

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	
<p>▶ No external lightning protection system</p> <p>▶ Earthing cable-connection</p>	<p>Distance < 10 m</p> <p>Private building (e.g. single family house) Distance between main distributor box and sub-distributor box and/or combined distributor.</p>	<p>TN TT V10 Compact 63 A*, 2,5 DU**</p> <p>Type 2, type 3 Secondary meter area</p> <p>With visual signalling With audible signalling (AS), With remote signalling (RS),</p> <p>item no. 5093 38 0 item no. 5093 39 1 item no. 5093 38 2</p>	<p>Not required</p>	
	<p>Distance > 10 m</p> <p>Apartment buildings Industry/commerce Distance between main distributor box and sub-distributor box and/or combined distributor.</p>	<p>TN TT V20-3+NPE-280 160 A*, 4 DU**</p> <p>Type 2 Secondary meter area</p> <p>With visual signalling With remote signalling (RS)</p> <p>Item no. 5095 25 3 Item no. 5095 33 3</p>	<p>TN TT V20-3+NPE-280 160 A*, 4 DU**</p> <p>Type 2 Secondary meter area</p> <p>With visual signalling With remote signalling (RS)</p> <p>Item no. 5095 25 3 Item no. 5095 33 3</p>	<p>FineController FC-D Universal fine protection use as socket adapter device, 16 A* Art.-Nr. 5092800</p> <p>FineController FC-TV-D Fine protection device with integrated surge protection module for TV supply cable, incl. adapter cable, 16 A* Item no. 5092808</p> <p>FineController FC-SAT-D Fine protection device with integrated surge protection module for SAT supply cable, incl. adapter cable, 16 A* Item no. 5092816</p> <p>FineController FC-TAE-D Fine protection device with integrated surge protection module for power supply to telecom equipment (TAE connector) for the protection of ISDN S 0 -NTBA, DSL splitters or analogue devices incl. adapter cable, 16 A* Item no. 5092824</p> <p>FineController FC-ISDN-D Fine protection device with integrated surge protection module for ISDN, terminals, incl. adapter cable, 16 A* Item no. 5092812</p> <p>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**</p> <p>With visual function display V 10 Compact Item no. 5093380 With audible signalling (AS) V 10 Compact-AS Item no. 5093391 With remote signalling (RS) V 10 Compact-FS Item no. 5093382</p>
<p>▶ External lightning protection system (acc. to VDE 0185-305/ DIN EN 62305/ IEC 62305)</p>	<p>Distance > 10 m</p> <p>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.</p>	<p>TN TT V50-3+NPE-280 160 A*, 4 DU**</p> <p>Type 1+2 Secondary meter area</p> <p>With visual signalling With remote signalling (RS)</p> <p>Item no. 5093 52 6 Item no. 5093 53 3</p>	<p>TN TT V20-3+NPE-280 160 A*, 4 DU**</p> <p>Type 2 Secondary meter area</p> <p>With visual signalling, item no. 5095 25 3 With remote signalling (RS) Item no. 5095 33 3</p>	
	<p>Distance < 10 m</p>	<p>TN TT V50-3+NPE-280 160 A*, 4 DU**</p> <p>Type 1+2 Secondary meter area</p> <p>With visual signalling With remote signalling (RS)</p> <p>Item no. 5093 52 6 Item no. 5093 53 3</p>	<p>Not required</p>	<p>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. 5092451 Item no. 5092460</p> <p>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. 6117473 With audible function display ÜSS 45-A Item no. 6117465</p> <p>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</p>
<p>▶ Open line connection (acc. to VdS 2031)</p>	<p>Distance < 10 m</p>	<p>TN-C MCD 50-B/3 500 A*, 3x 2 DU** Type 1 Primary or secondary meter area</p> <p>Item no. 5096877</p>	<p>TN-S MCD 50-B/3+1 500 A*, 4x 2 DU** Type 1 Primary or secondary meter area</p> <p>Item no. 5096879</p>	<p>Not required</p>
<p>▶ Earthed antenna structures (Recommendation)</p>	<p>Distance > 10 m</p>	<p>TN-C MCD 50-B/3 500 A*, 3x 2 DU** Type 1 Primary or secondary meter area</p> <p>Item no. 5096877</p>	<p>TN-S MCD 50-B/3+1 500 A*, 4x 2 DU** Type 1 Primary or secondary meter area</p> <p>Item no. 5096879</p>	<p>TN TT V20-3+NPE-280 160 A*, 4 DU** Type 2 Secondary meter area</p> <p>With visual signalling, item no. 5095 25 3 With remote signalling (RS) item no. 5095 33 3</p>

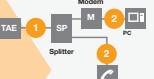
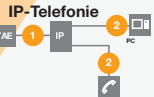
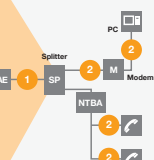
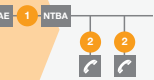
*If upstream protection > than indicated value: selective protection of arrestors with indicated value

**Dividing unit = 17.5 mm grid width for top hat fixing rail

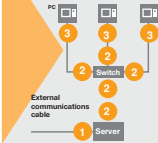

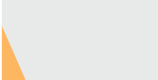


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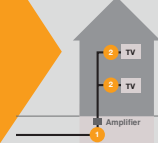
Telecommunications

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	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 <ul style="list-style-type: none"> With receiver (e.g. in single family house) 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Analogue TV DVB-T 	<ul style="list-style-type: none"> Installation between antenna and booster DS-F m/f Item no. 5093 27 5 DS-F f/f Item no. 5093 27 2	<ul style="list-style-type: none"> 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

