 28  
[francesales@schaffner.com](mailto:francesales@schaffner.com)

### Germany

#### Schaffner Deutschland GmbH

Schoemperlenstrasse 12B  
76185 Karlsruhe  
T +49 721 56910  
F +49 721 569110  
[germanysales@schaffner.com](mailto:germanysales@schaffner.com)

### India

#### Schaffner India Pvt. Ltd

REGUS WORLD TRADE CENTRE  
WTC, 22nd Floor Unit No 2238, Brigade  
Gateway Campus, 26/1, Dr. Rajkumar Road  
Malleswaram (W)  
560055 Bangalore  
T +91 80 67935355  
[indiasales@schaffner.com](mailto:indiasales@schaffner.com)

### Italy

#### Schaffner EMC S.r.l.

Via Ticino, 30  
20900 Monza (MB)  
T +39 039 21 41 070  
[italysales@schaffner.com](mailto:italysales@schaffner.com)

### Japan

#### Schaffner EMC K.K.

1-32-12, Kamiyama, Setagaya-ku  
7F Mitsui-seimei Sangenjaya Bldg.  
154-0011 Tokyo  
T +81 3 5712 3650  
F +81 3 5712 3651  
[japansales@schaffner.com](mailto:japansales@schaffner.com)  
[www.schaffner.jp](http://www.schaffner.jp)

### Singapore

#### Schaffner EMC Pte Ltd.

#05-09, Kg Ubi Ind. Estate  
408705 Singapore  
T +65 6377 3283  
F +65 6377 3281  
[singaporesales@schaffner.com](mailto:singaporesales@schaffner.com)

### Spain

#### Schaffner EMC España

Calle Caléndula 93, Miniparc III, Edificio E  
El Soto de Moraleja, Alcobendas  
28109 Madrid  
T +34 917 912 900  
F +34 917 912 901  
[spainsales@schaffner.com](mailto:spainsales@schaffner.com)

### Sweden

#### Schaffner EMC AB

Tegeluddsvägen 76, 2tr  
115 28 Stockholm  
T +46 8 5050 2425  
[swedensales@schaffner.com](mailto:swedensales@schaffner.com)  
[www.schaffner.com](http://www.schaffner.com)

### Switzerland

#### Schaffner EMV AG

Nordstrasse 11  
4542 Luterbach  
T +41 32 681 66 26  
[switzerlandsales@schaffner.com](mailto:switzerlandsales@schaffner.com)

### Taiwan R.O.C.

#### Schaffner EMV Ltd.

20 Floor-2, No 97, Section 1, XinTai 5th Road  
22175 XiZhi District New Taipei City 22175  
T +886 2 2697 5500  
F +886 2 2697 5533  
[taiwansales@schaffner.com](mailto:taiwansales@schaffner.com)  
[www.schaffner.com.tw](http://www.schaffner.com.tw)

### Thailand

#### Schaffner EMC Co. Ltd.

Northern Region Industrial Estate  
67 Moo 4 Tambon Ban Klang  
Amphur Muangng P.O. Box 14  
51000 Lamphun  
T +66 53 58 11 04  
F +66 53 58 10 19  
[thailandsales@schaffner.com](mailto:thailandsales@schaffner.com)

### United Kingdom

#### Schaffner Ltd.

5 Ashville Way, Molly Millars Lane  
Wokingham  
RG41 2PL Berkshire  
T +44 118 9770070  
F +44 118 9792969  
[uksales@schaffner.com](mailto:uksales@schaffner.com)

### USA

#### Schaffner EMC Inc.

52 Mayfield Avenue  
08837 Edison, New Jersey  
T +1 800 367 5566  
T +1 732 225 9533  
F +1 732 225 4789  
[usasales@schaffner.com](mailto:usasales@schaffner.com)  
[www.schaffnerusa.com](http://www.schaffnerusa.com)

#### Schaffner North America

6722 Thirlane Road  
24019 Roanoke, Virginia  
T +1 276 228 7943  
F +1 276 228 7953

#### Schaffner North America

823 Fairview Road  
24382 Wytheville, Virginia  
T +1 276 228 7943  
F +1 276 228 7258

To find your local partner within Schaffner's global network: [www.schaffner.com](http://www.schaffner.com)

© 2018 Schaffner Group

The content of this document has been carefully checked and understood. However, neither Schaffner nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Schaffner does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Swiss law and resulting disputes shall be settled by the courts at the place of business of Schaffner Holding AG. Latest publications and a complete disclaimer can be downloaded from the Schaffner website. All trademarks recognized.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.