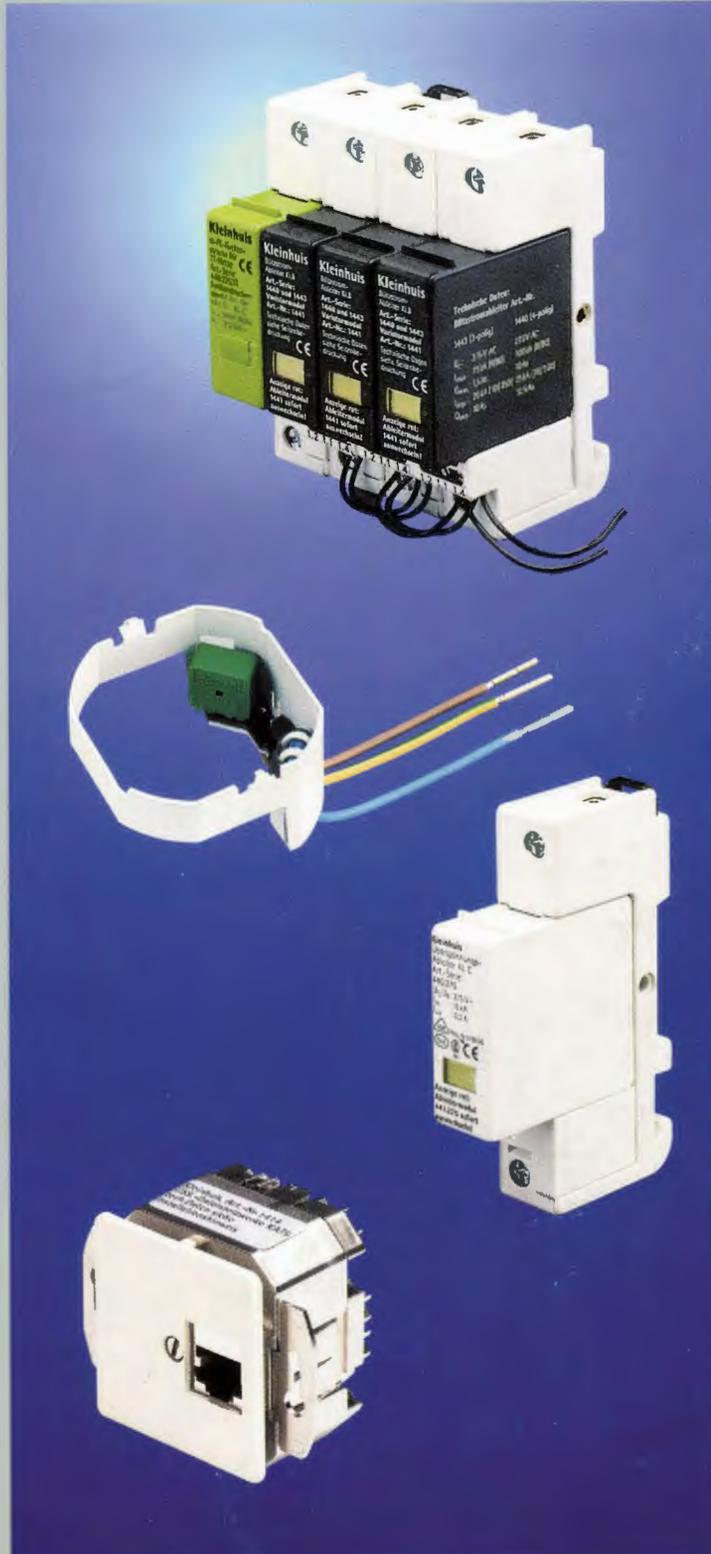


# Kleinhuis

Components  
and systems  
for  
electric installations

## Overvoltage Protection



## Kleinhuis

Overvoltage protection  
B-arrester  
Sparking distance technology



Version	No. of poles	Art. No.
Lightning arrester	1 <b>new</b>	1440/60



Sum current sparking distance	1 <b>new</b>	1440/100TT
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Decoupling inductance	1 <b>new</b>	1440/L
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Isolation housing IP 65	1	
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The GBZ 2 lightning protection housing by the Günther Spelsberg GmbH+Co. KG company has been authorised for the installation of the sparking distance arresters article no. 1440/60 and 1440/100 TT when installing B-arresters upstream of the current meter order no. 010-092

## Kleinhuis

Overvoltage protection  
B-arrester  
Sparking distance technology

### Technical data

Art. No.:	1440/60	1440/100TT	1440/L
Operating voltage max. $U_{C-}$ :	400 V	400 V	500 V
$U_{C-}$ :			500 V
Surge Iimp (10/350):	60 kA	100 kA	-
Protective level $U_R$ :	4000 V	4000 V	-
Class:	B		
Design frequency:	50/60 Hz		
Response time $t_a$ :	$\leq 100$ ns		
Conductor size:	10–50 mm <sup>2</sup> (rigid), 16–35 mm <sup>2</sup> (flexible)		
Assembly:	35 mm standard rail to DIN EN 50 022		
Voltage dropping fuse:	max. 250 A gl	-	35 A gl
Rated current $I_N$ :	-	-	35 A/40 °C
Inductance:	-	-	7,5 $\mu$ H
DC resistor:	-	-	4,5 mOhm
Temperature range:	-40 °C bis +80 °C		-40 °C to +115 °C
Protection class:	IP 20		
Designed to follow:	VDE E 0675 T6, A1 and A2		VDE 0565 T2
Colour:	black RAL 9002		

## Kleinhuis

Overvoltage protection  
B-arrester  
Varistor technology



Version	No. of poles	Art. No.
Lightning arrester	3 <b>new</b>	1443
with remote signalling	3 <b>new</b>	1443F
Lightning arrester	4 <b>new</b>	1440
with remote signalling	4 <b>new</b>	1440F



Lightning arrester	4 <b>new</b>	3+1-applications (see page 14)	1440/TT
with remote signalling	4 <b>new</b>		1440/TF



Replacement module	1	black	1441
Replacement module	1 <b>new</b>	green	1441/TT



Remote signal module	1		442
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Wiring loom	<b>new</b>		442.1
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Isolation housing IP 54		Dimensions: 100 x 180 x 110 mm	440G
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## Kleinhuis

### Overvoltage protection B-arrester Varistor technology

#### Technical data

Art. No.:	1440/TT	1443	1440
Technical specification for L-N (PEN/PE)-arrester:			
Operating voltage max. $U_{C\sim}$ :	275 V		
$U_{C\sim}$ :	350 V		
Surge limp (10/350):	20 kA	20 kA (3 poles)	25 kA (4 poles)
Protective level $U_R$ (for limp):		< 2000 V	< 2000 V
Response time $t_a$ :	≤ 25 ns		
Voltage dropping fuse:	160 A gl	160 A gl	160 A gl
Colour:	jet-black RAL 9005		
General specifications:			
Conductor size:	4-25 mm <sup>2</sup>		
Protection class:	IP 20		
Assembly:	35 mm standard rail to DIN EN 50 022		
Temperature range:	-20 °C to +60 °C		
Designed to follow:	VDE E 0675 T6, A1 and A2		
Technical specification for N-PE-arrester:			
Operating voltage max. $U_{C\sim}$ :	≥ 250 V		
Surge limp:	20 kA (10/350)		
Response time $t_a$ :	≤ 100 ns		
Colour:	yellowish-green RAL 6018		
Art. No.:	442		
Type of contact:	change-over contact		
Breaking capacity:	1,5 A, 250 V~, cos φ = 1		
Conductor size:	max 1,5 mm <sup>2</sup>		

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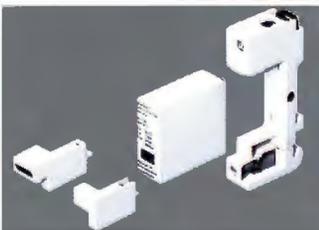
### Overvoltage protection C-arrester



Version	No. of poles	Operating voltage	Art. No.
Lightning arrester with remote signalling	1	275 V	440.275.1
	1	275 V	440.275.1F
	2	275 V	440.275.2
	2	275 V	440.275.2F
	3	275 V	440.275.3
	3	275 V	440.275.3F
Replacement module	1	275 V	441.275



Lightning arrester with remote signalling	4	<b>new</b>	275 V	3+1-application	440.275.TT
	4	<b>new</b>	275 V	3+1-application	440.275.TTF
Replacement module	1	<b>new</b>	275 V		441.275.TT



Lightning arrester with remote signalling	1		130 V		440.130.1
	1		130 V		440.130.1F
	2		130 V		440.130.2
	2		130 V		440.130.2F
	3		130 V		440.130.3
	3		130 V		440.130.3F
Replacement module	1		130 V		441.130



Lightning arrester with remote signalling	1		385 V		440.385.1
	1		385 V		440.385.1F
	2		385 V		440.385.2
	2		385 V		440.385.2F
	3		385 V		440.385.3
	3		385 V		440.385.3F
Replacement module	1		385 V		441.385

Lightning arrester with remote signalling	1		550 V		440.550.1
	1		550 V		440.550.1F
	2		550 V		440.550.2
	2		550 V		440.550.2F
	3		550 V		440.550.3
	3		550 V		440.550.3F
Replacement module	1		550 V		441.550

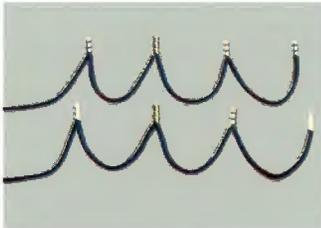
Lightning arrester with ohmic isolation with remote signalling	1		275 V		440.2F.1
	1		275 V		440.2F.1F
	2		275 V		440.2F.2
	2		275 V		440.2F.2F
	3		275 V		440.2F.3
	3		275 V		440.2F.3F
Replacement module	1		275 V		441.2F

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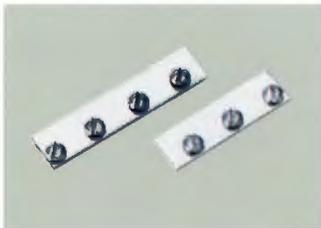
## Overvoltage protection C-arrester



Version	No. of poles	Operating voltage	Art. No.
Remote signalling module	1		442



Wiring loom	<b>new</b>		442.1
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Earthing stirrups	3		440ES.3/UU
Earthing stirrups	4		440ES.4/UU

Isolation housing IP 54 (see also page 20)		Dimensions: 100 x 180 x 110 mm	440G
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### Technical data

Art. No.:	440.130.1	440.275.1	440.385.1	440.550.1	440.2F
Operating voltage max. $U_{C-}$ :	130 V~ 170 V=	275 V~ 350 V=	385 V~ 505 V=	550 V~ 745 V=	275 V~ 350 V~
Surge $I_{SN}$ (8/20):	15 kA	15 kA	15 kA	15 kA	15 kA
$I_{max}$ (8/20):	40 kA	40 kA	40 kA	40 kA	40 kA
Protective level $U_R$ (I sn):	700 V	1300 V	1800 V	2500 V	1400 V
$I_{UA}$ :		0,2 A			
Class:	C				
Design frequency:	50/60Hz				
Response time $t_a$ :					
between L-N (PEN/PE):	≤ 25 ns				
Conductor size:	4–25mm <sup>2</sup>				
Assembly:	35 mm standard rail to DIN EN 50 022				
Voltage dropping fuse between L-N (PEN):	100 A max. $I_{gl}$				
Temperature range:	-20 °C bis +60 °C				
Protection:	IP 20				
Designed to follow:	VDE E 0675 T6, A1 and A2 IEC 99.1				
Mark of conformity:	VDE Reg. No. 5159 (440.275.1)				
Colour L-N arrester:	light-grey RAL 7035				

#### Art. No.: 440.275.TT

Technical specifications for L-N-arrester:

Operating voltage max. $U_{C-}$ :	275 V		
Operating voltage max. $U_{C-}$ :	350 V	Type of contact:	change-over contact
Surge $I_{SN}$ :	20 kA (8/20)	Breaking capacity:	1,5 A, 250 V~, $\cos \pi = 1$
Response time $t_a$ :	≤ 25 ns	Conductor size:	1,5mm <sup>2</sup> max.
Voltage dropping fuse:	100 A $I_{gl}$		
Colour:	light-grey RAL 7035		

Technical specifications for N-PE-arrester:

Operating voltage max. $U_{C-}$ :	≥ 250 V
Surge $I_{SN}$ :	20 kA (8/20)
Response time $t_a$ :	≤ 100 ns
Colour:	yellow-green RAL 6018

#### Art. No.: 442