

Surge protection made easy – TBS selection aid

Application example:
Private house with external
lightning protection system



Application example:
Office building with lightning
protection system



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Initial situation	1 Installation location	2 Installation location	3 Installation location
	<ul style="list-style-type: none">Installation in the main distributor boxBasic protection/Type 1, Type 2Primary meter area or combined distributor	<ul style="list-style-type: none">Installation in the/each sub-distributor boxMedium protection/Type 2	<ul style="list-style-type: none">Installation in front of terminalFine protection/Type 3
 ▶ No external lightning protection system ▶ Earthing cable-connection	Distance < 10 m Private building (e.g. single family house) Distance between main distributor box and sub-distributor box and/or combined distributor.	TN TT V10 Compact 63 A*, 2,5 DU** With visual signalling With audible signalling (AS), With remote signalling (RS), Type 2, type 3 Secondary meter area Item no. 5093 38 0 Item no. 5093 39 1 Item no. 5093 38 2	Not required
	Distance > 10 m Apartment buildings Industry/commerce Distance between main distributor box and sub-distributor box and/or combined distributor.	TN TT V20-3+NPE-280 160 A*, 4 DU** With visual signalling With remote signalling (RS), Type 2 Secondary meter area Item no. 5095 25 3 Item no. 5095 33 3	TN TT V20-3+NPE-280 160 A*, 4 DU** Type 2 With visual signalling, item no. 5095 25 3 With remote signalling (RS) Item no. 5095 33 3 Type 2 Secondary meter area
	Distance < 10 m	TN TT V20-3+NPE-280 160 A*, 4 DU** With visual signalling With remote signalling (RS) Type 2 Secondary meter area Item no. 5095 25 3 Item no. 5095 33 3	Not required
	Distance > 10 m Buildings of lightning protection classes III and IV (e.g. housing and commercial and office buildings) Distance between main distributor box and sub-distributor box and/or combined distributor.	TN TT V50-3+NPE-280 160 A*, 4 DU** With visual signalling With remote signalling (RS) Type 1+2 Secondary meter area Item no. 5093 52 6 Item no. 5093 53 3	TN TT V20-3+NPE-280 160 A*, 4 DU** Type 2 With visual signalling, item no. 5095 25 3 With remote signalling (RS) Item no. 5095 33 3 Type 2 Secondary meter area
 ▶ External lightning protection system (acc. to VDE 0185-305/ DIN EN 62305/ IEC 62305)	Distance < 10 m	TN TT V50-3+NPE-280 160 A*, 4 DU** With visual signalling With remote signalling (RS) Type 1+2 Secondary meter area Item no. 5093 52 6 Item no. 5093 53 3	Not required
	Distance < 10 m	TN-C MCD 50-B/3 500 A*, 3x 2 DU** Type 1 Primary or secondary meter area Item no. 5096 87 7	TN-S MCD 50-B/3+1 500 A*, 4x 2 DU** Type 1 Primary or secondary meter area Item no. 5096 87 9
	Distance < 10 m	TN-C MCD 50-B/3 500 A*, 3x 2 DU** Type 1 Primary or secondary meter area Item no. 5096 87 7	TN-S MCD 50-B/3+1 500 A*, 4x 2 DU** Type 1 Primary or secondary meter area Item no. 5096 87 9
	Distance > 10 m Buildings of lightning protection class I to IV (e.g. industrial buildings, computer centres and hospitals) Distance between main distributor box and sub-distributor box and/or combined distributor.	TN-C MCD 50-B/3 500 A*, 3x 2 DU** Type 1 Primary or secondary meter area Item no. 5096 87 7	TN TT V20-3+NPE-280 160 A*, 4 DU** Type 2 With visual signalling, item no. 5095 25 3 With remote signalling (RS) Item no. 5095 33 3 Type 2 Secondary meter area

*If upstream protection > than indicated value: selective protection of arrestors with indicated value
** Dividing unit = 17.5 mm grid width for top hat fixing rail

FineController FC-D
Universal fine protection use as socket adapter device,
16 A*
Art.-Nr. **5092 80 0**



CNS-3-D
Universal fine protection with additional audible error signalling and 3x socket bar,
16 A*
Item no. **5092 70 1**



FineController FC-TV-D
Fine protection device with integrated surge protection module for TV supply cable, incl. adapter cable, 16 A*
Item no. **5092 80 8**



ÜSM-A and ÜSM-A-2
Surge protection module universal, for stationary installation in standard concealed or duct installation boxes. With audible signalling, 16 A*

Item no. **5092 45 1**
Item no. **5092 46 0**



FineController FC-SAT-D
Fine protection device with integrated surge protection module for SAT supply cable, incl. adapter cable, 16 A*
Item no. **5092 81 6**



ÜSS 45-O und ÜSS 45-A
Surge protection module 45 for stationary installation in Rapid 45 ducts, dado ducts and underfloor systems, 16 A*

With visual function display
ÜSS 45-O
Item no. **6117 47 3**

With audible function display
ÜSS 45-A
Item no. **6117 46 5**



FineController FC-ISDN-D
Fine protection device with integrated surge protection module for ISDN, terminals, incl. adapter cable, 16 A*
Item no. **5092 81 2**



VF 230-AC/DC
Surge protection device, suitable for installation in sub-distributor boxes or in switch cabinets.
20 A*, 1 DU**

With visual signalling
Item no. **5097 65 0**

With remote signalling (RS)
Item no. **5097 85 8**



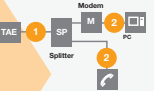

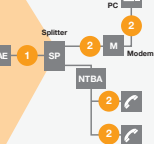

V 10 Compact
Surge protection devices, Type 2+3 for rotary current systems (3 phases, N, PE)
For installation in sub-distributor boxes or in switch cabinets
63 A*, 2,5 DU**

With visual function display
V 10 Compact Item no. **5093 38 0**
With audible signalling (AS)
V 10 Compact-AS Item no. **5093 39 1**
With remote signalling (RS)
V 10 Compact-FS Item no. **5093 38 2**

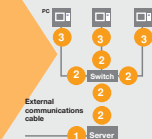






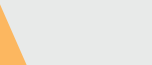






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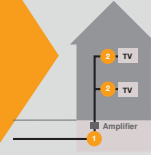













Telecommunications

Situation Please select the appropriate connection type	1 Installation location ■ Behind the TC transfer point/building entry point ■ Basic protection device or combined protection device	2 Installation location ■ At TC terminal/modem/PC ■ Fine protection device
DSL connection + analogue telephone  IP-Telefonie 	Teledefender TD-4/I Installation in front of DSL splitter Item no. 5081 69 2 Alternatively Teledefender TD-2D-V Installation in front of DSL splitter Item no. 5081 69 8	RJ11-Tele/4-F Installation in front of analogue terminals Item no. 5081 97 7 Net Defender Data cable protection device for high-speed networks Item no. 5081 80 0
DSL + ISDN 	Teledefender TD-4/I Installation in front of DSL splitter Item no. 5081 69 2 Alternatively Teledefender TD-2D-V Installation in front of DSL splitter Item no. 5081 69 8	Net Defender Data cable protection device for high-speed networks Item no. 5081 80 0 FC-TAE-D Fine protection device with integrated surge protection module for power supply to telecom equipment (TAE connector) 16 A* Item no. 5092 82 4
ISDN 	Teledefender TD-4/I-TAE-F Installation in front of DSL splitter Item no. 5081 69 2 Alternatively Teledefender TD-4/I for NTBA Art.-Nr. 5081 69 0 FC-TAE-D Fine protection device with integrated surge protection module for power supply to telecom equipment (TAE connector) 16 A* Item no. 5092 82 4	Net Defender Data cable protection device for high-speed networks Item no. 5081 80 0 Alternatively FineController FC-ISDN-D Fine protection device with integrated surge protection module for ISDN, terminals, incl. adapter cable, 16 A* Item no. 5092 81 2

Data technology

Initial situation Please select the appropriate cable type	1 Installation location ■ Installation in front of the server	2 Installation location ■ Installation on the switch	3 Installation location ■ Installation in front of the (PC, IP camera)
Netzwerke Class EA / CAT 6A 	Net Defender Data cable protection device for high-speed networks Item no. 5081 80 0 	Net Defender Data cable protection device for high-speed networks Item no. 5081 80 0 	Net Defender Data cable protection device for high-speed networks Item no. 5081 80 0 
CCTV application 	Protection of IP-based CCTV Protection of coaxial-based CCTV	Net Defender Data cable protection device for high-speed networks Item no. 5081 80 0 	Koax B-E2 FF-F Data cable protection device for coaxial systems item no. 5082 43 4 Alternatively Koax B-E2 MF-F Data cable protection device for coaxial systems item no. 5082 43 2 
Power supply 	CNS-3-D Item no. 5092 70 1  V10 Compact for the sub-distributor and/or switch cabinet Item no. 5093 38 0 	CNS-3-D Item no. 5092 70 1 	CNS-3-D Item no. 5092 70 1 alternativ FineController FC-D Fine protection 230 V Item no. 5092 80 0 

TV, video, SAT and radio

Initial situation Please select the right application	1 Installation location ■ Installation between BC transition point and booster	2 Installation location ■ Installation in front of each terminal device (TV/video/hi-fi)
Broadband (Cable TV) 	DS-F m/f Item no. 5093 27 5  DS-F f/f Item no. 5093 27 2 	FineController FC-TV-D Fine protection devices with integrated surge protection module for TV supply cable for the protection of TV units and/or video recorders, incl. adapter cable Item no. 5092 80 8 
SAT reception system ■ With receiver (e.g. in single family house)	■ Installation between LNB and receiver/multi switch, directly on device to be protected DS-F m/f Item no. 5093 27 5  DS-F f/f Item no. 5093 27 2  TV 4+1 Compact protection device (4x SAT, 1x terrestrial) Item no. 5083 40 0 	■ Installation in front of each terminal (receiver and/or TV/video/hi-fi) FineController FC-SAT-D Fine protection devices with an integrated surge protection module for the TV/SAT supply cable for the protection of TV/SAT receivers, incl. adapter cable Item no. 5092 81 6 
SAT reception system ■ With multi switch ■ With multi-LNB (e.g. in apartment bldg.)	DS-F m/f Item no. 5093 27 5  DS-F f/f Item no. 5093 27 2  TV 4+1 Compact protection device (4x SAT, 1x terrestrial) Item no. 5083 40 0 	FineController FC-SAT-D Fine protection devices with an integrated surge protection module for the TV/SAT supply cable for the protection of TV/SAT receivers, incl. adapter cable Item no. 5092 81 6 
Terrestrial receiver unit ■ Analogue TV ■ DVB-T	■ Installation between antenna and booster DS-F m/f Item no. 5093 27 5  DS-F f/f Item no. 5093 27 2 	■ Installation in front of each terminal (TV/Video/hi-fi) FineController FC-TV-D Fine protection devices with an integrated surge protection module for the TV supply cable for the protection of TV units and/or video recorders, incl. adapter cable. Item no. 5092 80 8 