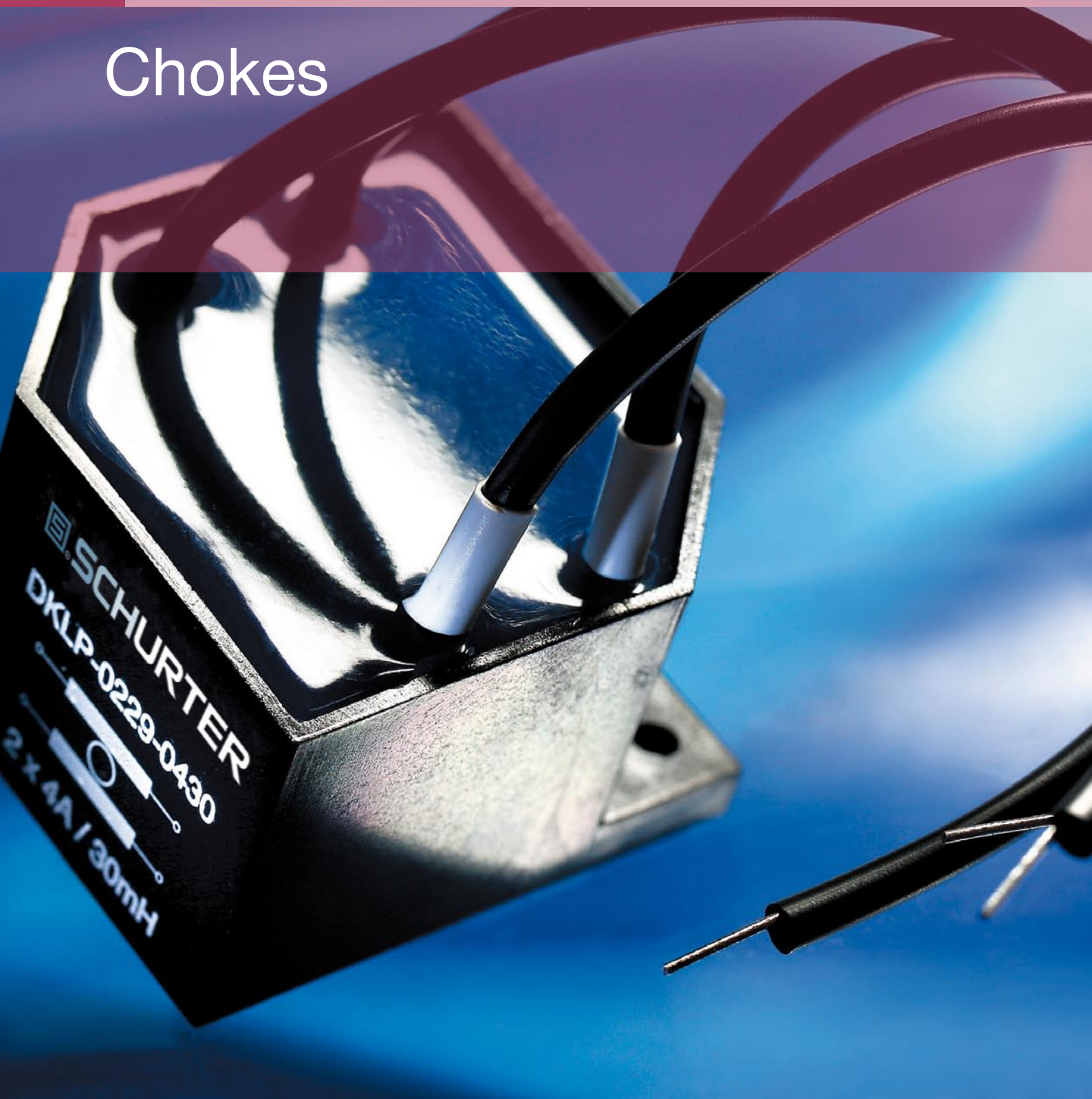
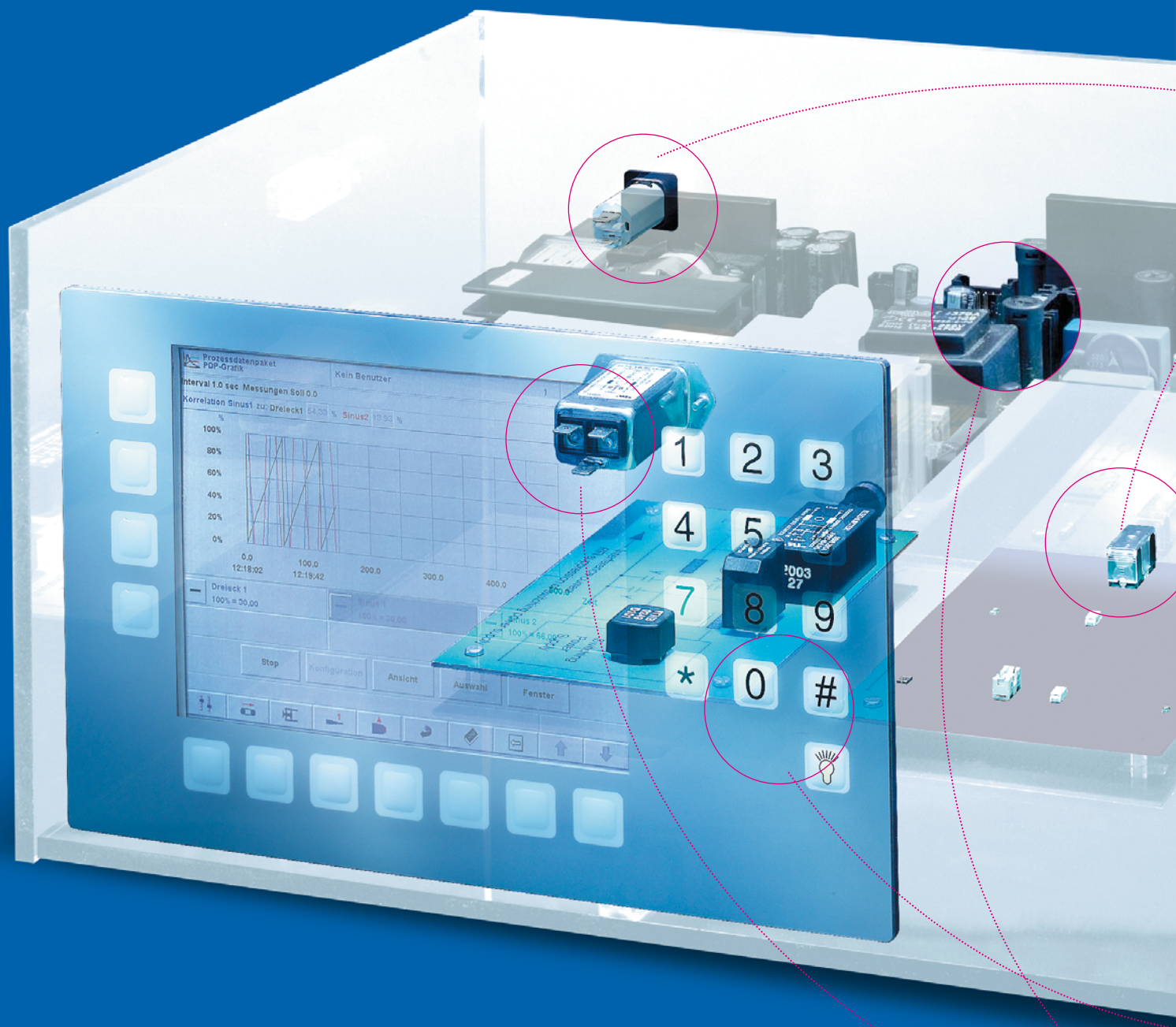


Chokes



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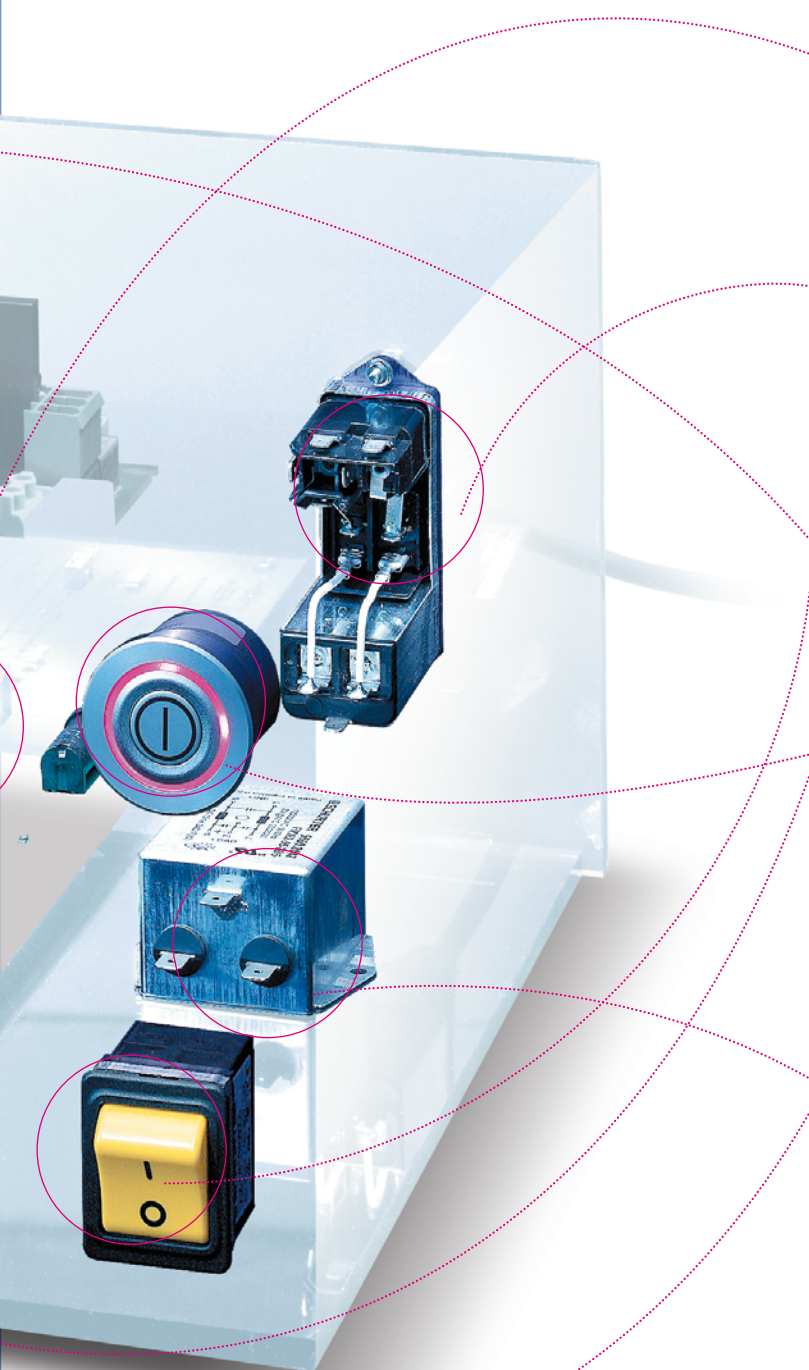


“We rely on reliability and flexibility; that is why we produce your products by our qualified and motivated employee.”

Battista Filippini, CEO Ticomel SA (a member of the SCHURTER Group)

> the Schurter Range at the Glance

SCHURTER is a progressive innovator and manufacturer of fuses, connectors, circuit breakers, input systems, EMC products and manufacturing services for the electronics industry. We focus on components that ensure safe supply of power and make the interface between human and machine easier.



■ fuses

- non resettable fuses
- telecom fuses
- resettable fuses
- fuseholders
- fuseholders blocks & clips

■ connectors

- power entry modules without line filter
- power entry modules with line filter
- appliance couplers
- cord connectors (rewireable)
- distribution units
- cord sets

■ circuit breakers

- thermal (t- and ta-line)
- thermal-magnetic (tm- and as-line)
- undervoltage protection
- power entry modules with CBE

■ input systems

- printmount switches
- frontpanel switches
- public transport switch
- metal line switches
- sensor switches
- membrane keypads
- sensor keypad
- metal line keypads
- touch panel / touch screen
- housing systems and front panels

■ EMC products

- power entry modules with line filter
- 1-phase line filters
- 3-phase line filters
- chokes
- pulse transformers
- power stage driver modules

■ other products

- voltage selector
- test jacks & probes
- indicators
- data & signal, audio, dc/ din connectors

■ EMS

- Electronic Manufacturing Services

Description	Rated Current Rated Voltage	Rated inductance	Mounting	Web Reference or Type
STYLE 1- OR 3-PHASE CHOKE				
 Magnetically Compensated Choke, 1- and 3-phase	0.5 - 15A up to 440VAC	1 - 20 mH Tol. -30% +50%	THT Flexible wire	DFK 32
STYLE 1-PHASE CHOKE				
 Compensated High Current Choke, 1-phase	10 - 20A up to 540VAC	1.1 - 12 mH Tol. -30% +50%	THT	DKIL-1 18
 Compensated High Current Choke, 1-phase	10 - 50A up to 540VAC	1.1 - 12 mH Tol. -30% +50%	Flexible wire	DKIP-1 16
 Compensated High Inductance Choke, 1-phase	4 - 7A up to 540VAC	14 - 60 mH Tol. -30% +50%	THT	DKLL-1 20
 Compensated High Inductance Choke, 1-phase	4 - 20A up to 540VAC	14 - 60 mH Tol. -30% +50%	Flexible wire	DKLP-1 22
 Magnetically Compensated Choke, 1-phase, flat design	0.4A up to 440VAC	0.6 - 40 mH Tol. -30% +50%	THT	DFKF 10
 Magnetically Compensated Choke, 1-phase, high design	0.6A up to 440VAC	0.6 - 50 mH Tol. -30% +50%	THT	DFKH 14
STYLE 3-PHASE CHOKE				
 Compensated High Current Choke, 3-phase	10 - 20A up to 540VAC	0.6 - 5 mH Tol. -30% +50%	THT	DKIL-3 26



Description	Rated Current Rated Voltage	Rated inductance	Mounting	Web Reference or Type
Compensated High Current Choke, 3-phase	10 - 50A up to 540VAC	0.6 - 5 mH Tol. -30% +50%	Flexible wire	DKIP-3 24



Compensated High Inductance Choke, 3-phase	3 - 8A up to 540VAC	4.0 - 50 mH Tol. -30% +50%	THT	DKLL-3 28
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Compensated High Inductance Choke, 3-phase	8 - 16A up to 540VAC	4.0 - 50 mH Tol. -30% +50%	Flexible wire	DKLP-3 30
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STYLE SMD-TERMINALS



Magnetically Compensated SMD Choke, compact	0.5 - 2A up to 250VAC	0.5 - 4.0 mH Tol. -30% +50%	SMD	DKFS 12
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STYLE THT-TERMINALS



Magnetically Compensated Choke, compact	0.5 - 2A up to 250VAC	0.5 - 4.0 mH Tol. -30% +50%	THT	DKFP 13
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This overview only shows a selection of the current product range of SCHURTER.

You will find additional information about the respective products on our website: www.schurter.com/pg81_82

For customer specific solutions, please contact us. www.schurter.com/contact

Description	Rated Current Rated Voltage	Rated inductance	Mounting	Web Reference or Type
STYLE WIRE LEADS				
 Linear Choke, open version, without socket	0.45 - 7A	0.02 - 5 mH Tol. ±15%	Wire leads	DLO 43
 Storage Choke, open version, without socket	0.5 - 16A	0.01 - 1 mH Tol. ±15%	Wire leads	DSO 55
 High frequency ground wire choke, shrink hose	16 - 25A	0.02 - 4 mH Tol. ±15%	Wire leads	DEH 65
 Low frequency ground wire choke, fully potted design	16 - 25A	0.02 - 4 mH	Wire leads	DEN 67
 Linear/Saturating Choke	5 - 45A up to 440VAC	-	THT Flexible wire	DLFP 60
STYLE THT-TERMINALS				
 Ground wire choke, open design	16A	0.04 - 4 mH	THT	DENO 68
 Linear Choke, compact	0.6 - 1A	0.05 - 0.1 mH Tol. ±15%	THT	DLNP 41
 Linear Choke, flat design	0.4A	0.015 - 3 mH Tol. ±15%	THT	DLF 39

	Description	Rated Current Rated Voltage	Rated inductance	Mounting	Web Reference or Type
	Linear Choke, high design	0.45A	0.02 - 5.5 mH Tol. ±15%	THT	DLH 36
	Linear/Saturating Choke	5 - 45A up to 440VAC	-	THT Flexible wire	DLFL 63
	Saturating Choke	0.8 - 10A up to 440VAC	-	THT Flexible wire	DFSG 57
	Storage Choke, compact	0.6 - 1A	0.04 - 0.1 mH Tol. ±15%	THT	DSHP 53
	Storage Choke, flat design	0.4 - 6.3A	0.011 - 3.7 mH Tol. ±15%	THT	DSF 48
	Storage Choke, fully potted resign	0.5 - 16A	0.01 - 1 mH Tol. ±15%	THT	DS 45
	Storage Choke, high design	0.45 - 6.3A	0.01 - 2 mH Tol. ±15%	THT	DSH 50

This overview only shows a selection of the current product range of SCHURTER.

You will find additional information about the respective products on our website: www.schurter.com/pg81_82

For customer specific solutions, please contact us. www.schurter.com/contact

Magnetically Compensated Choke, 1-phase, flat design



Description

- Current compensated choke
- 1-phase choke
- THT-terminals
- Inductor horizontally positioned in housing
- SMD version on request

Standards

- EN 60938

Applications

- Attenuation of common mode interferences
- Designed for 230/400 VAC applications
- Chopper amplifiers
- DC drives and stepper motor controls
- Switching power supplies

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

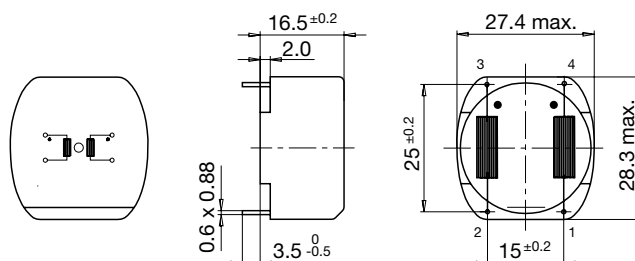
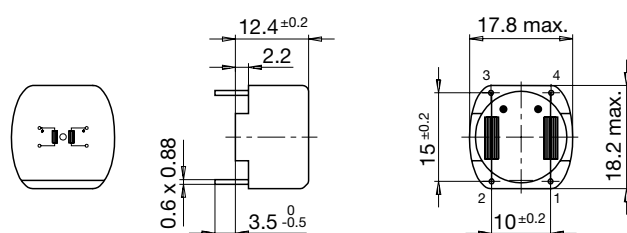
Rated Voltage	up to 440VAC
Rated Current	0.4 -A @ Ta 40 °C
Rated inductance	0.6 - 40 mH, Tol. -30% +50%
Power Operating Frequency	50 - 400Hz
Terminal technic	THT
Weight	5 - 16g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

Test Voltage	1.8kV, 50Hz, 1 min, winding to winding
Isolation Voltage	2kV eff., winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

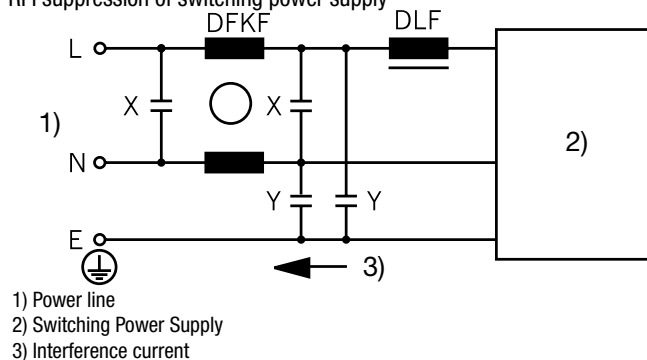
Case 04-2

Case 15-2

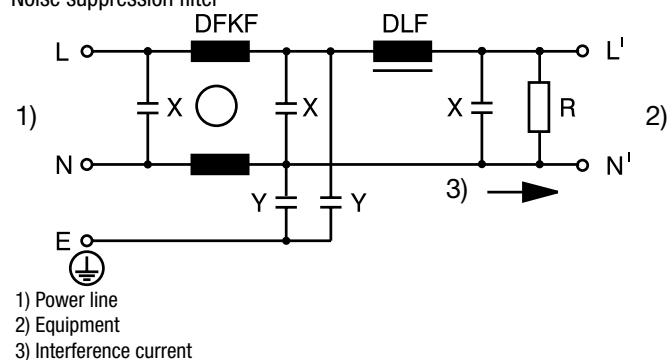


Diagrams

RFI suppression of switching power supply



Noise suppression filter



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Weight [g]	Case	Packing unit [pcs.]	Order Number
0.4	40	1200	0.4	0.11	5	04-2	45	DFKF-18-0001
0.6	15	540	-	-	5	04-2	45	DFKF-18-0002
1.2	6.8	200	0.6	0.45	5	04-2	45	DFKF-18-0003
1.5	3.3	110	0.5	1.2	5	04-2	45	DFKF-18-0004
2	2	60	-	-	5	04-2	45	DFKF-18-0005
4	0.7	16	0.5	2.5	5	04-2	45	DFKF-18-0006
-	0.6	13	1	2.5	16	15-2	40	DFKF-28-0006
0.6	40	1000	0.7	0.2	16	15-2	40	DFKF-28-0001
1	20	360	0.7	0.28	16	15-2	40	DFKF-28-0002
1.4	27	310	-	-	16	15-2	40	DFKF-28-0003
2	6	100	0.8	0.3	16	15-2	40	DFKF-28-0004
4	1.5	28	0.9	1.3	16	15-2	40	DFKF-28-0005

Magnetically Compensated SMD Choke, compact

**Description**

- Current compensated choke
- SMD-terminals
- Inductor vertically positioned in housing

Standards

- EN 60938

Applications

- Attenuation of common mode interferences
- Designed for 230/400 VAC applications
- Chopper amplifiers
- DC drives and stepper motor controls
- Switching power supplies

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

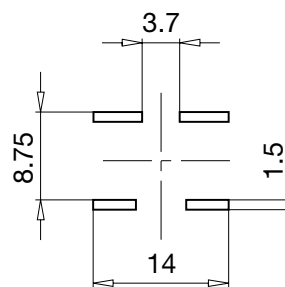
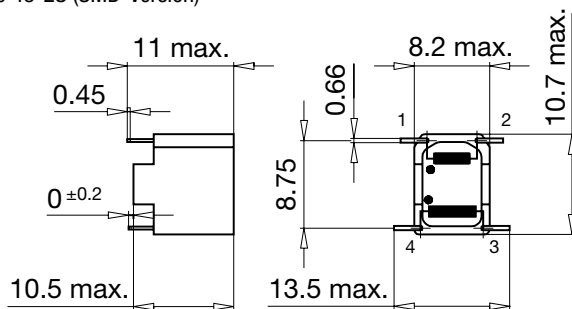
Technical Data

Rated Voltage	up to 250VAC
Rated Current	0.5 - 2 A @ Ta 40 °C
Rated inductance	0.5 - 4.0 mH, Tol. -30% +50%
Power Operating Frequency	50 - 400 Hz
Terminal technic	SMD
Weight	1 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

Test Voltage	1.5kV, 50Hz, 1 min, winding to winding
Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

Case 48-2S (SMD-Version)



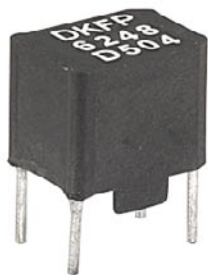
Possible solder land pattern

Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Weight [g]	Case	Packing unit [pcs.]	Order Number
0.5	4	500	0.25	1.2	1	48-2S	176	DKFS-6248-D504
0.9	2	240	0.39	1.6	1	48-2S	176	DKFS-6248-0102
2	0.5	50	0.4	4.5	1	48-2S	176	DKFS-6248-02D5

Magnetically Compensated Choke, compact



Description

- Current compensated choke
- THT-terminals
- Inductor vertically positioned in housing

Standards

- EN 60938

Applications

- Attenuation of common mode interferences
- Designed for 230/400 VAC applications
- Chopper amplifiers
- DC drives and stepper motor controls
- Switching power supplies

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

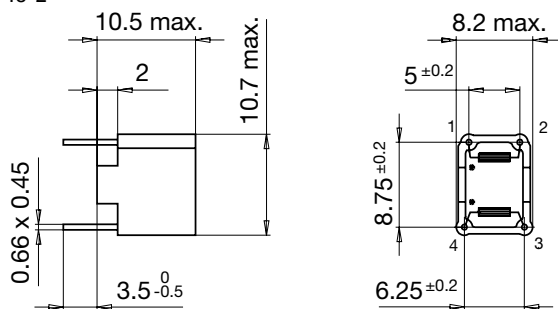
Technical Data

Rated Voltage	up to 250 VAC
Rated Current	0.5 - 2 A @ Ta 40 °C
Rated inductance	0.5 - 4.0 mH, Tol. -30% +50%
Power Operating Frequency	50 - 400 Hz
Terminal technic	THT
Weight	1 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

Test Voltage	1.5 kV, 50 Hz, 1 min., winding to winding
Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

Case 48-2



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Weight [g]	Case	Packing unit [pcs.]	Order Number
0.5	4	500	0.25	1.2	1	48-2	176	DKFP-6248-D504
0.9	2	240	0.39	1.6	1	48-2	176	DKFP-6248-0102
2	0.5	50	0.4	4.5	1	48-2	176	DKFP-6248-02D5

Magnetically Compensated Choke, 1-phase, high design



Description

- Current compensated choke
- 1-phase choke
- THT-terminals
- Inductor vertically positioned in housing

Standards

- EN 60938

Applications

- Attenuation of common mode interferences
- Designed for 230/400 VAC applications
- Chopper amplifiers
- DC drives and stepper motor controls
- Switching power supplies

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

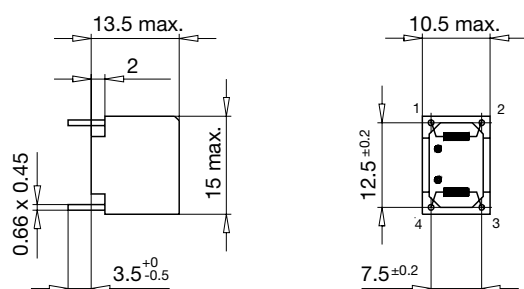
Technical Data

Rated Voltage	up to 440VAC
Rated Current	0.6 - A @ Ta 40 °C
Rated inductance	0.6 - 50 mH, Tol. -30% +50%
Power Operating Frequency	50 - 400Hz
Terminal technic	THT
Weight	3 - 30g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

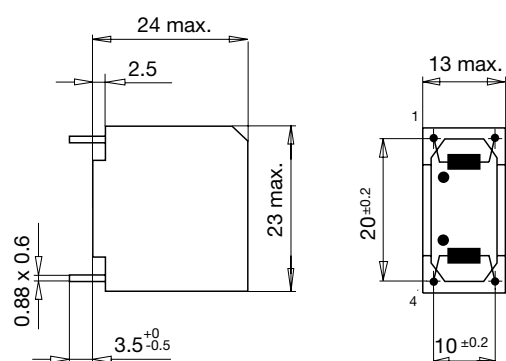
Test Voltage	1.8kV, 50Hz, 1 min, winding to winding
Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

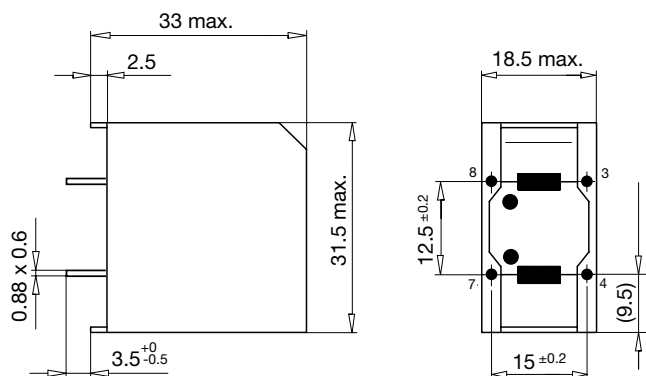
Case 50-2, 51-2, 52-2



Case 09-2



Case 19-2



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Weight [g]	Case	Packing unit [pcs.]	Order Number
-	0.6	15	1.4	2.5	10	09-2	50	DFKH-22-0005
1	20	500	1	0.25	10	09-2	50	DFKH-22-0002
2	6	150	1.3	0.6	10	09-2	50	DFKH-22-0003
4	1.5	36	1.2	1.5	10	09-2	50	DFKH-22-0004
0.6	50	1200	0.9	0.15	22	19-2	70	DFKH-31-0001
1	33	700	1.4	0.25	30	19-2	70	DFKH-31-0002
1.4	27	470	1.8	0.3	30	19-2	70	DFKH-31-0003
2	6.8	150	1.2	0.5	30	19-2	70	DFKH-31-0005
2.5	5.6	110	-	-	30	19-2	70	DFKH-31-0006
4	3.3	58	1.8	0.8	30	19-2	70	DFKH-31-0007
6	2	24	1.8	1.2	30	19-2	70	DFKH-31-0008
0.6	11	600	0.5	0.5	3	50-2	100	DFKH-14-0001
1	4	250	0.5	1.2	3	51-2	100	DFKH-14-0002
2	1	65	0.5	2.5	3	52-2	100	DFKH-14-0003

Compensated High Current Choke, 1-phase

**Description**

- Current compensated choke
- 1-phase choke
- Wire leads
- Flange for mounting onto printed circuit board
- Fully potted resign

Standards

- EN 60938
- IEC 60950
- EN 55011/55014
- VDE 0871/0875

Applications

- Placed in front of frequency converter
- Stepper motor drives
- UPS-systems
- Inverter

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

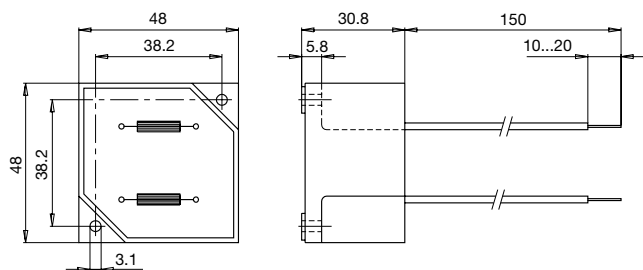
Technical Data

Rated Voltage	up to 540VAC
Rated Voltage	up to 760VDC
Rated Current	10 - 50A @ Ta 40 °C
Rated inductance	1.1 - 12 mH, Tol. -30% +50%
Power Operating Frequency	50 - 400Hz
Terminal technic	Flexible wire
Weight	145 - 1865g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

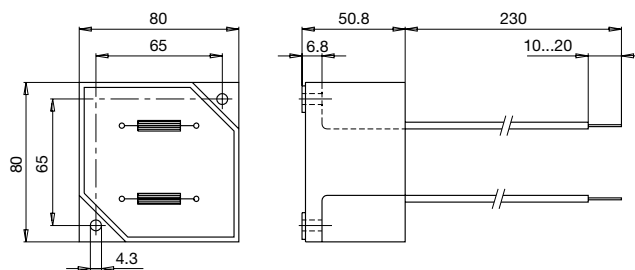
Test Voltage	2.5kV, 50Hz, 2 sec, winding to winding
Isolation Voltage	2.5kV, 50Hz, 2 sec, winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

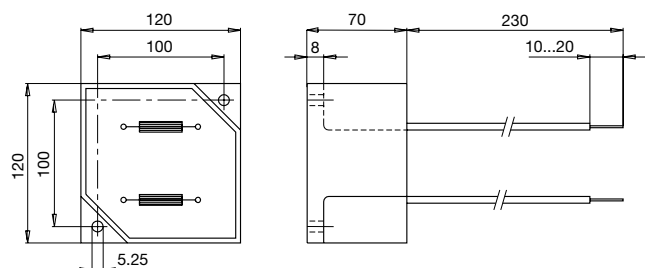
Case 29-2W



Case 31-2W



Case 33-2W



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Copper ϕ [mm]	Weight [g]	Case	Packing unit [pcs.]	Order Number
10	5	18	3.6	0.35	1.25	145	29-2W	6	DKIP-0229-1005
15	2	8	3.6	0.6	1.6	145	29-2W	6	DKIP-0229-1502
20	1.1	6	4.8	2.5	1.8	145	29-2W	6	DKIP-0229-2001
10	12	40	8	0.15	1.25	477	31-2W	2	DKIP-0231-1012
15	5	17	7.6	0.33	1.6	525	31-2W	2	DKIP-0229-1505
20	3	10	8	0.55	1.8	506	31-2W	2	DKIP-0231-2003
30	5	12.5	22.5	0.26	2.24	1600	33-2W	1	DKIP-0233-3005
40	3	6	19.2	0.3	1.5 x 4.5	1830	33-2W	1	DKIP-0233-4003
50	2	5	25	0.25	1.5 x 4.5	1865	33-2W	1	DKIP-0233-5002

Compensated High Current Choke, 1-phase

**Description**

- Current compensated choke
- 1-phase choke
- THT-terminals
- Flange for mounting onto printed circuit board
- Fully potted resign

Standards

- EN 60938
- IEC 60950
- EN 55011/55014
- VDE 0871/0875

Applications

- Placed in front of frequency converter
- Stepper motor drives
- UPS-systems
- Inverter

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

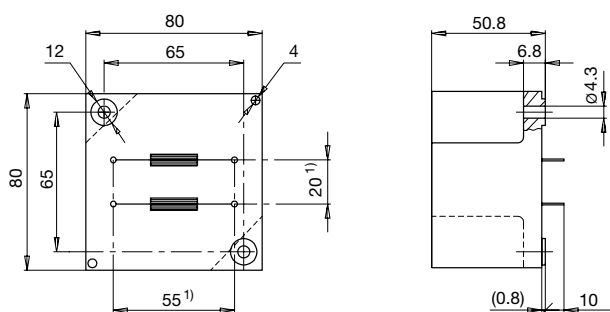
Technical Data

Rated Voltage	up to 540VAC
Rated Voltage	up to 760VDC
Rated Current	10 - 20A @ Ta 40 °C
Rated inductance	1.1 - 12 mH, Tol. -30% +50%
Power Operating Frequency	50 - 400Hz
Terminal technic	THT
Weight	145 - 525g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

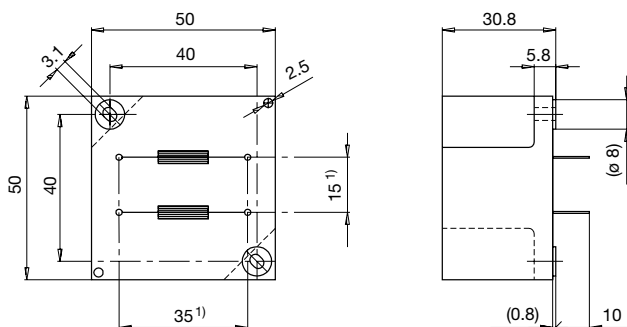
Test Voltage	2.5kV, 50Hz, 2 sec, winding to winding
Isolation Voltage	2.5kV eff., 50Hz, 2 sec, winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

Case 31-2P



Case 46-2P



1) Spacing given at pin base

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Copper ø [mm]	Weight [g]	Case	Packing unit [pcs.]	Order Number
10	12	40	8	0.15	1.25	477	31-2P	2	DKIL-0231-1012
15	5	17	7.6	0.33	1.6	525	31-2P	2	DKIL-0231-1505
20	3	10	8	0.55	1.8	506	31-2P	2	DKIL-0231-2003
10	5	18	3.6	0.35	1.25	145	46-2P	10	DKIL-0246-1005
15	2	8	3.6	0.6	1.6	145	46-2P	10	DKIL-0246-1502
20	1.1	6	4.8	2.5	1.8	145	46-2P	10	DKIL-0246-2001

Compensated High Inductance Choke, 1-phase

**Description**

- Current compensated choke
- 1-phase choke
- THT-terminals
- Flange for mounting onto printed circuit board
- Fully potted resign

Standards

- EN 60938
- IEC 60950
- EN 55011/55014
- VDE 0871/0875

Applications

- Placed in front of frequency converter
- Stepper motor drives
- UPS-systems
- Inverter

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

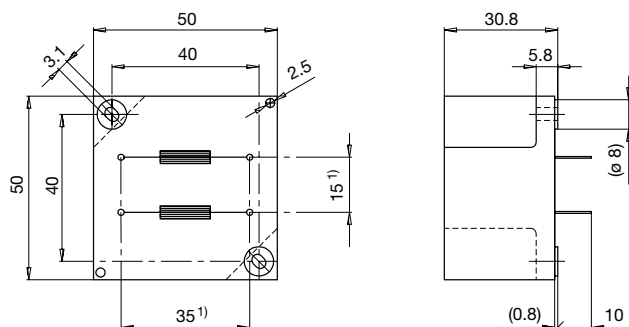
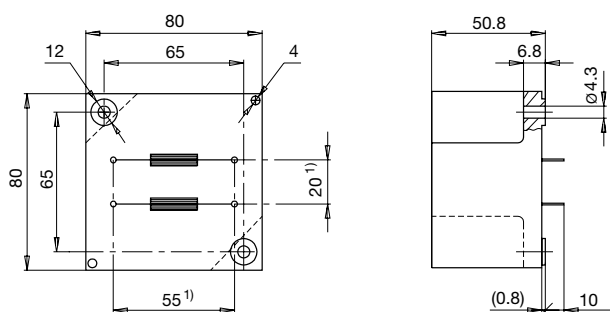
Rated Voltage	up to 540VAC
Rated Voltage	up to 760VDC
Rated Current	4 - 7 A @ Ta 40 °C
Rated inductance	14 - 60mH, Tol. -30% +50%
Power Operating Frequency	50 - 400Hz
Terminal technic	THT
Weight	145 - 505 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

Test Voltage	2.5kV, 50Hz, 2 sec, winding to winding
Isolation Voltage	2.5kV eff., 50Hz, 2 sec, winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

Case 31-2P

Case 46-2P



1) Spacing given at pin base

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Copper ø [mm]	Weight [g]	Case	Packing unit [pcs.]	Order Number
4	60	250	8	0.1	0.71	490	31-2P	2	DKLL-0231-0460
5	40	126	6.3	0.048	0.9	490	31-2P	2	DKLL-0231-0540
7	20	62	6	0.18	1.12	505	31-2P	2	DKLL-0231-0720
4	30	96	3	0.2	0.8	145	46-2P	10	DKLL-0246-0430
6	14	46	3.3	0.3	1	145	46-2P	10	DKLL-0246-0614

Compensated High Inductance Choke, 1-phase

**Description**

- Current compensated choke
- 1-phase choke
- Wire leads
- Flange for mounting onto printed circuit board
- Fully potted design

Standards

- EN 60938
- IEC 60950
- EN 55011/55014
- VDE 0871/0875

Applications

- Placed in front of frequency converter
- Stepper motor drives
- UPS-systems
- Inverter

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

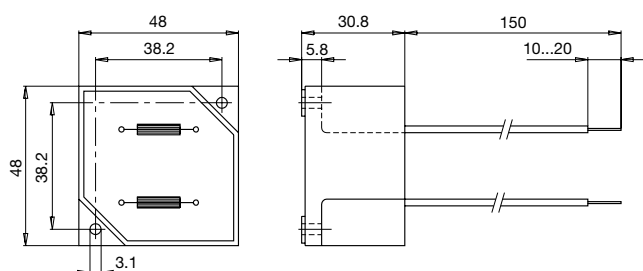
Technical Data

Rated Voltage	up to 540VAC
Rated Voltage	up to 760VDC
Rated Current	4 - 20A @ Ta 40 °C
Rated inductance	14 - 60mH, Tol. -30% +50%
Power Operating Frequency	50 - 400Hz
Terminal technic	Flexible wire
Weight	145 - 512g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

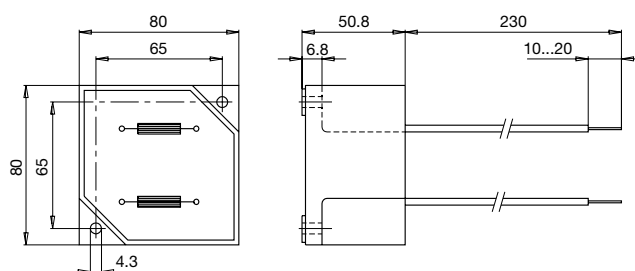
Test Voltage	2.5kV, 50Hz, 2 sec, winding to winding
Isolation Voltage	2.5kV eff., 50Hz, 2 sec, winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

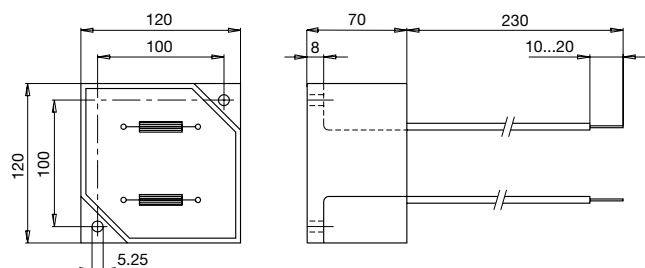
Case 29-2W



Case 31-2W



Case 33-2W



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Copper ϕ [mm]	Weight [g]	Case	Packing unit [pcs.]	Order Number
4	30	96	3	0.2	0.8	145	29-2W	6	DKLP-0229-0430
6	14	46	3.3	0.3	1	145	29-2W	6	DKLP-0229-0614
4	60	250	8	0.1	0.71	477	31-2W	2	DKLP-0231-0460
5	40	126	6.3	0.048	0.9	505	31-2W	2	DKLP-0231-0540
7	20	62	6	0.18	1.12	512	31-2W	2	DKLP-0231-0720
20	12	19	15.2	0.16	1.8	180	33-2W	1	DKLP-0233-2012

Compensated High Current Choke, 3-phase

**Description**

- Current compensated choke
- 3-phase choke
- Wire leads
- Flange for mounting onto printed circuit board
- Fully potted resign

Standards

- EN 60938
- IEC 60950
- EN 55011/55014
- VDE 0871/0875

Applications

- Placed in front of frequency converter
- Stepper motor drives
- UPS-systems
- Inverter

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

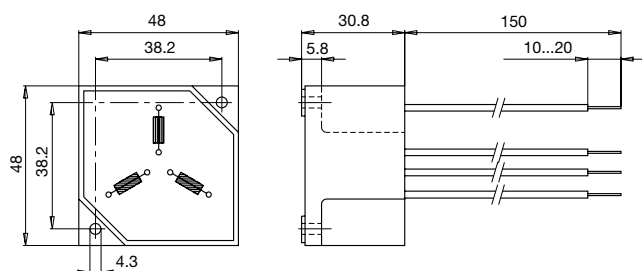
Technical Data

Rated Voltage	up to 540VAC
Rated Voltage	up to 760VDC
Rated Current	10 - 50A @ Ta 40 °C
Rated inductance	0.6 - 5 mH, Tol. -30% +50%
Power Operating Frequency	50 - 400Hz
Terminal technic	Flexible wire
Weight	145 - 1864g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

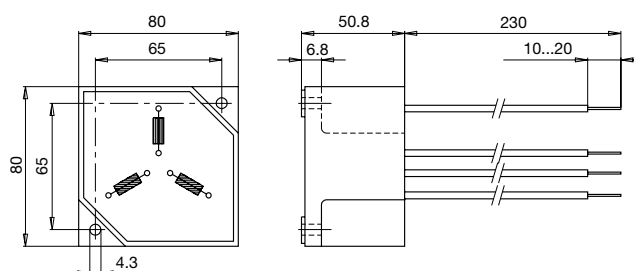
Test Voltage	2.5kV, 50Hz, 2 sec, winding to winding
Isolation Voltage	2.5kV eff., 50Hz, 2 sec, winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

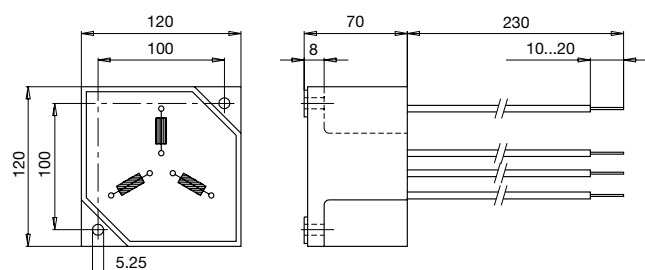
Case 29-3W



Case 31-3W



Case 33-3W



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Copper ϕ [mm]	Weight [g]	Case	Packing unit [pcs.]	Order Number
10	2.5	15	4.5	0.5	1.25	145	29-3W	6	DKIP-0329-1002
15	1	7	4.7	0.6	1.6	145	29-3W	6	DKIP-0329-1501
20	0.6	5	6	2.6	1.8	145	29-3W	6	DKIP-0329-20D6
10	5	32	9.6	0.22	1.25	526	31-3W	2	DKIP-0331-1005
15	2	13	8.8	0.44	1.6	544	31-3W	2	DKIP-0331-1502
20	1	8	9.6	0.68	1.8	544	31-3W	2	DKIP-0331-2001
25	4	12	22.5	0.18	2	1830	33-3W	1	DKIP-0333-2504
36	2	7.6	29.5	0.25	2.36	1831	33-3W	1	DKIP-0333-3602
50	1	4	30	0.5	1.5 x 4.5	1864	33-3W	1	DKIP-0333-5001

Compensated High Current Choke, 3-phase

**Description**

- Current compensated choke
- 3-phase choke
- THT-terminals
- Flange for mounting onto printed circuit board
- Fully potted resign

Standards

- EN 60938
- IEC 60950
- EN 55011/55014
- VDE 0871/0875

Applications

- Placed in front of frequency converter
- Stepper motor drives
- UPS-systems
- Inverter

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

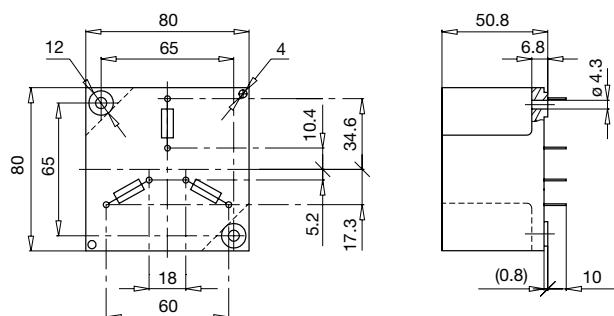
Technical Data

Rated Voltage	up to 540VAC
Rated Voltage	up to 760VDC
Rated Current	10 - 20A @ Ta 40 °C
Rated inductance	0.6 - 5 mH, Tol. -30% +50%
Power Operating Frequency	50 - 400Hz
Terminal technic	THT
Weight	146 - 517 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

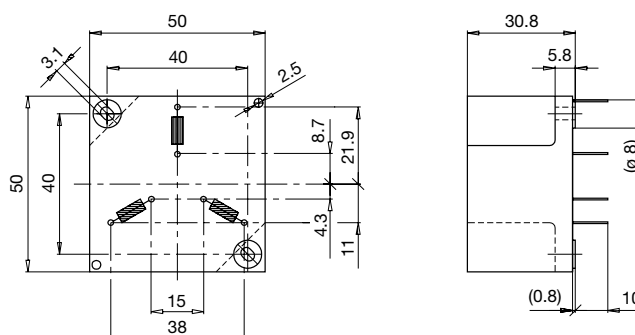
Test Voltage	2.5kV, 50Hz, 2 sec, winding to winding
Isolation Voltage	2.5kV eff., 50Hz, 2 sec, winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

Case 31-3P



Case 46-3P



[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Copper ø [mm]	Weight [g]	Case	Packing unit [pcs.]	Order Number
10	5	32	9.6	0.22	1.25	501	31-3P	2	DKIL-0331-1005
15	2	13	8.8	0.44	1.6	497	31-3P	2	DKIL-0331-1502
20	1	8	9.6	0.68	1.8	517	31-3P	2	DKIL-0331-2001
10	2.5	15	4.5	0.5	1.25	146	46-3P	10	DKIL-0346-1002
15	1	7	4.7	0.6	1.6	148	46-3P	10	DKIL-0346-1501
20	0.6	5	6	2.6	1.8	155	46-3P	10	DKIL-0346-20D6

Compensated High Inductance Choke, 3-phase

**Description**

- Current compensated choke
- 3-phase choke
- THT-terminals
- Flange for mounting onto printed circuit board
- Fully potted resign

Standards

- EN 60938
- IEC 60950
- EN 55011/55014
- VDE 0871/0875

Applications

- Placed in front of frequency converter
- Stepper motor drives
- UPS-systems
- Inverter

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

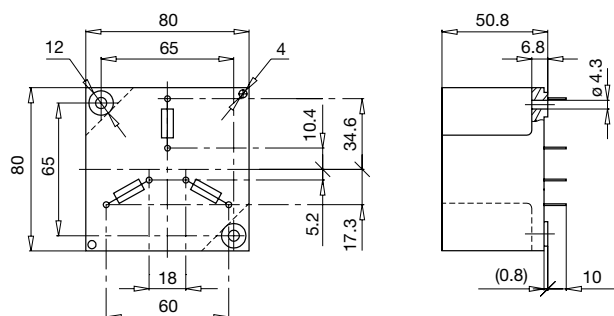
Technical Data

Rated Voltage	up to 540VAC
Rated Voltage	up to 760VDC
Rated Current	3 - 8A @ Ta 40 °C
Rated inductance	4.0 - 50 mH, Tol. -30% +50%
Power Operating Frequency	50 - 400Hz
Terminal technic	THT
Weight	142 - 501 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

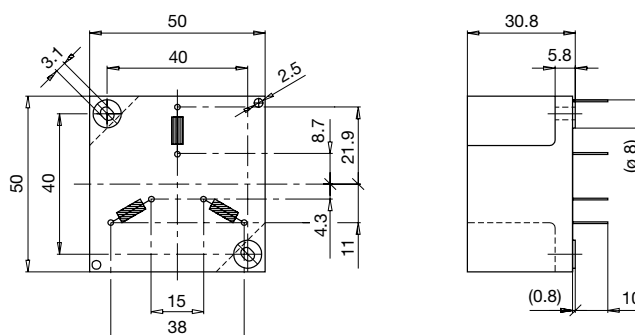
Test Voltage	2.5kV, 50Hz, 2 sec, winding to winding
Isolation Voltage	2.5kV eff., 50Hz, 2 sec, winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

Case 31-3P



Case 46-3P



[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Copper ø [mm]	Weight [g]	Case	Packing unit [pcs.]	Order Number
3	50	260	7	0.055	0.71	497	31-3P	2	DKLL-0331-0350
4	30	155	7.5	0.075	0.8	501	31-3P	2	DKLL-0331-0430
5	20	100	7.5	0.145	0.9	500	31-3P	2	DKLL-0331-0520
3	30	130	3.5	0.13	0.71	147	46-3P	6	DKLL-0346-0330
5	10	48	3.6	0.15	0.9	142	46-3P	6	DKLL-0346-0510
8	4	22	4.2	0.4	1.12	147	46-3P	6	DKLL-0346-0804

Compensated High Inductance Choke, 3-phase

**Description**

- Current compensated choke
- 3-phase choke
- Wire leads
- Flange for mounting onto printed circuit board
- Fully potted resign

Standards

- EN 60938
- IEC 60950
- EN 55011/55014
- VDE 0871/0875

Applications

- Placed in front of frequency converter
- Stepper motor drives
- UPS-systems
- Inverter

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

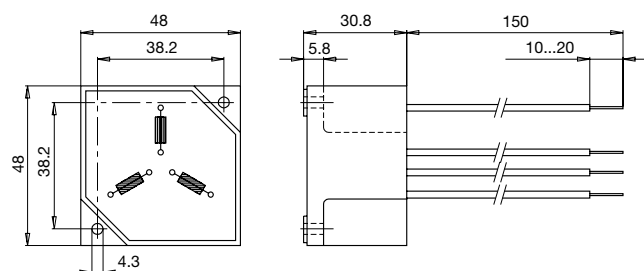
Technical Data

Rated Voltage	up to 540VAC
Rated Voltage	up to 760VDC
Rated Current	8 - 16A @ Ta 40 °C
Rated inductance	4.0 - 50 mH, Tol. -30% +50%
Power Operating Frequency	50 - 400Hz
Terminal technic	Flexible wire
Weight	145 - 1840g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

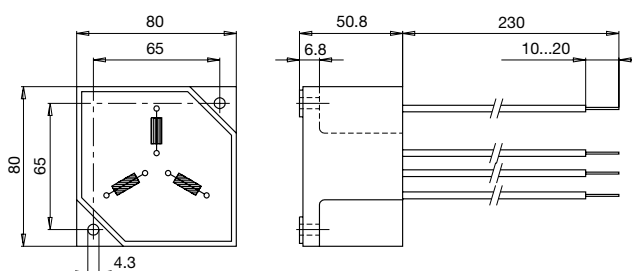
Test Voltage	2.5kV, 50Hz, 2 sec, winding to winding
Isolation Voltage	2.5kV eff., 50Hz, 2 sec, winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

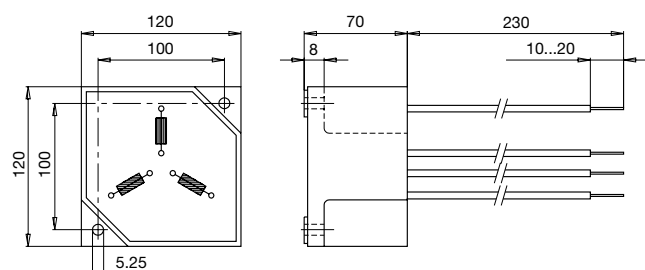
Case 29-3W



Case 31-3W



Case 33-3W



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Copper ϕ [mm]	Weight [g]	Case	Packing unit [pcs.]	Order Number
3	30	130	3.5	0.13	0.71	145	29-3W	6	DKLP-0329-0330
5	10	48	3.6	0.15	0.9	145	29-3W	6	DKLP-0329-0510
8	4	22	4.2	0.4	1.12	145	29-3W	6	DKLP-0329-0804
3	50	260	7	0.055	0.71	509	31-3W	2	DKLP-0331-0350
4	30	155	7.5	0.075	0.8	512	31-3W	2	DKLP-0331-0430
5	20	100	7.5	0.145	0.9	514	31-3W	2	DKLP-0331-0520
8	40	110	21	0.05	1.12	1726	33-3W	1	DKLP-0333-0840
16	10	30	23	0.14	1.6	1840	33-3W	1	DKLP-0333-1610

Magnetically Compensated Choke, 1- and 3-phase

**Description**

- Current compensated choke
- 1- or 3-phase choke
- THT terminals or wire leads
- Flange for mounting onto printed circuit board
- Fully potted design

Standards

- EN 60938
- IEC 60950
- T.2
- VDE 0565

Applications

- Attenuation of common mode interferences
- May also be used in direct current applications where magnetic compensation is required
- Designed for 230/400 VAC applications

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

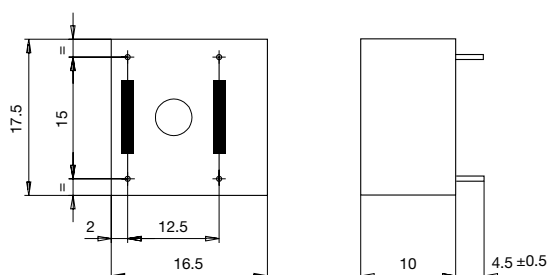
Technical Data

Rated Voltage	up to 440VAC
Rated Current	0.5 - 15A @ Ta 40 °C
Rated inductance	1 - 20mH, Tol. -30% +50%
Power Operating Frequency	50 - 400Hz
Terminal technic	THT, Flexible wire
Weight	6 - 163g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

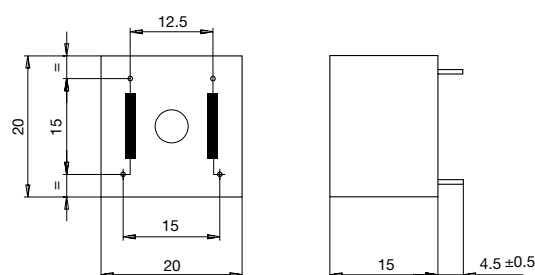
Test Voltage	1.8kV, 50Hz, 1 min, winding to winding
Isolation Voltage	2kV eff., winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

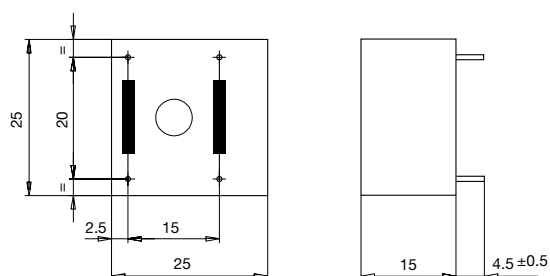
Case 03



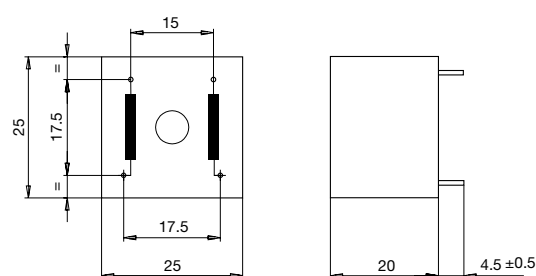
Case 07



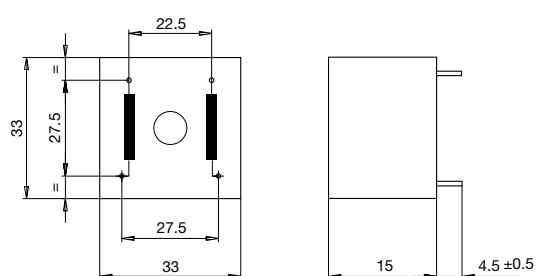
Case 11



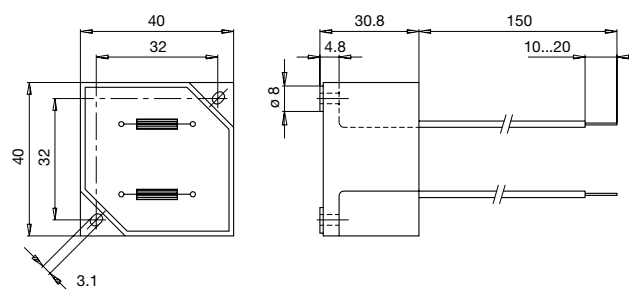
Case 12



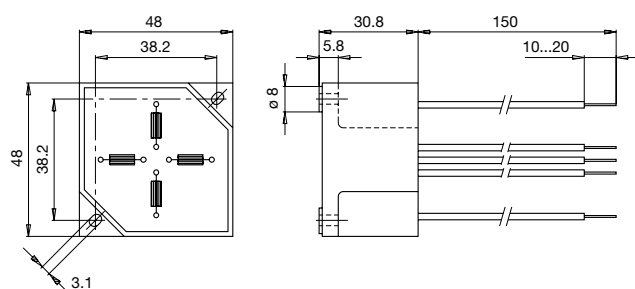
Case 20



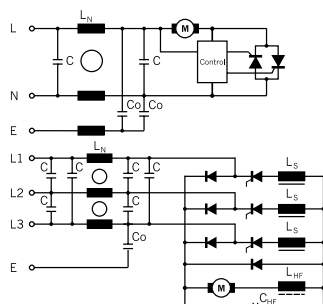
Case 25-2



Case 29-4



Diagrams

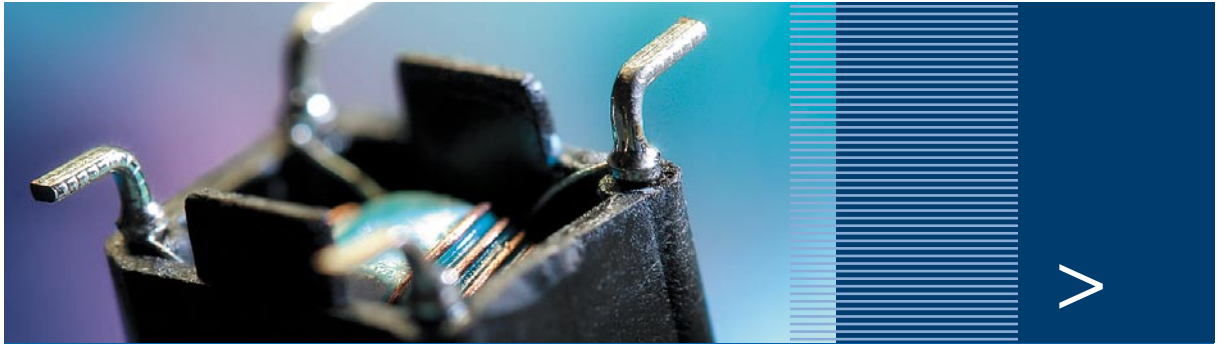


LN: Radio interference suppression choke (magnetically compensated DF)
 LS: Radio interference suppression choke (magnetically saturated DFS/DFL)

Variants

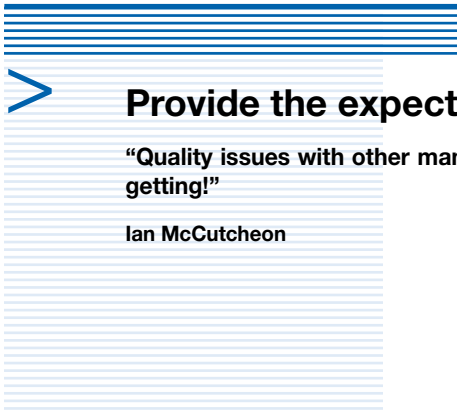
[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Copper ø [mm]	Weight [g]	Case	Packing unit [pcs.]	Order Number
0.5	10	900	0.5	0.5	6	03	100	DFK-175-0001
1	10	500	0.7	0.6	12	07	150	DFK-20-0001
1	20	500	0.5	0.6	12	07	150	DFK-20-0002
1	10	510	0.5	0.6	18	11	50	DFK-25-0001
2	10	250	0.5	0.6	18	12	50	DFK-25-0002
2	20	250	0.3	0.6	37	20	45	DFK-33-0001
3	10	150	0.38	0.6	37	20	45	DFK-33-0002
6	4	27	0.4	-	127	25-2	10	DFK-40-0003
10	2	9	1.45	-	127	25-2	10	DFK-40-0004
15	1	10	1.45	2.5 x	127	25-2	10	DFK-40-0005
6	4 x 1.5	20	0.2	1.5 x	163	29-4	10	DFK-48-0008



Current Compensated Choke for SMD Mounting

The choke DKFS is ideally suitable to be used for a discrete design of line filters. Extreme compact circuits may be designed with the SMD style chokes for rated currents up to 2 A.



Provide the expected Product Quality

“Quality issues with other manufacturers led the customer to us plus the support they were not getting!”

Ian McCutcheon

Linear Choke, high design



Description

- Linear choke
- THT-terminals
- Inductor vertically positioned in housing

Standards

- EN 60938

Applications

- Smoothing RFI suppression choke
- RFI suppression choke
- Chopper amplifiers
- DC drives and stepper motor controls
- Switching power supplies

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

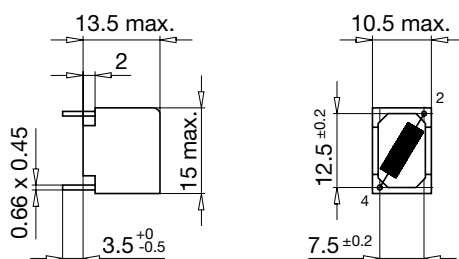
Technical Data

Rated Voltage	up to 600VDC
Rated Current	0.45 - A @ Ta 70 °C
Rated inductance	0.02 - 5.5 mH, Tol. $\pm 15\%$
Power Operating Frequency	up to 20 kHz
Terminal technic	THT
Weight	4 - 38 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

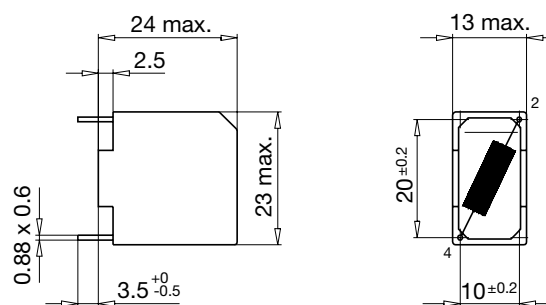
Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	40/125/21 acc. to IEC 60068-1
Allowable Operation Temp.	-40 °C to 125 °C

Dimensions

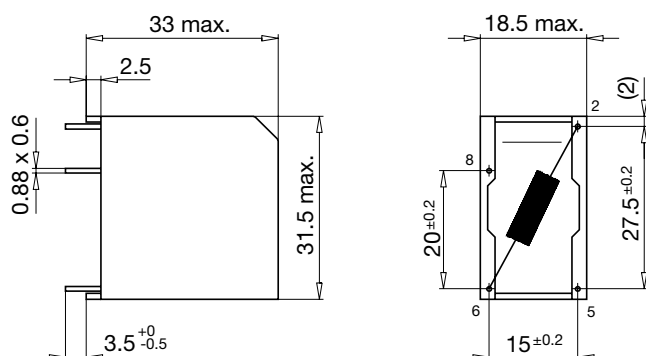
Case 01-1



Case 09-1

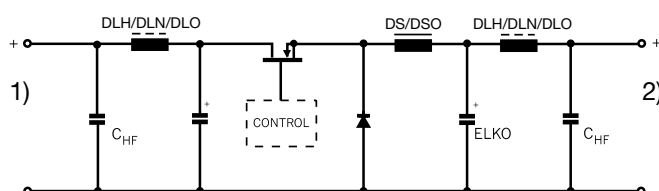


Case 19-1



Diagrams

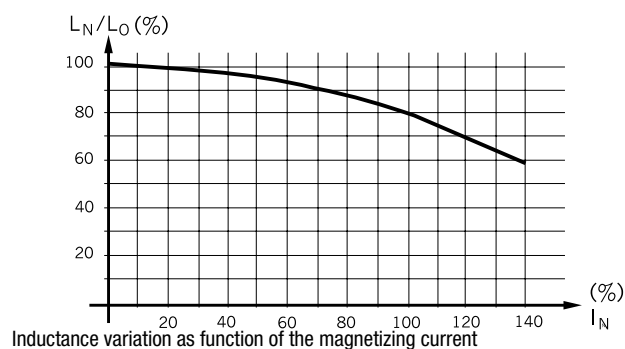
Application in DC-DC Converter



1) DC-Input unregulated

2) DC-Output regulated

Derating Curves



Variants

Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Weight [g]	Case	Packing unit [pcs.]	Order Number
0.6	0.5	750	1.6	4	01-1	100	DLH-14-0001
1	0.2	220	6	4	01-1	100	DLH-14-0002
2	0.05	50	9	4	01-1	100	DLH-14-0003
0.45	5	2600	0.2	14	09-1	50	DLH-22-0001
0.6	3	1550	0.3	14	09-1	50	DLH-22-0002
1	0.5	0.3	1	14	09-1	50	DLH-22-0003
1.5	0.5	280	1	14	09-1	50	DLH-22-0004
1.8	0.3	180	1.5	14	09-1	50	DLH-22-0005
3	0.1	70	4	14	09-1	50	DLH-22-0006
4.5	0.05	30	6	14	09-1	50	DLH-22-0007

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Weight [g]	Case	Packing unit [pcs.]	Order Number
7	0.02	12	15	14	09-1	50	DLH-22-0008
0.6	5.5	3600	0.2	38	19-1	70	DLH-31-0001
1	2.0	70	4	38	19-1	70	DLH-31-0002
1.6	0.8	470	1.5	38	19-1	70	DLH-31-0003
2	0.5	300	2	38	19-1	70	DLH-31-0004
2.5	0.3	160	3	38	19-1	70	DLH-31-0005
3.15	0.2	109	5	38	19-1	70	DLH-31-0006
4	0.13	53	6	38	19-1	70	DLH-31-0007
6.3	0.05	23	9.5	38	19-1	70	DLH-31-0008

Linear Choke, flat design

**Description**

- Linear choke
- THT-terminals
- Inductor horizontally positioned in housing
- SMD version on request

Standards

- EN 60938

Applications

- Smoothing RFI suppression choke
- RFI suppression choke
- Chopper amplifiers
- DC drives and stepper motor controls
- Switching power supplies

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

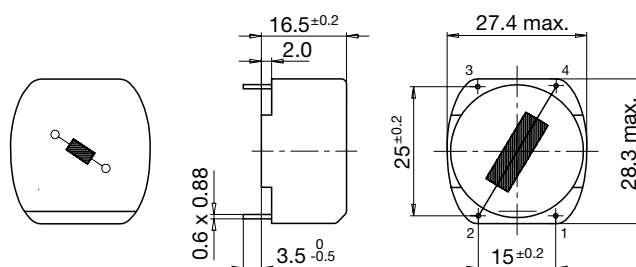
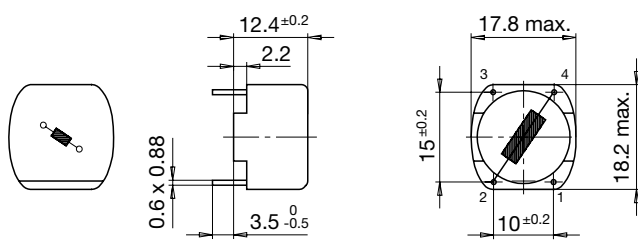
Rated Voltage	up to 600VDC
Rated Current	0.4 - A @ Ta 70 °C
Rated inductance	0.015 - 3 mH, Tol. ±15%
Power Operating Frequency	up to 20 kHz
Terminal technic	THT
Weight	7 - 18 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	40/125/21 acc. to IEC 60068-1
Allowable Operation Temp.	-40 °C to 125 °C

Dimensions

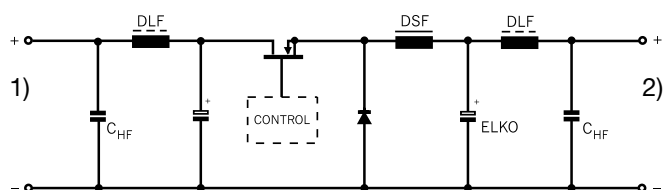
Case 04-1

Case 15-1



Diagrams

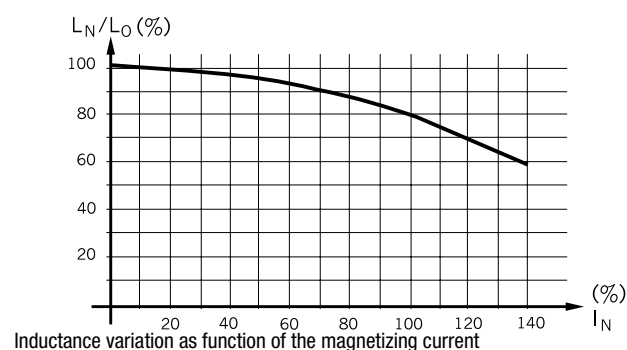
Application in DC-DC Converter



1) DC-Input unregulated

2) DC-Output regulated

Derating Curves



Variants

Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Weight [g]	Case	Packing unit [pcs.]	Order Number
0.4	1.5	2150	0.5	7	04-1	45	DLF-18-0001
0.6	0.65	690	1	7	04-1	45	DLF-18-0002
1.2	0.17	190	2.8	7	04-1	45	DLF-18-0003
1.5	0.11	150	8	7	04-1	45	DLF-18-0004
2	0.06	79	12	7	04-1	45	DLF-18-0005
4	0.015	17	28	7	04-1	45	DLF-18-0006
0.45	3	3300	-	18	15-1	40	DLF-28-0001
0.6	3	1700	0.3	18	15-1	40	DLF-28-0002
1	1	550	0.8	18	15-1	40	DLF-28-0003
1.5	0.5	270	1.2	18	15-1	40	DLF-28-0004
1.8	0.3	180	3.3	18	15-1	40	DLF-28-0005
3	0.1	70	7.5	18	15-1	40	DLF-28-0006
4.5	0.05	30.5	-	18	15-1	40	DLF-28-0007
7	0.02	13	20	18	15-1	40	DLF-28-0008

Linear Choke, compact

**Description**

- Linear choke
- THT-terminals
- Inductor vertically positioned in housing
- SMD version on request

Standards

- EN 60938

Applications

- Smoothing RFI suppression choke
- RFI suppression choke
- Chopper amplifiers
- DC drives and stepper motor controls
- Switching power supplies

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

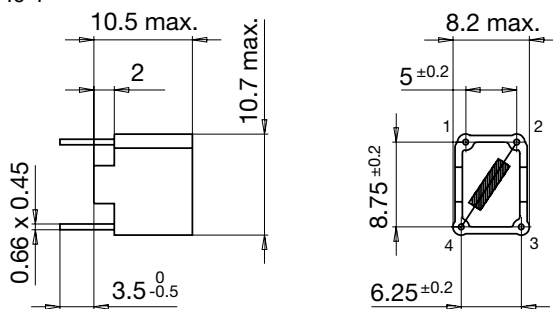
Technical Data

Rated Voltage	up to 600VDC
Rated Current	0.6 - 1 A @ Ta 70 °C
Rated inductance	0.05 - 0.1 mH, Tol. ±15%
Power Operating Frequency	50 - 400Hz
Terminal technic	THT
Weight	1 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

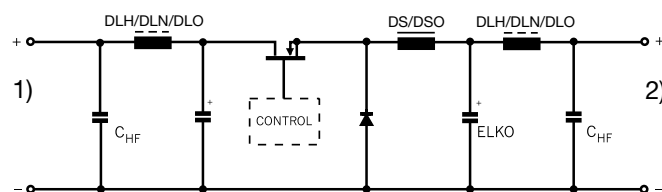
Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	40/125/21 acc. to IEC 60068-1
Allowable Operation Temp.	-40°C to 125°C

Dimensions

Case 48-1

**Diagrams**

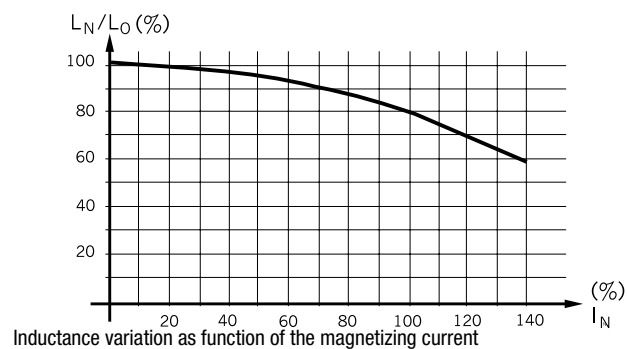
Application in DC-DC Converter



1) DC-Input unregulated

2) DC-Output regulated

Derating Curves

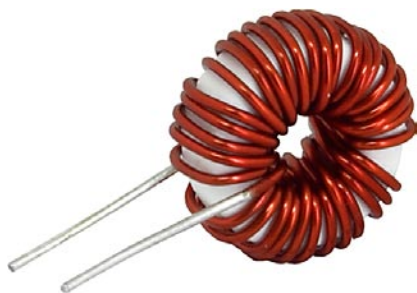


Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Weight [g]	Case	Packing unit [pcs.]	Order Number
0.6	0.1	600	9	1	48-1	176	DLNP-6148-D6D1
1	0.05	280	15	1	48-1	176	DLNP-6148-01C5

Linear Choke, open version, without socket



Description

- Linear choke
- Wire leads
- Open version without socket and chassis

Standards

- EN 60938

Applications

- Smoothing RFI suppression choke
- RFI suppression choke
- Chopper amplifiers
- DC drives and stepper motor controls
- Switching power supplies

References

[General Product Information](#)

Weblinks

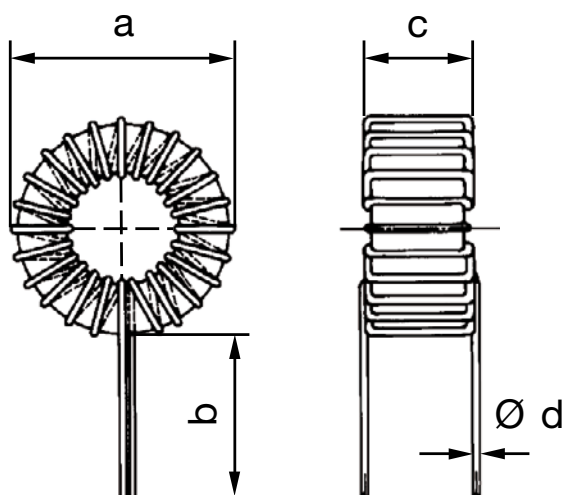
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

Rated Voltage	to 600 VDC
Rated Current	0.45 - 7 A @ Ta 70 °C
Rated inductance	0.02 - 5 mH, Tol. $\pm 15\%$
Power Operating Frequency	up to 20 kHz
Terminal technic	Wire leads
Weight	10 - 12 g

Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	40/125/21 acc. to IEC 60068-1
Allowable Operation Temp.	-40 °C to 125 °C

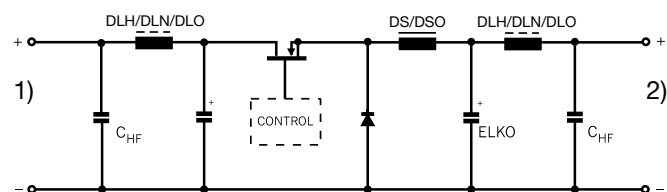
Dimensions



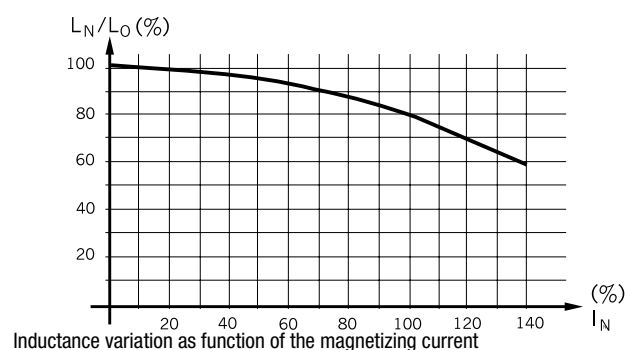
Dimensions: see table of variants

Diagrams

Application in DC-DC Converter



Derating Curves



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Inductance drop max [%]	A [mm]	B [mm]	C [mm]	D [mm]	Weight [g]	Packing unit [pcs.]	Order Number
0.45	5	3000	0.3	20	20	15	10	0.27	10	200	DL01-24-0008
0.6	3	1550	0.4	20	20	36	10	0.32	11	200	DL01-24-0007
1.0	1	600	0.8	20	20	15	10	0.38	10	200	DL01-24-0006
1.5	0.5	280	1.3	20	20	15	10	0.48	10	200	DL01-24-0005
1.8	0.3	178	2	20	20	15	10	0.55	10	200	DL01-24-0004
3	0.1	70	8.2	20	20	36	10	0.65	10	200	DL01-24-0003
4.5	0.05	26	8.4	20	20	15	10	0.9	11	200	DL01-24-0002
7	0.02	12	20.2	20	20	36	10	1.2	12	200	DL01-24-0001

 R_{cu} at T_u 20°CInductance drop at I_n Derating at $T_u > 70^\circ\text{C}$: $I = I_n \times ((125 - T_u)/55)^{0.5}$

Storage Choke, fully potted resign



Description

- Storage choke
- THT-terminals
- Reduced magnetic reversal
- Constant inductance at high alternating field modulation and large DC magnetization
- Constant inductance at high alternating field modulation and large DC magnetization
- Fully potted resign

Standards

- EN 60938

Applications

- Storage of energy in switched power supplies
- Switch-mode
- Chopper amplifiers
- DC drives and stepper motor controls

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

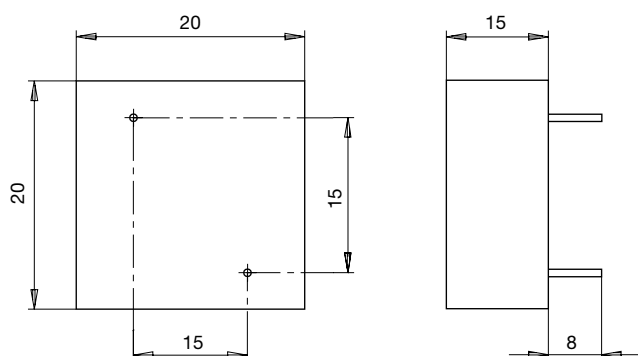
Technical Data

Rated Voltage	up to 600VDC
Rated Current	0.5 - 16A @ Ta 70 °C
Rated inductance	0.01 - 1 mH, Tol. ±15%
Power Operating Frequency	up to 1 MHz
Terminal technic	THT
Weight	7 - 243 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

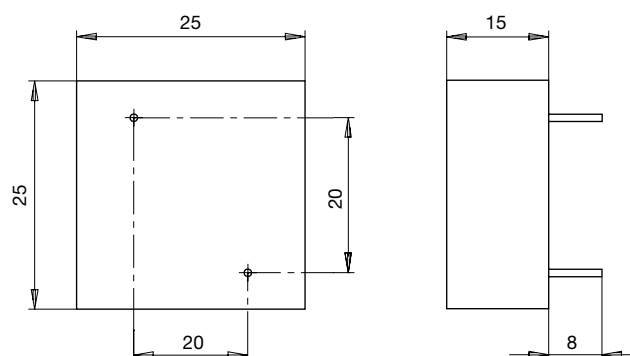
Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	40/125/21 acc. to IEC 60068-1
Allowable Operation Temp.	-40 °C to 125 °C

Dimensions

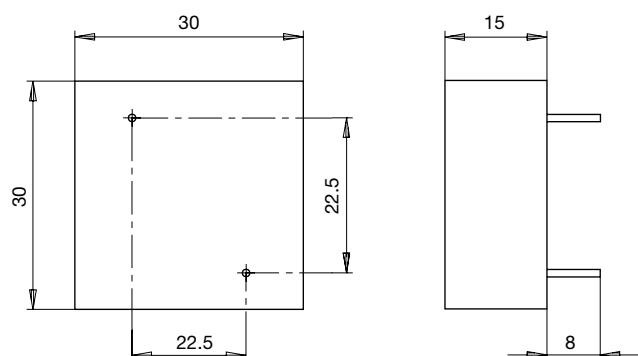
Case 20



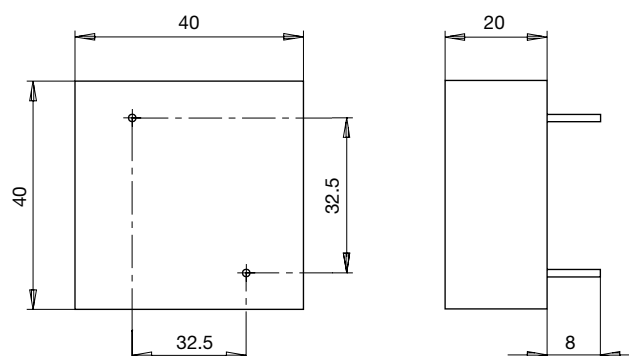
Case 25



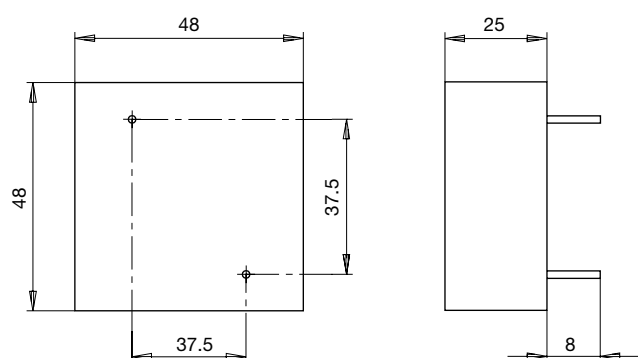
Case 30



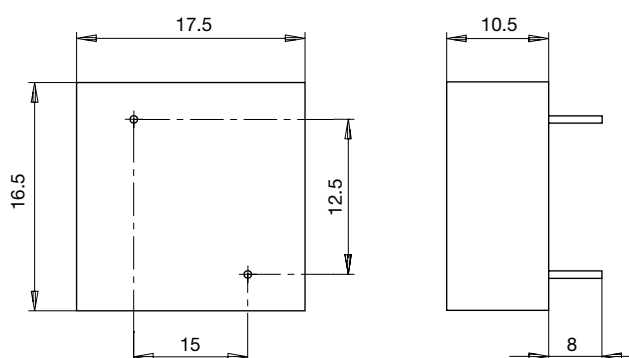
Case 40



Case 48

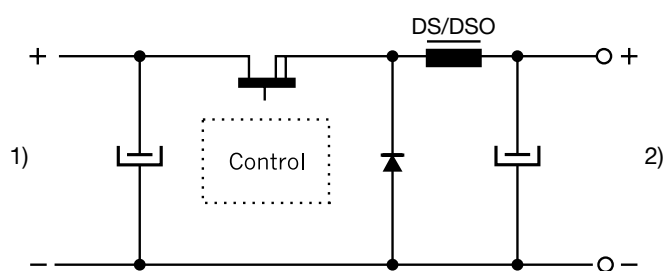


Case 175



Diagrams

Switch-mode



- 1) Input
- 2) DC output regulated

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Copper ø [mm]	Weight [g]	Case	Packing unit [pcs.]	Order Number
0.5	0.8	700	2	0.5	7	175	100	DS1-175-0001
0.63	0.5	500	2.5	0.5	7	175	100	DS1-175-0002
1	0.2	180	5	0.5	7	175	100	DS1-175-0003
1.4	0.1	80	6.5	0.5	7	175	100	DS1-175-0004
3	0.035	26	11	0.5	7	175	100	DS1-175-0005
0.63	1	700	1.2	0.5	14	20	75	DS1-20-0001
1.4	0.2	175	4	0.5	14	20	75	DS1-20-0002
3.15	0.04	26	10	0.7	14	20	75	DS1-20-0003
6.3	0.01	8	-	0.7	14	20	75	DS1-20-0004
1.4	0.5	200	1	1	23	25	25	DS1-25-0001
2	0.2	100	3.5	1	23	25	25	DS1-25-0002
3.15	0.1	40	5.7	1	23	25	25	DS1-25-0003
7	0.02	10	-	1	23	25	25	DS1-25-0004
1.6	0.5	200	-	1	34	30	30	DS1-30-0001
2	0.3	140	-	1	34	30	30	DS1-30-0002
3.15	0.15	55	4.5	1	34	30	30	DS1-30-0003
4	0.1	36	6	1	34	30	30	DS1-30-0004
2	1	190	-	1.5	84	40	35	DS1-40-0001
3.15	0.5	90	-	1.5	85	40	35	DS1-40-0002
4	0.2	55	3	1.5	84	40	35	DS1-40-0003
16	0.1	26	4.5	1.5	84	40	35	DS1-40-0004
3.15	1	160	1	1.5	243	48	20	DS1-48-0001
4	0.5	80	1.5	1.5	243	48	20	DS1-48-0002
5	0.3	75	-	1.5	243	48	20	DS1-48-0003
9	0.1	20	-	1.5	243	48	20	DS1-48-0004
15	0.035	7	-	1.5	243	48	20	DS1-48-0005
16	0.16	12	-	1.5	243	48	20	DS1-48-0006

Storage Choke, flat design



Description

- Storage choke
- THT-terminals
- Inductor horizontally positioned in housing
- Constant inductance at high alternating field modulation and large DC magnetization
- Reduced magnetic reversal
- SMD version on request

Standards

- EN 60938

Applications

- Storage of energy in switched power supplies
- Switch-mode
- Chopper amplifiers
- DC drives and stepper motor controls

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

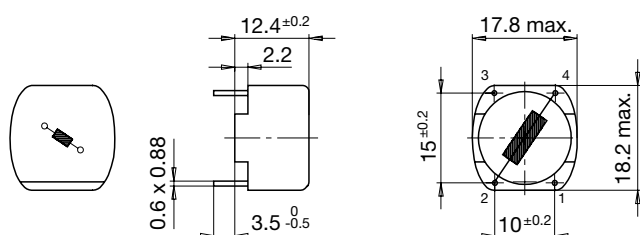
Technical Data

Rated Voltage	up to 600VDC
Rated Current	0.4 - 6.3A @ Ta 70 °C
Rated inductance	0.011 - 3.7 mH, Tol. ±15%
Power Operating Frequency	up to 1 MHz
Terminal technic	THT
Weight	7 - 18g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

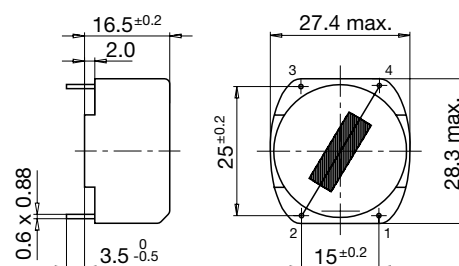
Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	40/125/21 acc. to IEC 60068-1
Allowable Operation Temp.	-40 °C to 125 °C

Dimensions

Case 04-1

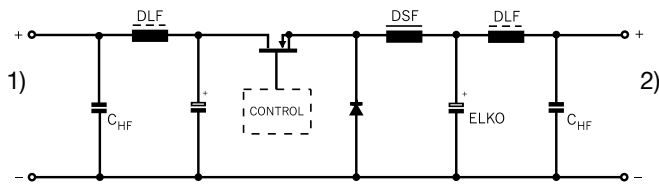


Case 15-1



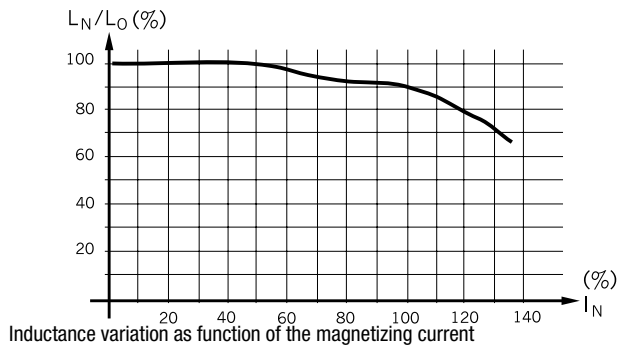
Diagrams

Application in DC-DC Converter



- 1) DC-Input unregulated
2) DC-Output regulated

Derating Curves



Inductance variation as function of the magnetizing current

Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Weight [g]	Case	Packing unit [pcs.]	Order Number
0.4	1.1	700	-	7	04-1	45	DSF-18-0001
0.6	0.5	360	2.5	7	04-1	45	DSF-18-0002
1.2	0.125	90	6.5	7	04-1	45	DSF-18-0003
2	0.045	32	12	7	04-1	45	DSF-18-0005
4	0.011	8	32	7	04-1	45	DSF-18-0006
0.45	3.7	1900	0.6	18	15-1	40	DSF-28-0001
0.63	1.8	900	1	18	15-1	40	DSF-28-0002
1	0.75	360	1.8	18	15-1	40	DSF-28-0003
1.4	0.38	160	-	18	15-1	40	DSF-28-0004
1.8	0.23	125	3.5	18	15-1	40	DSF-28-0005
3.15	0.075	45	7	18	15-1	40	DSF-28-0006
4.5	0.037	20	10	18	15-1	40	DSF-28-0007
6.3	0.018	10	18	18	15-1	40	DSF-28-0008

Storage Choke, high design



Description

- Storage choke
- THT-terminals
- Inductor vertically positioned in housing
- Constant inductance at high alternating field modulation and large DC magnetization
- Reduced magnetic reversal

Standards

- EN 60938

Applications

- Storage of energy in switched power supplies
- Switch-mode
- Chopper amplifiers
- DC drives and stepper motor controls

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

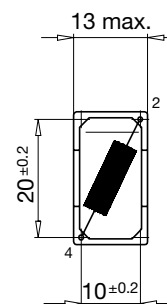
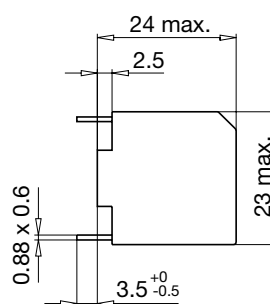
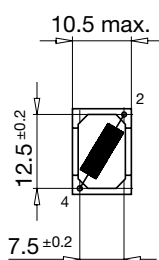
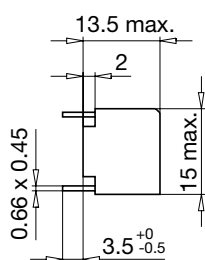
Rated Voltage	up to 600VDC
Rated Current	0.45 - 6.3A @ Ta 70 °C
Rated inductance	0.01 - 2 mH, Tol. ±15%
Power Operating Frequency	up to 1 MHz
Terminal technic	THT
Weight	4 - 30g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	40/125/21 acc. to IEC 60068-1
Allowable Operation Temp.	-40 °C to 125 °C

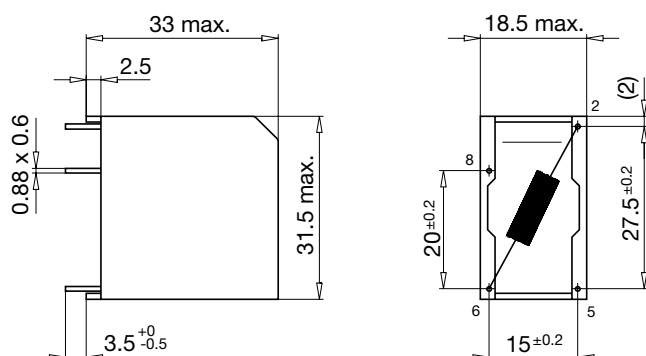
Dimensions

Case 01-1

Case 09-1

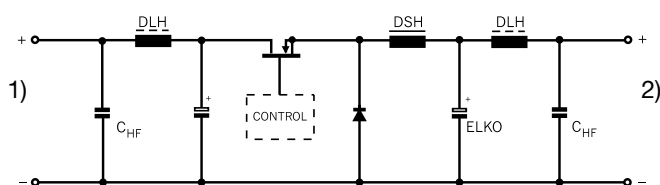


Case 19-1



Diagrams

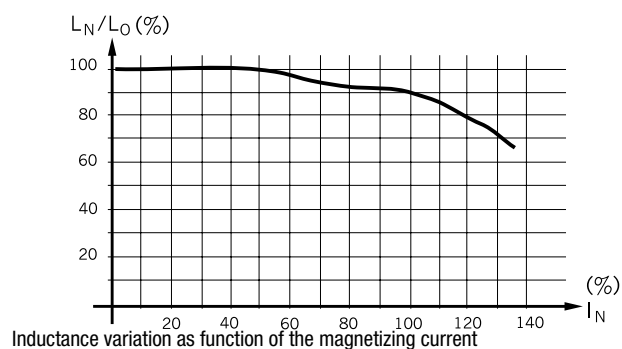
Application in DC-DC Converter



1) DC-Input unregulated

2) DC-Output regulated

Derating Curves



Variants

Distributor-Stock-Check | SCHURTER-Stock-Check | e-Store

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Weight [g]	Case	Packing unit [pcs.]	Order Number
0.6	0.14	280	8	4	01-1	100	DSH-14-0001
1	0.05	100	12	4	01-1	100	DSH-14-0002
2	0.012	25	35	4	01-1	100	DSH-14-0003
0.45	2	1250	0.4	14	09-1	50	DSH-22-0001
0.63	2	750	1.8	14	09-1	50	DSH-22-0002
1	0.4	300	3	14	09-1	50	DSH-22-0003
1.4	0.2	160	4.8	14	09-1	50	DSH-22-0004
1.8	0.12	90	6.5	14	09-1	50	DSH-22-0005
3.15	0.04	33	14	14	09-1	50	DSH-22-0006
4.5	0.02	20	-	14	09-1	50	DSH-22-0007

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Weight [g]	Case	Packing unit [pcs.]	Order Number
6.3	0.01	8	35	14	09-1	50	DSH-22-0008
1.6	0.5	240	2.5	29	19-1	70	DSH-31-0001
2	0.3	140	3.5	29	19-1	70	DSH-31-0002
3.15	0.15	40	-	30	19-1	70	DSH-31-0003
4	0.1	40	6.5	30	19-1	70	DSH-31-0004
6.3	0.035	15	13	30	19-1	70	DSH-31-0005

Storage Choke, compact

**Description**

- Storage choke
- THT-terminals
- Inductor vertically positioned in housing
- Constant inductance at high alternating field modulation and large DC magnetization
- Reduced magnetic reversal

Standards

- EN 60938

Applications

- Storage of energy in switched power supplies
- Switch-mode
- Chopper amplifiers
- DC drives and stepper motor controls

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

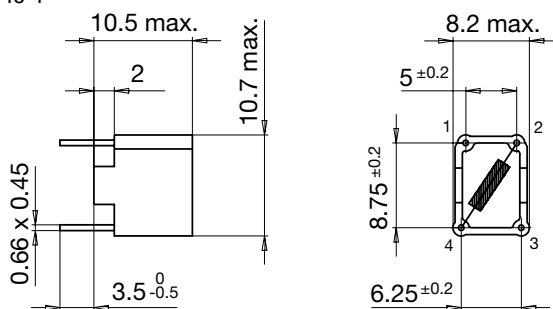
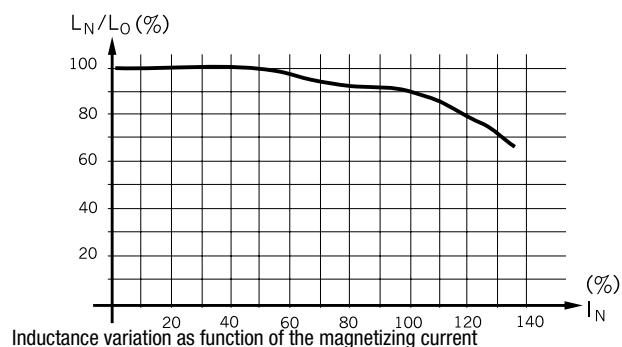
Technical Data

Rated Voltage	up to 600VDC
Rated Current	0.6 - 1 A @ Ta 70 °C
Rated inductance	0.04 - 0.1 mH, Tol. ±15%
Power Operating Frequency	up to 1 MHz
Terminal technic	THT
Weight	1 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	40/125/21 acc. to IEC 60068-1
Allowable Operation Temp.	-40 °C to 125 °C

Dimensions

Case 48-1

**Derating Curves**

Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Weight [g]	Case	Packing unit [pcs.]	Order Number
0.6	0.1	550	11	1	48-1	176	DSHP-6148-D6D1
1	0.04	280	18	1	48-1	176	DSHP-6148-01C5

Storage Choke, open version, without socket



Description

- Storage choke
- Wire leads
- Reduced magnetic reversal
- Constant inductance at high alternating field modulation and large DC magnetization
- Constant inductance at high alternating field modulation and large DC magnetization
- Open version without socket and chassis

Standards

- EN 60938

Applications

- Storage of energy in switched power supplies
- Switch-mode
- Chopper amplifiers
- DC drives and stepper motor controls

References

[General Product Information](#)

Weblinks

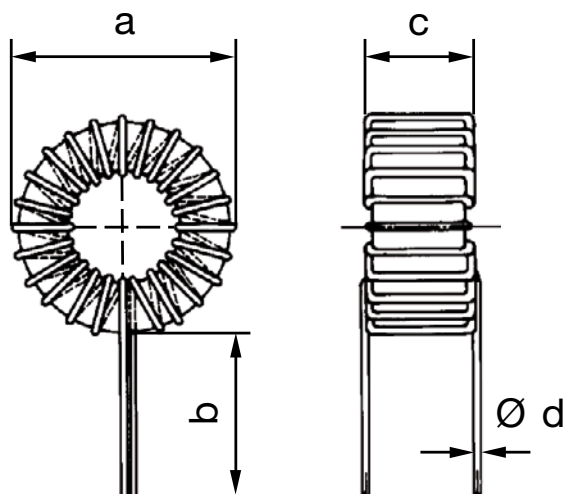
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

Rated Voltage	to 600VDC
Rated Current	0.5 - 16A @ Ta 70 °C
Rated inductance	0.01 - 1 mH, Tol. ±15%
Power Operating Frequency	up to 1 MHz
Terminal technic	Wire leads
Weight	4 - 104 g

Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	40/125/21 acc. to IEC 60068-1
Allowable Operation Temp.	-40 °C to 125 °C

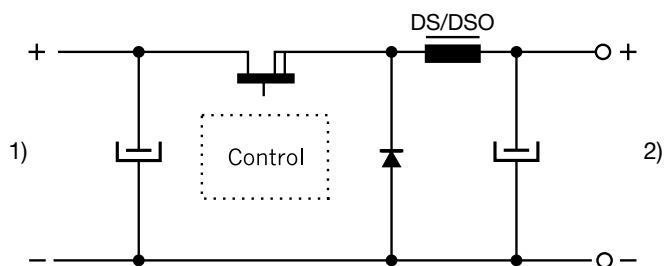
Dimensions



Dimensions: see table of variants

Diagrams

Switch-mode



1) Input

2) DC output regulated

Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Inductance drop max [%]	A [mm]	B [mm]	C [mm]	D [mm]	Weight [g]	Packing unit [pcs.]	Order Number
0.5	0.8	800	0.8	15	15	20	7	0.3	4	200	DS01-175-0001
0.63	0.5	550	2.5	15	15	20	7	0.3	4	200	DS01-175-0002
0.63	1	750	1.7	15	19	20	8.5	0.3	7	300	DS01-20-0001
1	0.2	200	3.5	15	15	20	7	0.4	4	200	DS01-175-0003
1.4	0.1	100	4	20	15	20	7	0.5	4	200	DS01-175-0004
1.4	0.2	175	4.7	15	19	20	8.5	0.4	8	300	DS01-20-0002
1.4	0.5	200	1.5	20	23	25	9	0.5	13	200	DS01-25-0001
1.6	0.5	200	1.7	15	26	25	11	0.5	19	100	DS01-30-0001
2	0.2	120	3.3	20	23	25	9	0.6	12	200	DS01-25-0002
2	0.3	140	2.5	15	26	25	11	0.5	17	100	DS01-30-0002
2	1	190	1.2	20	39	40	14	0.7	55	50	DS01-40-0001
3	0.035	20	5	20	15	20	7	0.8	4	200	DS01-175-0005
3.15	0.04	33	13	15	19	20	8.5	0.7	8	300	DS01-20-0003
3.15	0.1	50	5.7	20	23	25	9	0.8	13	200	DS01-25-0003
3.15	0.15	70	3.5	15	26	25	11	0.7	19	100	DS01-30-0003
3.15	0.5	90	1.5	20	39	40	14	0.8	55	50	DS01-40-0002
3.15	1	180	0.8	20	43	40	18	0.8	104	50	DS01-48-0001
4	0.1	40	5	20	26	25	11	0.8	20	100	DS01-30-0004
4	0.2	55	3	20	39	40	14	0.8	52	50	DS01-40-0003
4	0.5	90	1.5	20	43	40	18	0.9	104	50	DS01-48-0002
5	0.3	75	1.5	20	43	40	18	0.8	104	50	DS01-48-0003
6	0.1	25	5	20	39	40	14	1	53	50	DS01-40-0004
6.3	0.01	8	33	15	19	20	8.5	0.9	9	300	DS01-20-0004
7	0.2	10	6.5	20	23	25	9	1.3	14	200	DS01-25-0004
9	0.1	20	4	20	43	40	18	1.2	104	50	DS01-48-0004
15	0.035	7	5	20	43	40	18	1.8	104	50	DS01-48-0005
16	0.16	12	2.5	20	44	40	34	2	104	50	DS01-48-0006

 R_{cu} at T_u 20°CInductance drop at I_n Derating at $T_u > 70^\circ\text{C}$: $I = I_n \times ((125 - T_u)/55)^{0.5}$

Saturating Choke

**Description**

- Saturating choke
- THT-terminals
- Based on laminated iron core
- Fully potted resign

Standards

- EN 60938

Applications

- Phase angle control circuits with thyristors, triacs or transistors
- The choke acts at its optimum when it is mounted directly at the interference originator (thyristor, triac)

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

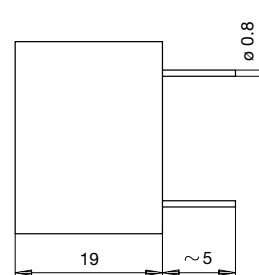
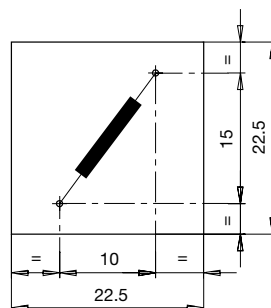
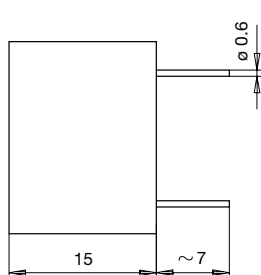
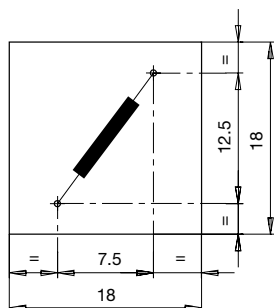
Rated Voltage	up to 440VAC
Rated Current	0.8 - 10A @ Ta 45 °C
Power Operating Frequency	50/60Hz
Terminal technic	THT, Flexible wire
Weight	14 - 86 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

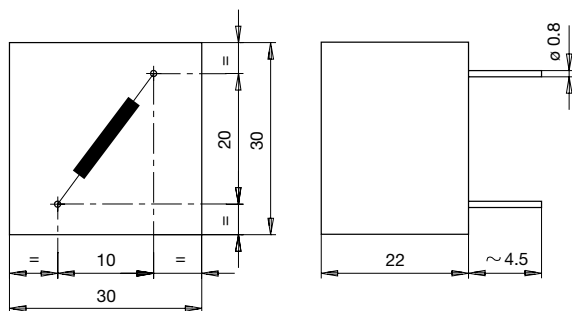
Dimensions

Case 00

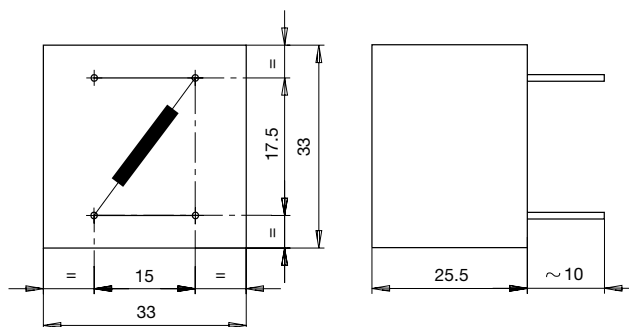
Case 08



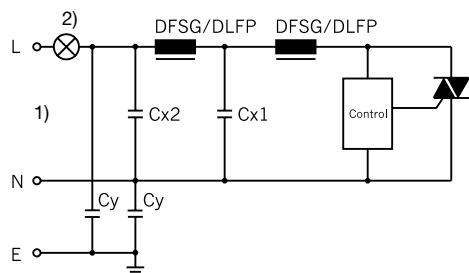
Case 17



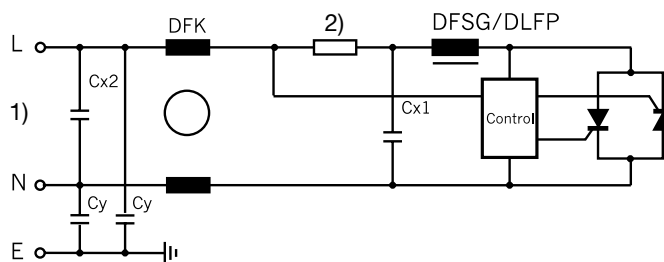
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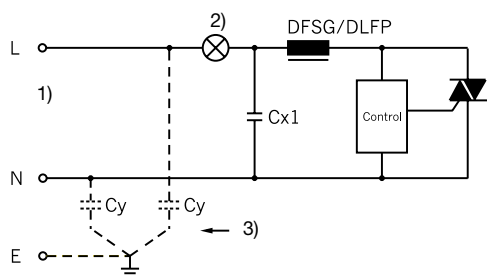
Diagrams



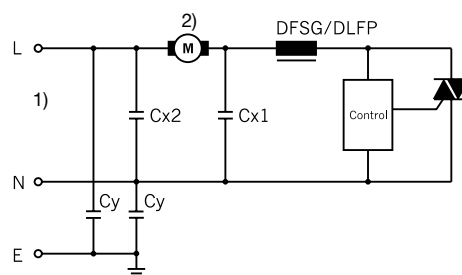
1) Line
2) Load
Interference suppression with resistive load, 2-phase



1) Line
2) Load
Interference suppression with resistive load, 2-stage
DFSG: Radio interference suppression saturation choke
DFK: Radio interference suppression choke magnetically condensed

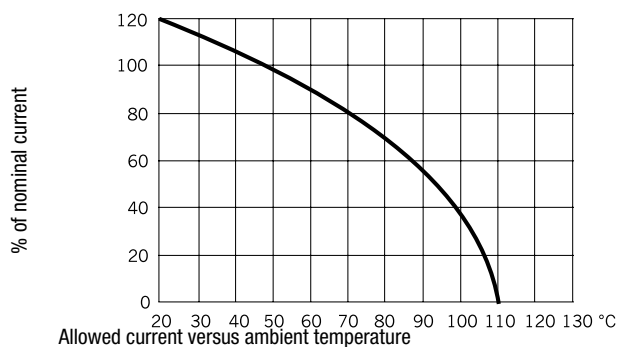


1) Line
2) Load
3) only to protection class I
Interference suppression with resistive load, < 10A, e.g. dimmers circuit (DFSG)



1) Line
2) Load
Interference suppression with inductive load

Derating Curves



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	R_{cu} [mΩ]	Weight [g]	Case	Packing unit [pcs.]	Order Number
0.8	1300	14	00	90	DFSG-20-0001
1.5	450	14	00	90	DFSG-20-0002
2	260	29	08	25	DFSG-25-0001
3	100	29	08	25	DFSG-25-0002
3	165	55	17	30	DFSG-30-0001
6	60	55	17	30	DFSG-30-0002
5	70	86	21	30	DFSG-33-0001
10	30	86	21	30	DFSG-33-0002

Linear/Saturating Choke

**Description**

- Linear/saturating choke
- Wire leads
- Low noise development by using iron powder toroids instead of conventional iron lamination cores
- Fully potted resign

Standards

- EN 60938

Applications

- Phase angle control circuits with thyristors, triacs or transistors
- The choke acts at its optimum when it is mounted directly at the interference originator (thyristor, triac)

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

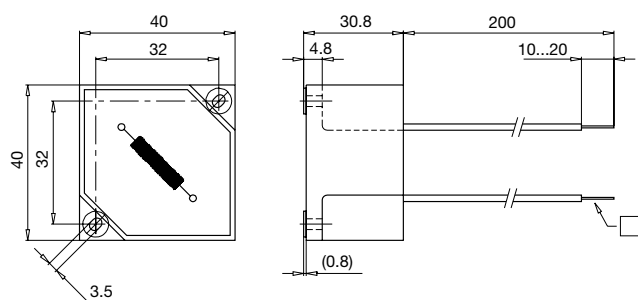
Technical Data

Rated Voltage	up to 440VAC
Rated Current	5 - 45 A @ Ta 45 °C
Power Operating Frequency	50Hz
Terminal technic	THT, Flexible wire
Weight	149 - 1423 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

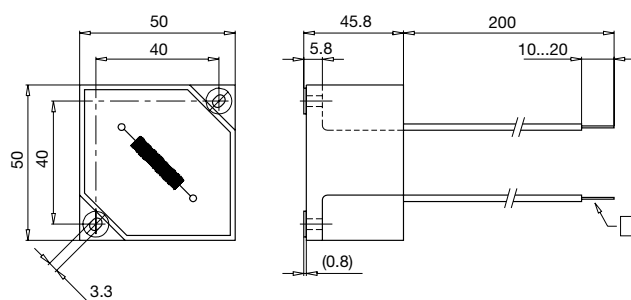
Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

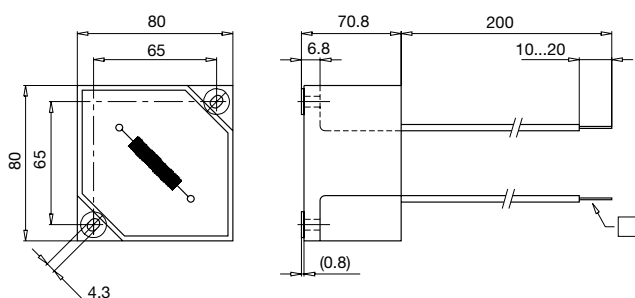
Case 25W



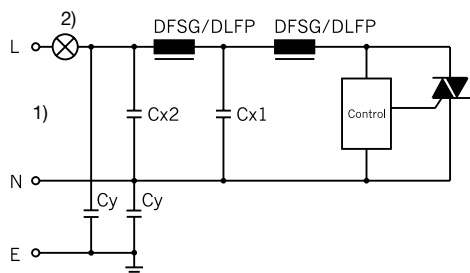
Case 47W



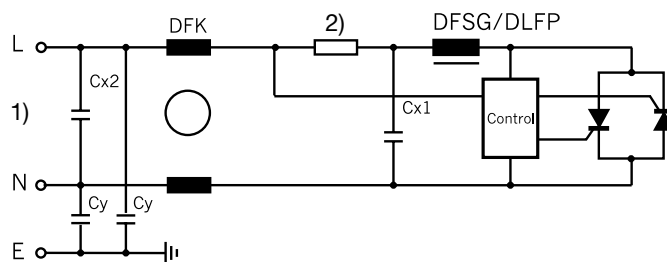
Case 32W



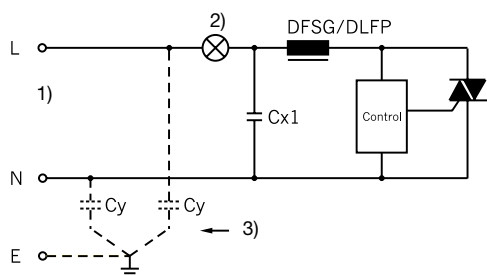
Diagrams



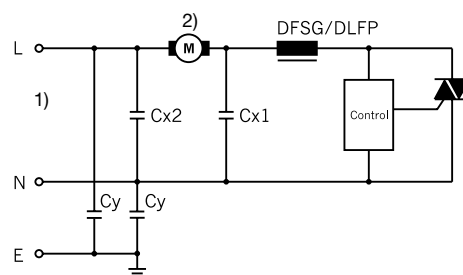
1) Line
2) Load
Interference suppression with resistive load, 2-phase



1) Line
2) Load
Interference suppression with resistive load, 2-stage
DFSG: Radio interference suppression saturation choke
DFK: Radio interference suppression choke magnetically condensed

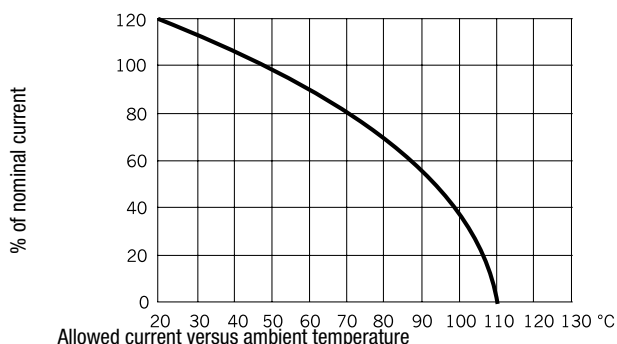


1) Line
2) Load
3) only to protection class I
Interference suppression with resistive load, < 10A, e.g. dimmers circuit (DFSG)



1) Line
2) Load
Interference suppression with inductive load

Derating Curves



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	Inductance drop max [%]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	Cx [μF]	Copper ø [mm]	Weight [g]	Case	Packing unit [pcs.]	Order Number
5	1	60	120	3	0.8	0.047	1	149	25W	10	DLFP-0125-0501
8	0.5	60	54	3.5	1.32	0.1	1.25	150	25W	10	DLFP-0125-08D5
45	0.2	70	6	12	1.1	1	5	1423	32W	2	DLFP-0132-45D2
12	0.5	60	38	5.5	1.16	0.1	1.7	350	47W	2	DLFP-0147-12D5
16	0.3	60	25	6.4	1.69	0.22	1.8	320	47W	2	DLFP-0147-16D3
25	0.15	60	10	6.3	2.5	0.47	2.36	350	47W	2	DLFP-0147-25D2
35	0.05	60	5.3	6.5	3.5	1.5	1.5 x 4.5	338	47W	2	DLFP-0147-35C5

Inductance drop at I_n

Linear/Saturating Choke

**Description**

- Linear/saturating choke
- THT-terminals
- Low noise development by using iron powder toroids instead of conventional iron lamination cores
- Flange for mounting onto printed circuit board
- Fully potted resin

Standards

- EN 60938

Applications

- Phase angle control circuits with thyristors, triacs or transistors
- The choke acts at its optimum when it is mounted directly at the interference originator (thyristor, triac)

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

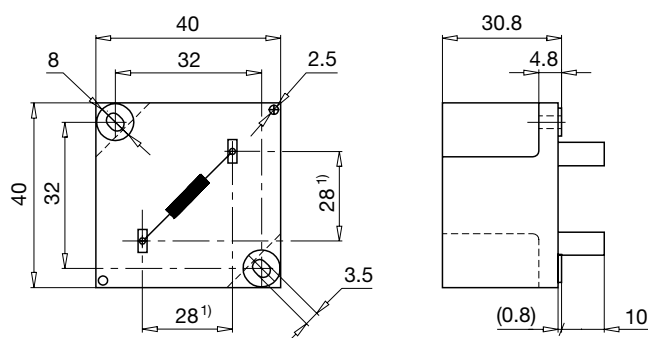
Technical Data

Rated Voltage	up to 440VAC
Rated Current	5 - 45 A @ Ta 45 °C
Power Operating Frequency	50Hz
Terminal technic	THT, Flexible wire
Weight	144 - 1423 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

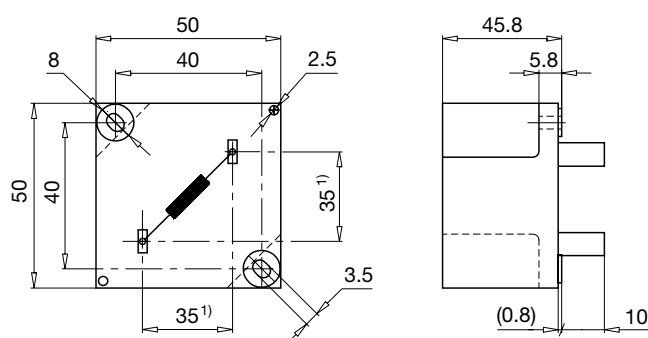
Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

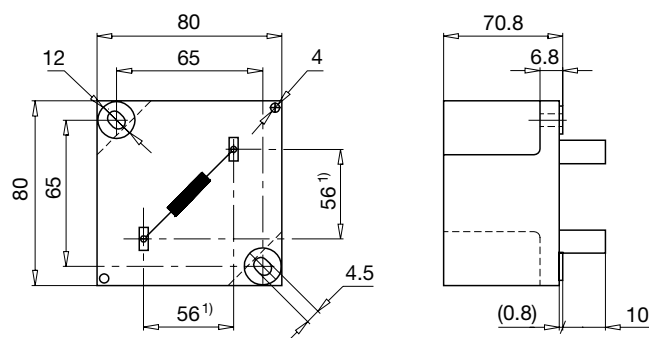
Case 25-P



Case 47-P

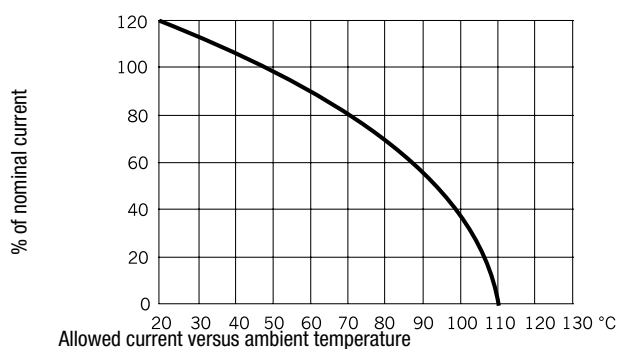


Case 32-P



1) Spacing given at pin base

Derating Curves



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	Inductance drop max [%]	R_{cu} [mΩ]	P_{loss} [W]	f_{RES} [MHz]	C_x [μF]	Copper ø [mm]	Weight [g]	Case	Packing unit [pcs.]	Order Number
5	1	60	120	3	0.8	0.047	1	144	25-P	20	DLFL-0125-0501
8	0.5	60	54	3.5	1.32	0.1	1.25	154	25-P	20	DLFL-0125-08D5
45	0.2	70	6	12	1.1	1	5	1423	32-P	2	DLFL-0132-45D2
12	0.5	60	38	5.5	1.16	0.1	1.7	333	47-P	2	DLFL-0147-12D5
16	0.3	60	25	6.4	1.69	0.22	1.8	325	47-P	2	DLFL-0147-16D3
25	0.15	60	10	6.3	2.5	0.47	2.36	336	47-P	2	DLFL-0147-25D2
35	0.05	60	5.3	6.5	3.5	1.5	1.5 x 4.5	338	47-P	2	DLFL-0147-35C5

Inductance drop at I_n

High frequency ground wire choke, shrink hose



Description

- Ground wire chokes (earth line chokes)
- Wire leads

Standards

- EN 60938

Applications

- Separating the main earth line to periphery devices
- This type of chokes permits the building of a system free of ground wire loops

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

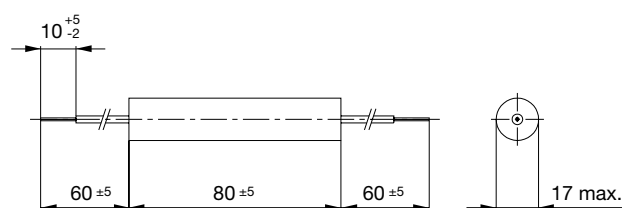
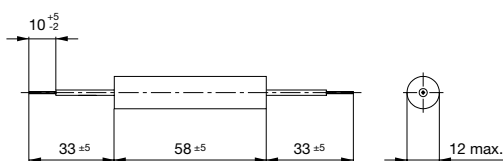
Rated Current	16 - 25 A @ Ta 40 °C
Rated inductance	0.02 - 4 mH, Tol. ±15%
Power Operating Frequency	> 5 MHz
Terminal technic	Wire leads
Weight	17 - 51 g
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

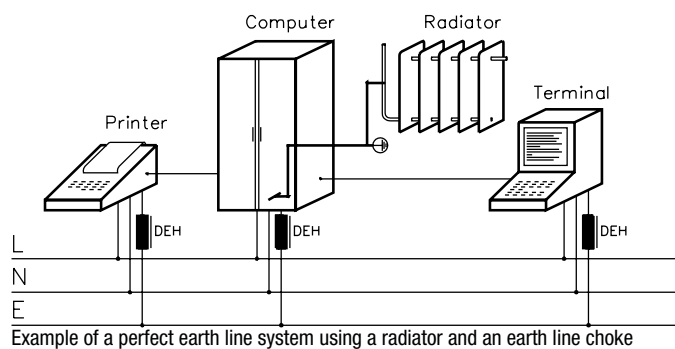
Dimensions

16A

25A



Diagrams



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Weight [g]	Packing unit [pcs.]	Order Number
16	0.02	15	30	17	100	DEHL-10-0001
25	0.04	10	20	51	50	DEH-15-0001

Low frequency ground wire choke, fully potted resin



Description

- Ground wire chokes (earth line chokes)
- Wire leads
- Fully potted resin

Standards

- EN 60938

Applications

- Separating the main earth line to periphery devices
- This type of chokes permits the building of a system free of ground wire loops

References

[General Product Information](#)

Weblinks

[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

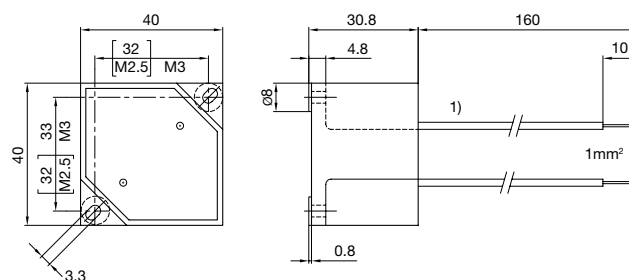
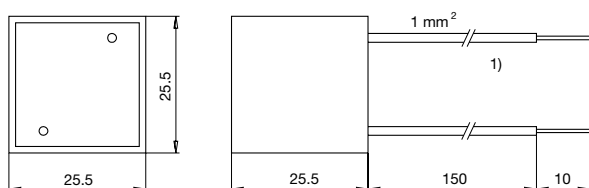
Rated Current	16 - 25 A @ Ta 40 °C
Rated inductance	0.02 - 4 mH
Power Operating Frequency	< 5 MHz
Terminal technic	Wire leads
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions

Case 25

Case 40



1) yellow/green

Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I _n [A]	L _n [mH]	R _{ou} [mΩ]	f _{RES} [MHz]	Weight [g]	Packing unit [pcs.]	Order Number
16	4	27	0.3	42	50	DEN-25-0001
25	4	10.5	0.3	38	50	DEN-40-0001

Ground wire choke, open design



Description

- Ground wire chokes (earth line chokes)
- THT-terminals

Standards

- EN 60938

Applications

- Separating the main earth line to periphery devices
- This type of chokes permits the building of a system free of ground wire loops

References

[General Product Information](#)

Weblinks

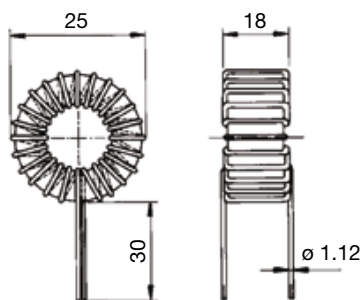
[Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Store](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

Technical Data

Rated Current	16 A @ Ta 40 °C
Rated inductance	0.04 - 4 mH
Power Operating Frequency	< 5 MHz
Terminal technic	THT
Material: Housing	UL 94V-0
Sealing Compound	UL 94V-0

Isolation Voltage	2 kV eff., winding to ambient
Climatic Category	25/100/21 acc. to IEC 60068-1
Allowable Operation Temp.	-25 °C to 100 °C

Dimensions



Variants

[Distributor-Stock-Check](#) | [SCHURTER-Stock-Check](#) | [e-Store](#)

I_n [A]	L_n [mH]	R_{cu} [mΩ]	f_{RES} [MHz]	Weight [g]	Packing unit [pcs.]	Order Number
16	2	15	0.3	13	50	DENO-23-0001
16	4	27	0.3	25	50	DENO-25-0001
25	4	10	0.3	20	50	DENO-40-0001

Product Standard / Definitions / CE-Marking / Conformity	70
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general product-information

Product standard equipment standard

The product standard only contains minimum requirements. Attention is drawn to the fact that appliance specifications might contain requirements additional to or deviating from those specified in the relevant product standards.

Comments on definitions used

Please be aware that the specifications nominal value used in the German part of the Schurter catalogue and the data sheets, is synonymous with rated value.
The difference between these two values is a pure matter of definition. In order to avoid any unnecessary complications we will continue to use the specifications nominal value.

CE marking acc. to EU-directives

CE marking is the only marking which indicates that a product conforms to the relevant EU-directive.
This means that the CE-mark is no quality or standard conformity mark but only an administration mark.
SCHURTER products are covered by the low voltage directives 72/23/EEC and 93/68/EEC. Those are valid for equipment and appliances with rated voltage values between AC 50 V to AC 1000 V as well as DC 75 V to DC 1500 V.
The CE marking of SCHURTER parts will be found on the label of the smallest packing unit. On request we will submit a CE conformity statement for each component. CE conformity statements and approvals can also be retrieved from the internet under www.schurter.com.

Conformity to component standards, national approvals

National testing institutions are testing according to national and international standards or other generally recognized rules of technology. Their certification/approval-marks confirm the observance of the safety requirements which electric appliances must fulfil.

National approvals

	(Recognition)	UL	Underwriters Laboratories (USA)
	(Listing)	UL	Underwriters Laboratories (USA, Canada)
	(Recognition)	UL	Underwriters Laboratories (USA, Canada)
	(Listing)	UL	Underwriters Laboratories (USA, Canada)
		CSA	Canadian Standard Association, Component Acceptance Service
		CSA	Canadian Standard Association
		SEV	Schweizerischer Elektrotechnischer Verein
	(Mark)	VDE	Verband Deutscher Elektrotechniker
	(Certificate of conformity with factory surveillance)		
		BSI	British Standard Institute
		SEMKO	Svenska Elektriska Materielkontrollanstalten
		NEMKO	Norges Elektriske Materielkontroll
		DEMKO	Danmarks Elektriske Materielkontroll
		FIMKO	Finnish Electrical Inspectorate
		ÖVE	Österreichischer Verband für Elektrotechnik
		KEMA	Keuring van Elektrotechnische Materialen
		IMQ	Instituto italiano del marchio di qualità
	(Mark)	European Norms Electrical Certification	
		CCC	China Compulsory Certification

In addition to the combined UL/CSA approvals, most of the SCHURTER components are also approved by one of the European Certification Bodies like VDE (Germany), Electrosuisse (Switzerland) or SEMKO (Sweden). The safety testing of all these European Certification Bodies are based on the common European Safety Standards. With the harmonisation effort in Europe, the different National European Certification Bodies have lost their importance and SCHURTER has decided to maintain only one European approval (e.g. VDE, SEV or SEMKO) in future. The others will not be renewed once they have expired.

Because UL and CSA are not members of the CENELEC, the standards of UL and CSA are not harmonised yet with the European Standards. However, UL and CSA are trying to harmonize their standards with each other. Where possible, SCHURTER will apply for the combined cULus or cURus approval.

Further to development in Asia, SCHURTER has obtained national approvals from China, Japan and Korea.



general product-information

IP degrees of protection provided by enclosures (IP code)

Standards IEC 60529; EN 60529

Scope

These standards apply to the classification of degrees of protection provided by enclosures for electrical equipment with a rated voltage not exceeding 72.5 kV.

Object

The object of these standards is to give:

- a) Definitions** for degrees of protection provided by enclosures of electrical equipment as regards:
 - 1. Protection of persons against access to hazardous parts inside the enclosure
 - 2. Protection of the equipment inside the enclosure against ingress of solid foreign objects
 - 3. Protection of the equipment inside the enclosure against harmful effects due to the ingress of water.
- b) Designations** for these degrees of protection.
- c) Requirements** for each designation.
- d) Tests** to be performed to verify that the enclosure meets the requirements of these standards.

Designations

The degree of protection provided by an enclosure is indicated by the IP Code.

Elements of the IP Code and their meanings

A brief description of the IP Code elements is given in the following table.

IP xy	Meaning for the protection of equipment	Meaning for the protection of persons
	Against ingress of solid foreign objectif	Against access to hazardous parts with
x = 0	(non-protected)	(non-protected)
x = 1	50 mm diameter	back of hand
x = 2	12.5 mm diameter	finger
x = 3	2.5 mm diameter	tool
x = 4	1.0 mm diameter	wire
x = 5	dust-protected	wire
x = 6	dust-tight	wire
	Against ingress of water with harmful effects	
y = 0	(non protected)	
y = 1	vertically dripping	
y = 2	dripping (15° tilted)	
y = 3	spraying	
y = 4	splashing	
y = 5	jetting	
y = 6	powerful jetting	
y = 7	temporary immersion	
y = 8	continuous immersion	

Protection against electric shock

1. Protection against direct and indirect contact General terms

The protection against electric shock on electric equipment as well as their components are divided into the following parts:

- Protection against direct contact with live parts concerns all measures for the protection of human beings and animals against hazards which result from direct contact with live parts of electric equipment and their components.
- Protection against indirect contact is the protection of human beings and animals against hazards which result from contact of live parts 1 of electric equipment as well as components thereof, which have become live due to an insulation failure.

¹⁾ Accessible, conductive part, which is not conductive normally but which may be conductive due to a failure.

2. Protection against direct contact with live parts e.g. of a fuseholder

The data sheets of the relevant components inform about the taken measures.

3. Protection against indirect contact

Measures for the protection against indirect contact on electrical equipment are defined according to IEC 61140 by the 4 protection classes 0, I, II, III. Each protection class includes two protection measures. Even if one of these measures should fail, no electric shocks will occur.

Protection class	Main protective measures
0	1. Basic insulation between live parts and accessible conductive parts. 2. Earth-free location, non-conducting environment.
I	 1. Basic insulation between live parts and accessible conductive parts. 2. Means are provided for the connection of accessible conductive parts of the equipment to the protective (earthing) conductor in the fixed wiring of the installation in such a way that accessible conductive parts cannot become live in the event of a failure of the basic insulation.
II	 1. Basic insulation between live parts and accessible conductive parts. 2. Additional insulation. Basic and supplementary insulation are summarised under the term "double insulation". Under certain circumstances also a "reinforced insulation" (single insulation system) may guarantee an equivalent protection against electric shock as a "double-insulation" does. No terminal for a protective conductor is allowable. A possibly existing protective conductor must not be connected and has to be insulated like any live part.
III	 1. Functional insulation. 2. Supply at safety extra-low voltage SELV (the circuit is isolated from the mains supply by such means as a safety isolating transformer). The protection against electric shock is in this case completely based on the supplying by SELV-circuits ($U \leq 42$ V). Higher voltages are not generated in the equipment. No terminal for a protective conductor is allowable.

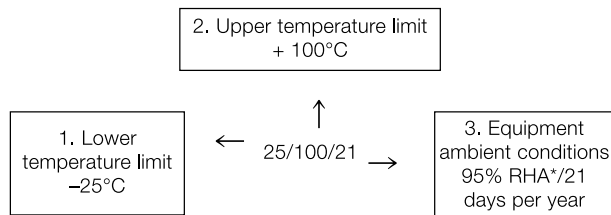


general product-information

Application Classes (IEC 60068-1)

The aim of this standard is to create a basis for classification of telecommunication engineering electrical components according to application classes which correspond to their climatic and mechanical suitability.

Example:



* relative humidity

MTBF

The high reliability of the filters can be excelled from MTBF (Meantime between failures). These values are according MIL-HB-217-F class G_B at an amient temperatur 40§C at rated voltage and current.



Industrial mains filters

Frequency range 0.01 MHz ... 1000 MHz

General Information

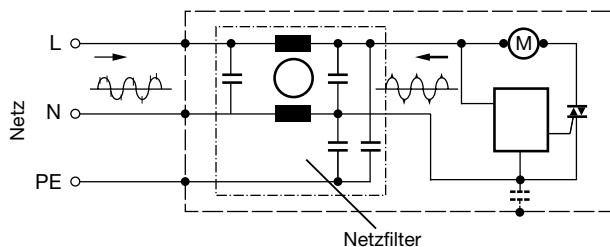
Electromagnetic Compatibility (EMC) is the capability of electrical equipment (installations, devices, assemblies) to operate effectively in its electromagnetic environment (Immunity), without in turn irresponsibly affecting this environment (Emission).

Mains filters of various types are used for the protection of electronic circuits, components and equipment against transients or similar interference, on the mains power supply. A suitable filter can be selected from the existing product range for each equipment type in accordance with electromagnetic conditions of its environment.

Mains interference can be classified into four categories:

- A) Fluctuations in the industrial mains supply
(magnetic voltage stabilizer)
- B) Harmonic wave interference in the frequency range 100 Hz ... 2 kHz
(filter type selective harmonic)
- C) Transient interference signals in the frequency range up to 300 MHz (filter type low-pass)
- D) Sinusoidal interference signals in the frequency range up to 1 GHz (filter type broad band, low-pass)

In practice, however, interference is mainly found in the last three categories B, C and D. Superimposed on the high-voltage mains supply, such interference can affect the performance of electronic circuits, or even cause them damage. An optimally-designed mains filter can perform a double function:



Function 1

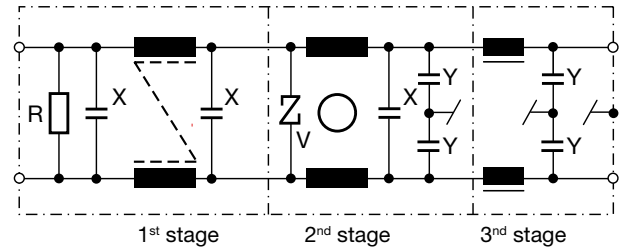
The filter protects an electronic control circuit from voltage spikes in the mains supply, which may be generated, for example, by electro-mechanical switches and relays.

Function 2

The same filter also acts simultaneously in the opposite direction. The HF interference generated in the unit by thyristor control is attenuated such that the boundary values Class B, (EN 55011/55022) are maintained.

Filters are usually made up of capacitors and inductance coils. Components such as leakage resistors, surge dissipators and VHF chokes can also be integrated into the filter. Broad band filters which meet the highest requirements are often composed of 2 or 3 single stages put together to make one filter unit:

3-stage filter



1st stage

A differential mode acting filter with high energy absorption. Discharging resistors are normally used for Cx capacitors > 100 nF. The capacitors are tested and approved as so-called Class X noise suppression capacitors. The 1st stage serves as di/dt limitation.

2nd stage

A common mode acting filter with a high, broad band attenuation ratio. A ZNR varistor surge serves as the overvoltage suppression component. The earthed capacitors are tested and approved as so-called Class Y noise suppression capacitors.

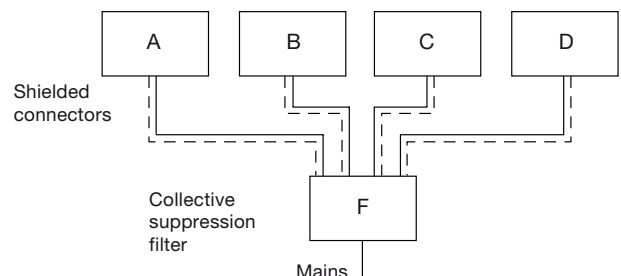
3rd stage

Common mode as well as differential mode acting filter in the HF range up to 300 MHz. Feedthrough capacitors make high attenuation values possible up to the gigahertz range. These capacitors are also Class Y type. SCHURTER uses only approved noise suppression capacitors according to EN 132400.

Filter Assemblies

Three types of mains noise suppression filter assemblies are used in practice:

Collective Suppressor



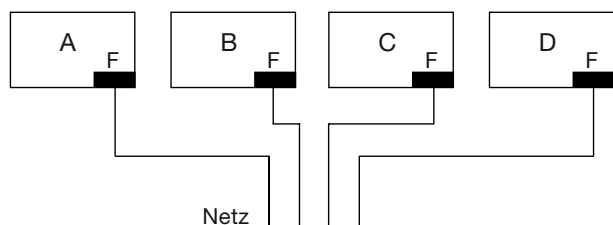
The collective suppressor principle results in one filter per plant. This has to cope with the entire power input. In addition, all of the connecting cables have to be shielded. Furthermore interference generated by «A» device can reach other devices for instance «B» or «C» through the connecting cables. The following example promises to be a more economical solution. In many cases, the single suppressor principle is



general product-information

the most economical solution.

Single Suppressors



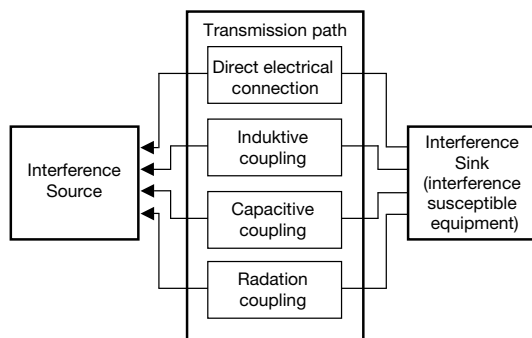
Combined Single and Collective Suppressor

From the technical point of view, only the combined application of both suppression techniques can result in a significant improvement.

Interference Propagation

In the field of interference and RF suppression, the most significant means of transmission is the direct electrical connection, i.e. the connecting wiring. The radiation coupling is also important from the electromagnetic compatibility (EMC) point of view; it cannot, however, be dealt with here.

Interference Propagation



Propagation and Coupling Paths

The capacitive and inductive coupling effects occur inside the case. These could be:

- Capacitive coupling through the coupling capacity of a mains transformer.
- Inductive coupling through control system wiring in parallel.

The introduction briefly mentioned the possibility of the mains filter operating with a double function. Depending on the main area of application, these filters are designated as either RF SUPPRESSION FILTERS or INTERFERENCE SUPPRESSION FILTERS.

The one filter may, therefore, appear under two references in the documentation. A filter is also classified by its mechanical design as well as its electrical data.

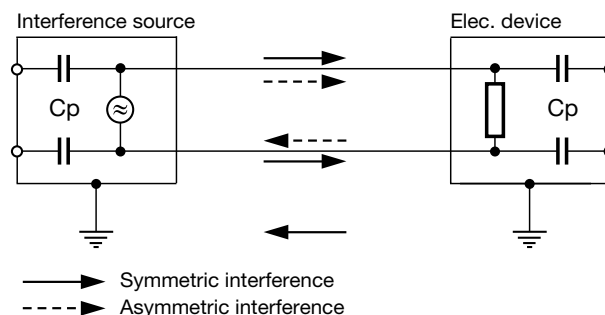
RF SUPPRESSION FILTERS impede the propagation of RF interference, generated by an electronic or electrical device into the mains. They also ensure an interference-free radio reception in the immediate vicinity.

INTERFERENCE SUPPRESSION FILTERS prevent mains interference from affecting electronic equipment. They enable an interference-free operation even in the case of a power supply badly affected by mains interference.

It is common to operate the mains filter in both directions in the one piece of equipment, allowing it to fulfil its double function as both interference and RF suppression filters as specified.

Common- and differential Mode Interference

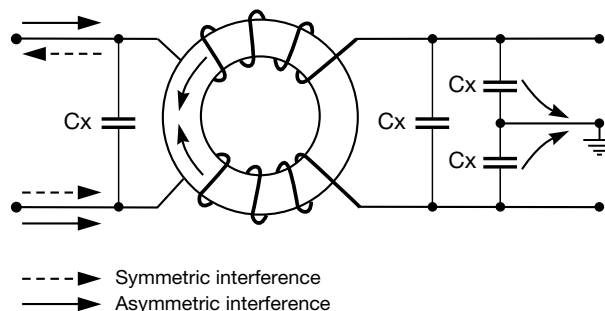
Filter engineering differentiates between common and differential mode interference originating from supply lines.



In the case of a non-earthed interference source, interference at first only propagates along the connecting lines. Like the mains AC current, the parasitic current flows to the user on one lead, and returns to the interference source on the other. Both these currents are in differential mode. This type of interference is therefore referred to as differential mode interference.

Due to the mechanical configuration and its parasitic capacitance, parasitic currents are also generated in the earthing circuit. This parasitic current flows on both connecting leads to the user and over an earthed lead back to the interference source. Both currents on the connecting lead are in common mode. This type of interference is therefore referred to as common mode interference.

Current Compensated Chokes in Interference Suppression Filters



The main type of choke used in suppression filter engineering is the current compensated choke. This mainly damps the common mode interference. The differential mode parasitic current, or rather the magnetic flux they produce in the core, is compensated by means of a special type of winding. The relatively small attenuation of the differential mode parasitic currents can be balanced through the large,



symmetrically connected capacitance C_x between the lines. Only the leakage inductance L_s of the choke is then of any importance.

$$L_{\text{leakage}} \approx \frac{L_{\text{nominal}}}{50} \quad \text{to} \quad \frac{L_{\text{nominal}}}{100}$$

The high nominal inductance L_N active for common mode parasitic currents allows the insertion of small, earthed capacitances C_Y in a filter circuit. These capacitances are regulated by international standards for leakage currents.

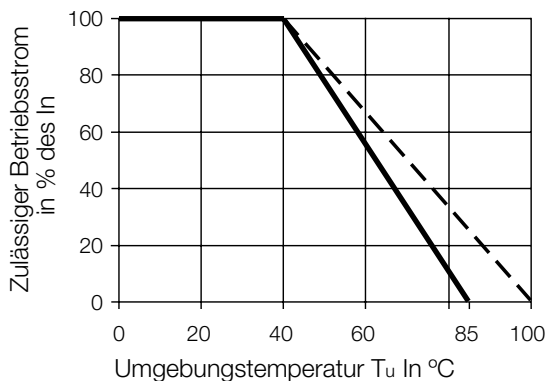
RF Suppression Capacitors:

General Information

All SCHURTER filters are fitted with Class X or Y RF suppression capacitors in accordance with international standards (IEC, EN). These are mainly self-healing metallized paper or polyester types, tested against the standards of major countries around the world and approved as noise suppression capacitors. Class X capacitors are capacitors with unlimited capacity for those applications in which a failure caused by a short circuit cannot result in a dangerous electrical shock. Class Y capacitors are capacitors intended for an operating voltage $V_{\text{eff}} = 250 \text{ V}$ with increased electrical and mechanical safety and limited capacitance.

Permissible Working Current as a Function of Ambient Temperature Up to the approved nominal ambient temperature a the filter can be operated continuously at its nominal current. Above this temperature the square of the nominal current drops off linearly and reaches its zero point at T_{max} (85 or 100 °C).

Derating curve (approx.)



Formula:

$$I = I_n \sqrt{\frac{T_{\text{max}} - T_a}{T_{\text{max}} - T_n}}$$

I = admissible operating current at elevated ambient air temperature

I_n = rated current

T_{max} = max. allowable ambient air temperature T_a (85 °C)

T_a = ambient air temperature

T_n = allowable ambient air temperature at rated current (40 °C)

RF Suppression Chokes Conforming to IEC60938

All SCHURTER filters are fitted with chokes which satisfy the guidelines set down by international and national standards organizations.

The most important test data for RF suppression chokes are:

Maximum variation of inductance:	30% / +50% for compensated 15% / +15% for linear and storage
Test frequency	1MHz $\pm$ 20% at $L < 10 \mu\text{H}$ 100kHz $\pm$ 20% at $10 \mu\text{H} < L < 1 \text{ mH}$ 10kHz $\pm$ 20% at $1 \text{ mH} < L < 50 \text{ mH}$ 50 to 120 Hz $\pm$ 20% at $L > 50 \text{ mH}$
Test current:	0.1 mA
Test temperature:	25°C $\pm$ 3°C
Insulation resistance R_{is} :	6000 MOhm

Test voltages

Chokes for	Between connections	Inner and outer insulation
AC	4.3 U_R VDC	2 U_R + 1500 VAC, but at least 2000 VAC
DC	3 U_R VDC	2 U_R + 1500 VDC

In compliance to the known standards of the IEC, EN, VDE and UL, the filters are tested as follows. In principle, these tests correspond to those of the RF suppression capacitors.

Test duration

- 2 sec for production test
- 60 sec for types test

The SCHURTER final production test has a duration of 2 sec. This test may not be repeated more than one time (i.e. incoming inspection at the customer). Any filter that has been under test for 60 sec can not be commercially used (reduced life cycle).



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SCHURTER develops, manufactures and markets components for the electronics industries worldwide.



safe&easy

> COMPONENTS

Switzerland

SCHURTER AG
Tel: ++41 +41 369 31 11
contact@schurter.ch

Brasil

SCHURTER + OKW do Brasil
Componentes Eletronicos Ltda
Tel.: ++55 +11 5041 31 41
info@sob-brasil.com

China

SCHURTER Electronics Shenzhen Ltd.
Tel: ++86 755 2994 0066
info@schurter.com.cn

CHI LICK SCHURTER Ltd.
Hong Kong SAR
Tel: ++852 2408 7798
fuse@chilickschurter.com

Czech Republic

SCHURTER spol. s.r.o.
Tel: ++42 +0483 392 080
firma@schurter.cz

France

SCHURTER SAS
Tel: ++33 +3 2502 5049
contact@schurter.fr

Germany

SCHURTER GmbH
Tel: ++49 +7642 6820
info@schurter.de

SCHURTER Otto Heil GmbH
Tel: ++49 +6171 506 10
sales@schurter-heil.de

India

SCHURTER Electronics (India) Pvt. Ltd.
Tel: ++91 +2667 264753/4
info@schurter.co.in

Italy

KEVIN-SCHURTER S.p.a
Tel: ++39 +02 3046 5311
info@kevin.it

Japan

SCHURTER K. K.
Tel: ++81 +3 5465 2062
info@schurter.co.jp

Singapore

SCHURTER (S) Pte. Ltd. (APAC HQs)
Tel: ++65 6291 2111
info@schurter.com.sg

Slovakia

SCHURTER (SK) s.r.o.
Tel: ++42 138 539 84 80

Sweden

SCHURTER Nordic AB
Tel: ++46 +8 447 35 60
info@schurter.se

UK

SCHURTER Ltd.
Tel: ++44 +1243 810 810
sales@schurter.co.uk

USA

SCHURTER Inc.
Tel: ++1 +707 636 3000
info@schurterinc.com

> INPUT SYSTEMS

Germany

SCHURTER GmbH
Tel: ++49 +7642 6820
info@schurter.de

Switzerland

MEIERHOFER AG
Tel: ++41 +56 481 90 00
info@meierhofer.ch

> EMS

ELECTRONIC MANUFACTURING SERVICES

Romania

INTERELEKTRONIC SRL
Tel: +402 135 08 100
info@interelektronic.ro

Switzerland

TICOMEL SA
Tel: ++41 +91 640 44 10
contact@ticomel.ch