

Surge protection mains filter

WAVEFILTERS for simple radio interference suppression in the control cabinet

The WAVEFILTER series eliminates the time-consuming work of screwing in mains filters. These filters are simply clipped on to the TS35 rail and connected to the device requiring suppression. The two-stage WAVEFILTER with overall width 22.5 mm in 1 A, 3 A, 6 A and 10 A versions offers high attenuation.

The WAVEFILTER with current-compensating choke is ideal for applications in drive technology and control/automation systems, e.g. for suppressing continuous interference types such as “noise” or “ripple” caused by interfering radiation from other systems, or interference from frequency converters and switch-mode power supplies. A short, low-ohm mass connection is required for the WAVEFILTER to function perfectly. We recommend earthing all devices directly with the largest possible cross-section to a central earthing point in the control cabinet.

Interference signals

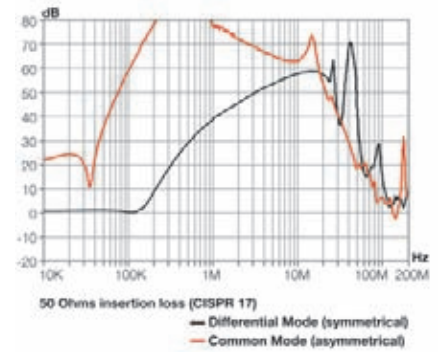
We distinguish between two types of induced transient and continuous interference signals: symmetrical (differential mode) and asymmetrical (common mode). The symmetrical interference signals generate a voltage between the signal leads of the system. The asymmetrical interference voltages occur between the signal leads and earth.

The WAVEFILTER is suitable for attenuating both kinds of interference signal. In addition, WAVEFILTER 10 A also has an earthing conductor choke. This earthing conductor choke supports both attenuation on the earthing conductor for the filter and additional attenuation of asymmetrical interference voltages.

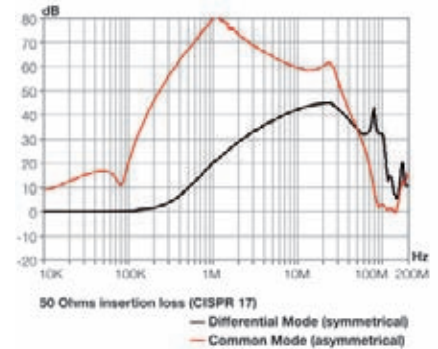
The WAVEFILTER have cULus approval.

Insertion loss

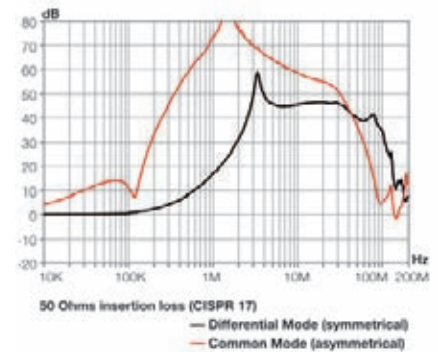
1 A WAVEFILTER



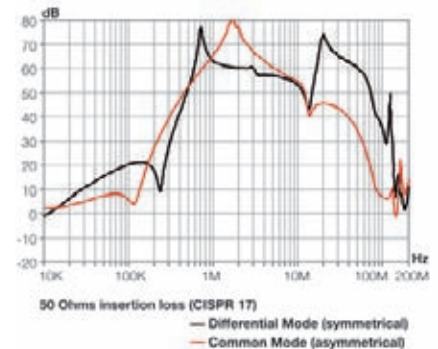
3 A WAVEFILTER



6 A WAVEFILTER



10 A WAVEFILTER



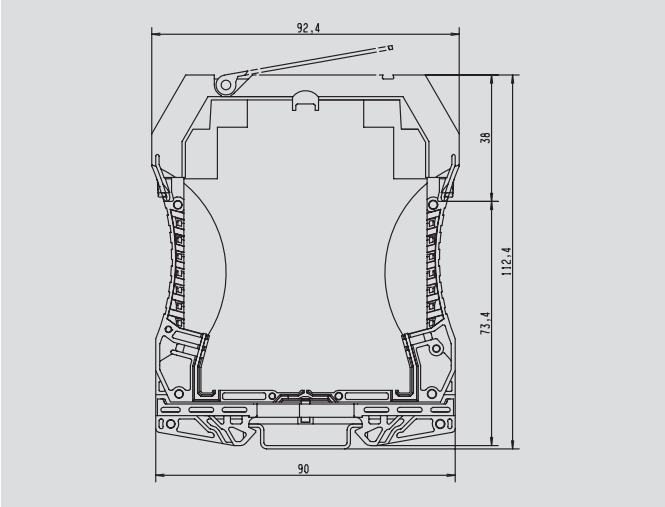
Installation height 112.4 mm



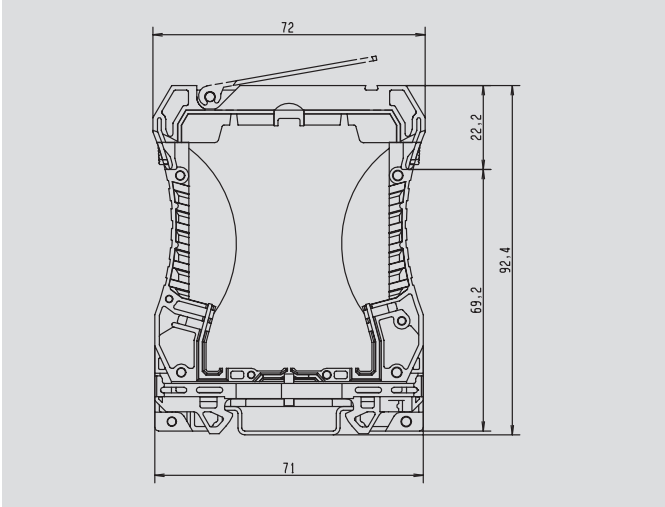
Installation height 92.4 mm



Dimensions



Dimensions

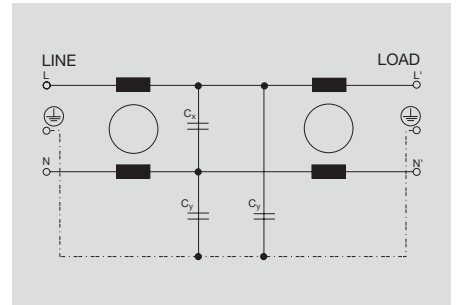
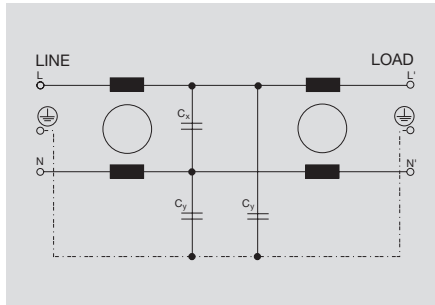


Surge protection for low-voltage supplies

mains filter

WAVEFILTER 1 A 250 V

WAVEFILTER 3 A 250 V



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Technical data

Technical data

Rated voltage (AC/DC)
 Rated current
 Capacitance
 Inductance L and L1
 Leakage current at Un
 Test voltage P/N-PE
 Test voltage P-N
 Ambient temperature (operational)
 Approvals

250 V
 1 A
 C_x / C_y: 33nF
 10.00 mH
 190 µA
 2000.00 V AC
 1700.00 V DC
 -20 ... 40°C
 cURus

250 V
 3 A
 C_x / C_y: 33nF
 2.00 mH
 190 µA
 2000.00 V AC
 1700.00 V DC
 -20 ... 40°C
 cURus

Dimensions

Clamping range (rating- / min. / max.) mm²
 Length x width x height mm

2.5 / 0.5 / 2.5
 90 x 22.5 x 73.4

2.5 / 0.5 / 2.5
 90 x 22.5 x 73.4

Note

See attenuation curve

See attenuation curve

Ordering data

Version

Type	Qty.	Order No.
WAVEFILTER 1A	1	8614790000

Type	Qty.	Order No.
WAVEFILTER 3A	1	8614780000

Note

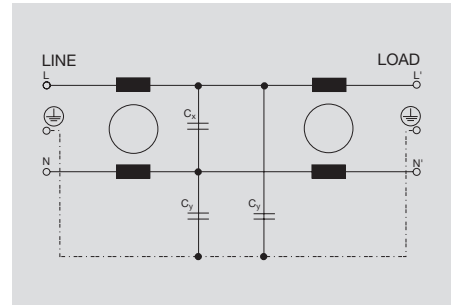
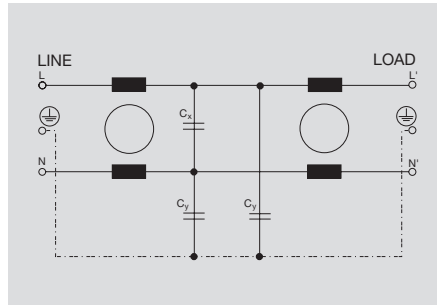
Accessories

Note

mains filter

WAVEFILTER 6 A 250 V

WAVEFILTER 10 A 250 V



Technical data

Technical data

Rated voltage (AC/DC)
 Rated current
 Capacitance
 Inductance L and L1
 Leakage current at Un
 Test voltage P/N-PE
 Test voltage P-N
 Ambient temperature (operational)
 Approvals

250 V
 6 A
 C_x : 33 nF / C_y : 22 nF
 0.80 mH
 190 μ A
 2000.00 V AC
 1700.00 V DC
 -20 ... 40°C
 cURus

250 V
 10 A
 C_x : 470 nF / C_y : 4,7 nF
 0.80 mH
 190 μ A
 2000.00 V AC
 1700.00 V DC
 -20 ... 40°C
 cURus

Dimensions

Clamping range (rating- / min. / max.) mm²
 Length x width x height mm

2.5 / 0.5 / 2.5
 90 x 22.5 x 73.4

2.5 / 0.5 / 2.5
 90 x 22.5 x 73.4

Note

See attenuation curve

See attenuation curve

Ordering data

Version

Type	Qty.	Order No.
WAVEFILTER 6A	1	8614800000

Type	Qty.	Order No.
WAVEFILTER 10A	1	8614770000

Note

Accessories

Note

Product quick selection, information technology

Instrumentation and control equipment

Interface/ signal	Mounting	Connection system	Protected wires	Discharge capacity	Operating current	Max. voltage	Protection device	Order No.
0-20 mA, 4-20mA	on DIN rail,separable	screw terminals	2	6 kA	100 mA	24V-230V	LPU 24V-230V 100mA	800830000-8008380000 + 8007871001
0-20 mA, 4-20mA	on DIN rail,separable	screw terminals	2	6 kA	1.5 A	24V-230V	LPU 24V-230V 1.5A	8008430000-8008460000 + 8007871001
0-20 mA, 4-20mA	on DIN rail,compact	screw terminals	1	5 kA	300 mA	24V-230V	DKU 24-230V 0.3A	8015800000-8019330000
0-20 mA, 4-20mA	on DIN rail,compact	screw terminals	2	5-7 kA	0.3-1 A	24V-230V	DKU DK5/DK6 24V-230V	8238340000-8263760000
0-20 mA, 4-20mA	on DIN rail,compact	tension clamp terminals	2	5 kA	500 mA - 1.25 A	24V-230V	MCZ OVP 24V-230V	8448920000-8449080000
Binary signals	on DIN rail,separable	screw terminals	2	6 kA	100 mA	24V-230V	LPU 24V - 230V SL	8008230000-8008280000 + 8007871001
Binary signals	on DIN rail,compact	screw terminals	1	5 kA	300 mA	24V-230V	DKU 24-230V 0.3 A	8015800000-8019330000
Binary signals	on DIN rail,compact	tension clamp terminals	2	5 kA	500 mA - 1.25 A	24V-230V	MCZ OVP SL 24V-230V	8448940000-8449090000
PT 100, PT 1000	on DIN rail,separable	screw terminals	2	6 kA	100 mA	24V	LPU 24V 100 mA SL	8008230000+8007871001
PT 100, PT 1000	on DIN rail,compact	tension clamp terminals	2	5 kA	1.25 A	24V	MCZ OVP SL 24V1.25A	8448970000
TTL	on DIN rail,separable	screw terminals	2	6 kA	100 mA	24V	LPU 24V 100 mA SL	8008230000+8007871001
TTL	on DIN rail,compact	tension clamp terminals	2	5 kA	0.5 A	24V	MCZ OVP SL 24V 0.5A	8448940000
TTY	on DIN rail,separable	screw terminals	2	6 kA	100 mA	24V	LPU 24V 100 mA SL	8008230000+8007871001
TTY	on DIN rail,compact	tension clamp terminals	2	5 kA	0.5 A	24V	MCZ OVP SL 24V 0.5A	8448940000
RS 232	on DIN rail,separable	screw terminals	2	6 kA	100 mA	24V	LPU 24V 100 mA SL	8008230000+8007871001
RS 232	on DIN rail,compact	tension clamp terminals	2	5 kA	0.5 A	24V	MCZ OVP SL 24V 0.5A	8448940000
RS 232	adapter plug	D-Sub	8	0.5 kA		15V	RS232 adapter plug	8570500000 or 8570510000
RS 232	built-in housing	screw terminals	2	5 kA		15V	EGU4 RS232	1170460000
RS 485	on DIN rail,separable	screw terminals	2	6 kA	100 mA	24V	LPU 24V 100 mA SL	8008230000+8007871001
RS 485	on DIN rail,compact	tension clamp terminals	2	5 kA	0.5 A	24V	MCZ OVP SL 24V 0.5A	8448940000
RS 485	built-in housing	screw terminals	4	0.5 kA		12V	RS485/RS422 K21	8008501001
RS 422,V11	on DIN rail,separable	screw terminals	2	6 kA	100 mA	24V	LPU 24V 100 mA SL	8008230000+8007871001
RS 422,V11	on DIN rail,compact	tension clamp terminals	2	5 kA	0.5 A	24V	MCZ OVP SL 24V 0.5A	8448940000

Bus systems

Interface/ signal	Mounting	Connection system	Protected wires	Discharge capacity	Operating current	Max. voltage	Protection device	Order No.
ASI	on DIN rail,separable	screw terminals	2	6 kA			PU DS 48V (yellow cable)	8670740000
ASI	on DIN rail,separable	screw terminals	2	6 kA			PU DS 24V8V (black cable)	8682100000
Bitbus	on DIN rail,separable	screw terminals	2	6 kA			RS 485	9454930000+8007871001
CAN Bus	on DIN rail,separable	screw terminals	2	6 kA			RS 485	9454930000+8007871001
Device Net	on DIN rail,separable	screw terminals	2	6 kA	1.5A	12V	RS 485	9454930000+8007871001
Ethernet Cat 5	plug-in adapter	RJ 45 connection	4	2 kA		7V	DME 100Tx-4RJ	8738780000
Ethernet Cat 5	plug-in adapter on DIN rail	RJ 45 connection	4	2 kA		7V	DME 100Tx-4RJ TS 35	8830230000
Ethernet Cat 5	adapter plug	M12	4	10 kA		30V	JACKPAC® Ethernet Cat.5 M12	8805570000
Ethernet Cat 6	combination adapter	RJ 45 connection	4	5 kA		30V	PU D ZS 230V16A Cat.6	8805530000
Ethernet Cat 6	adapter plug	RJ 45 connection	4	10 kA		48V	JACKPAC® Ethernet Cat.6 IP20	8805550000
Ethernet Cat 6	adapter plug	RJ 45 connection	4	10 kA		48V	JACKPAC® Ethernet Cat.6 IP67	8805560000
Interbus-Inline I/O	on DIN rail,separable	screw terminals	2	6 kA		53V	LPU 48V 1.5A	8008440000+8007871001
Interbus-Inline I/O	on DIN rail,compact	tension clamp terminals	2	10 kA	1.25A	53V	MCZ OVP CL 48V 1.25A	8449040000
LON TP/XF 78	on DIN rail,separable	screw terminals	2	6 kA	1.5A	27V	LPU 24V 1.5 A	8008430000+8007871001
LON TP/XF 78	on DIN rail,compact	tension clamp terminals	2	10 kA	0.5A	28V	MCZ OVP CL 24V 0.5A	8448920000
LON TP/XF 78	on DIN rail,compact	tension clamp terminals	2	0.1kA	16A	14V	MCZ OVP LON bus	8473470000
TP/FTT 10+TP/LPT10	on DIN rail,separable	screw terminals	2	6 kA		53V	LPU 48V 1.5A	8008440000+8007871001
TP/FTT 10+TP/LPT10	on DIN rail,compact	tension clamp terminals	2	10 kA	1.25A	53V	MCZ OVP CL 48V 1.25A	8449040000
Termination	on DIN rail,compact	screw terminals	2			60V	Dialoc bus terminator	8496110000
Profibus DP/FMS	on DIN rail,separable	screw terminals	2	6 kA	1.5A	12V	RS 485	9454930000+8007871001
Profibus PA	on DIN rail,separable	screw terminals	2	6 kA		53V	LPU 48V 1.5A	8008440000+8007871001
Profibus PA	on DIN rail,compact	tension clamp terminals	2	10 kA	1.25A	53V	MCZ OVP CL 48V 1.25A	8449040000
Sinec L2 DP/ ~Profibus DP	on DIN rail,separable	screw terminals	2	6 kA	1.5A	12V	RS 485	9454930000+8007871001
Token Ring	on DIN rail,compact	tension clamp terminals	2	0.5kA	16A	27V	MCZ OVP TAZ 24V	8449160000

Telecommunication

Interface/ signal	Mounting	Connection system	Protected Discharge		Operating current	Max. voltage	Protection device	Order No.
			wires	capacity				
			8/20 μ s	I _{max.}	DC			
ADSL, T-DSL	on DIN rail, compact	screw terminals	2	20 kA	135V	Dk4/35 U gas discharge tube 230V	9400120000	
ADSL, T-DSL	adapter plug	RJ 45	2	5 kA	190V	PU D ZS UK0	8697570000	
ISDN (S0)	in installation boxes	TAE	2	4 kA	190V	TAE OVP ISDN	8674000000	
ISDN (S0)	in installation boxes	TAE	2	4 kA	190V	TAE OVP ISDN LED	8674010000	
ISDN (S0)	in installation boxes	TAE	2	4 kA	190V	TAE OVP ISDN FM	8673970000	
ISDN (S0)	adapter plug	RJ 45	4	4 kA	190V	PU D ZS S0	8697560000	
ISDN (UK0)	on DIN rail, compact	screw terminals	2	20 kA	135V	Dk4/35 U gas discharge tube 230V	9400120000	
ISDN (UK0)	adapter plug	RJ 45	2	4 kA	190V	PU D ZS UK0	8697570000	
ISDN (UK0)	in installation boxes	TAE	2	4 kA	190V	TAE OVP ISDN	8674000000	
ISDN (UK0)	in installation boxes	TAE	2	4 kA	190V	TAE OVP ISDN LED	8674010000	
ISDN (UK0)	in installation boxes	TAE	2	4 kA	190V	TAE OVP ISDN FM	8673970000	
Telephone analogue	in installation boxes	TAE	2	4 kA	190V	TAE OVP analogue	8673980000	
Telephone analogue	in installation boxes	TAE	2	4 kA	190V	TAE OVP analogue LED	8674020000	
Telephone analogue	in installation boxes	TAE	2	4 kA	190V	TAE OVP analogue FM	8649910000	

Power supplies

Interface/ signal	Mounting	Connection system	Protected Discharge		Operating current	Max. voltage	Protection device	Order No.
			wires	capacity				
			8/20 μ s	I _{max.}	DC			
24V 6A	clip-on base profiles	screw terminals	2	24 kA	6A	27V	RSU 24V 6A	1171361001
115V 6A	clip-on base profiles	screw terminals	2	24 kA	6A	130V	RSU 115V 6A	1171561001
230V 6A	clip-on base profiles	screw terminals	2	24 kA	6A	250V	RSU 230V 6A	1171661001
24V 10A	clip-on base profiles	screw terminals	2	24 kA	10A	27V	RSU 24V 10A	8104201001
115V 10A	clip-on base profiles	screw terminals	2	24 kA	10A	130V	RSU 115V 10A	8104221001
230V 10A	clip-on base profiles	screw terminals	2	24 kA	10A	250V	RSU 230V 10A	8093281001

TV/radio

Interface/ signal	Mounting	Connection system	Protected Discharge		Operating current	Max. voltage	Protection device	Order No.
			wires	capacity				
			8/20 μ s	I _{max.}	DC			
TV/radio	adapter plug	BNC	2	5 kA	16A	70V	PU D ZS TV/R	8779230000

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