

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** Type 2</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>▶ 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** Type 2</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>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.</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>▶ 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>▶ 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>

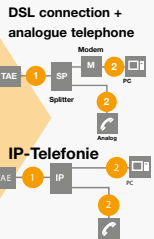



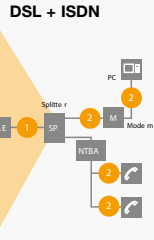








*if upstream protection > than indicated value: selective protection of arrestors with indicated value

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

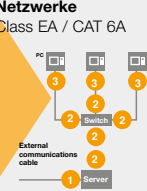














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Telecommunications

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 	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-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 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 Net Defender Data cable protection device for high-speed networks Item no. 5081 80 0 	Protection of coaxial-based CCTV 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 	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 