



BLITZDUCTOR® SP Surge Arrester.



Surge arrester

- High discharge capacity for 2-pole, 3-pole or 4-pole interfaces and minimum space requirements
- Type 2 arrester with very low voltage protection level ideally suited for the protection of terminal equipment, even for sensitive terminal equipment according to test level 1 (< 500V)
- Snaplock system with button release for easy insertion and removal of the SPD modules and safe operation even in case of shock and vibrations



Pluggable, multipole, universal surge arrester for use in IT systems. SPD module and base part have to be ordered separately.

BLITZDUCTOR SP is a pluggable, multipole, universal surge arrester for use as terminal block system in measuring and control circuits, bus systems, alarm systems and telecommunication systems. BLITZDUCTOR SP surge arresters combine a permanently high impulse current discharge capacity with an extremely low protection level for reliable protection of terminal equipment against lightning effects and surges resulting from switching operations.

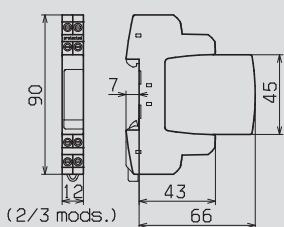
To ensure safe operation, the arrester provides protection against vibration effects and shock loads up to a 30-fold acceleration of gravity. The function-optimised design of the arrester ensures both quick and easy replacement of SPD modules which house all relevant protection elements. A wide range of accessories, e.g. for labelling, earthing of unused lines or easy testing of lines, completes the product range and makes the BLITZDUCTOR SP arrester especially user-friendly.



Completely installed BLITZDUCTOR SP. Especially space-saving, two-part design with universal base part and application-specific SPD module for DIN rail mounting.



BXT base part:
Universal base part for all SPD modules. Optimises storage and favors prewiring and service. A make-before-break switch contact allows plugging in and removing modules without signal interruption. Protection modules can thus be easily replaced during operation.

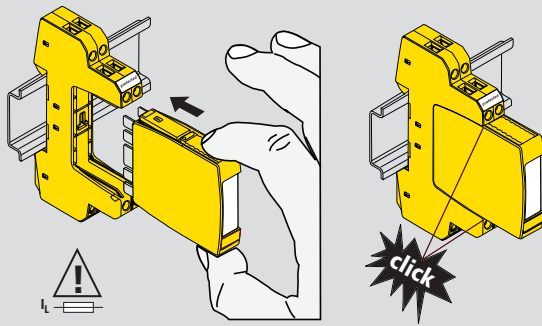


Dimension drawing of the plugged-in SPD module. Width of 2/3 modules (12 mm), suitable for DIN rail mounting in distribution boards.

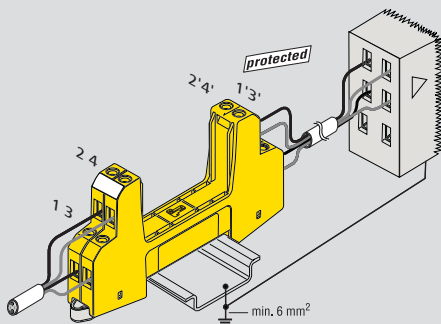
BLITZDUCTOR SP protection modules feature a fail-safe function. If an SPD is destroyed by means of lightning or overvoltage incidents exceeding the device specification, generally this causes a short-circuit or an interruption of the signal line. In both cases further overvoltages are interrupted and short-circuited. Thus, the overvoltage can not damage the system to be protected. The signal on the line is also interrupted and the system fails. By simply removing the protection module, the make-before-break switch contact in the BXT base part re-establishes signal transmission. After a new protection module has been plugged in, surge protection is restored again.



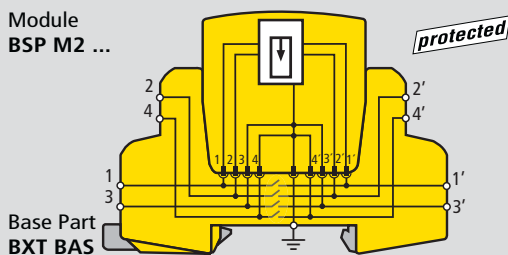
BSP M4 B ...:
SPD modules for 4 single lines or 2 pairs.
BSP M2 B:
SPD modules for 2 single lines or 1 pair. The BSP ML2 ... S version also features contacts for direct shield earthing.



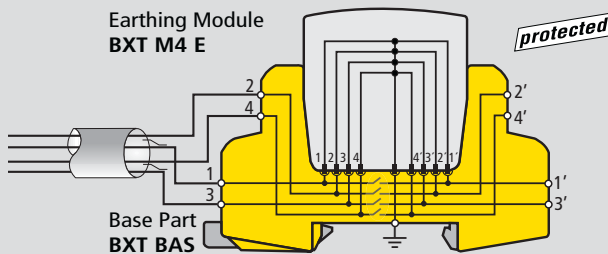
The function-optimised design of the arrester allows both to safely plug the arrester module into the base part and to remove it without problems. The module is secured in the base part by snapping it in (audible click). When pressing the yellow buttons, the module can be removed with little effort. This is ensured by the laminated contacts in the base part and the pressure spring of the module.



Up to four lines can be connected on two levels. Suitable for terminal block systems, lines of a pair belonging to each other are connected on top of one another.

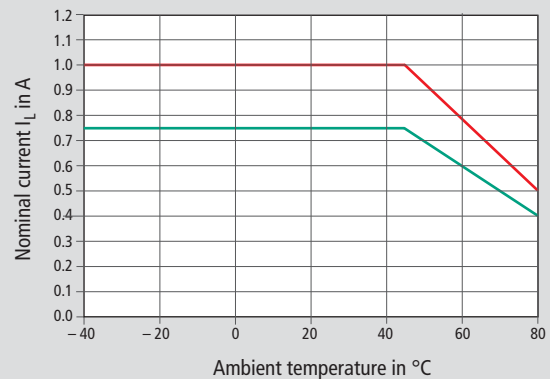


A both-sided direct earthing of the line shield can be performed by means of SPD modules type BSP M2 Transient impulse currents on the shield are discharged via the direct shield earthing on terminals 3, 3' or 4, 4'.



Unused lines of stranded cables should be laid and earthed. If the unused lines are connected to base parts, BXT M4 E earthing modules should be used thus reserving space for retrofitting SPD modules and efficiently integrating the lines in the equipotential bonding circuit.

Derating of nominal current

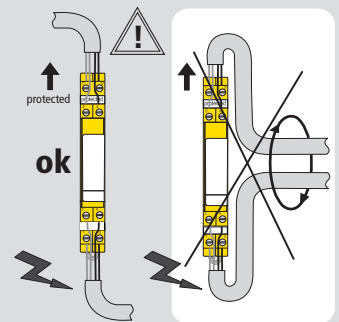


BSP M4 / M2 ...

BE	5	12	24	48	60	180
BD	5	12	24	48	60	180
BE HF	5					
BD HF	5		24			

BSP with series impedance 1 Ω:
 BSP with series impedance 1,8 Ω:

The protected lines always have to be assigned to terminals 1' to 4' (protected) of the base part. In order not to reduce the protective effect, protected and unprotected lines have to be installed separately.



The clamps integrated into the base part can be used with many 2-pole modules for shield earthing. Especially for bus systems, the EMC spring terminal should be used for wide connection of line shields.

Common Data

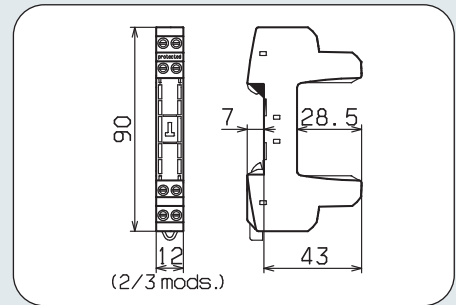
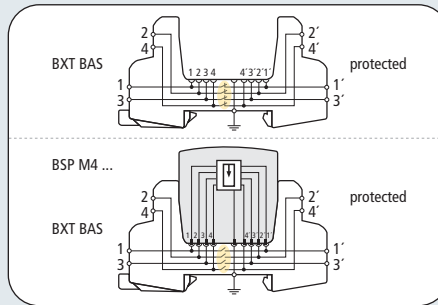
SPD class	TYPE 2 P1
C2 Total nominal discharge current (8/20 μs) I _n	20 kA
C2 Nominal discharge current (8/20 μs) per line I _n	10 kA
Bandwidth line-PG f _G	1.0 MHz or higher
Operating temperature range	-40°C...+80°C
Degree of protection (plugged-in)	IP 20
Earthing by	base part BXT BAS
Enclosure material	polyamide PA 6.6
Colour	yellow
Test standards	IEC 61643-21
Approvals, Certifications	UL (except 926 375, 926 275)

BLITZDUCTOR® Base Part

BXT BAS

INFORMATION TECHNOLOGY SYSTEMS

PLUGGABLE SPDs FOR DIN RAIL MOUNTING



- Four-pole version for universal use with all types of SPD modules
- Allows to plug in and remove the modules without signal interruption
- Universal design without protection elements

Basic circuit diagram with and without plug-in module

Dimension drawing BXT BAS

The base part BXT BAS is a very space-saving, four-pole, universal feed-through terminal for the insertion of SPD modules without signal interruption. The snap-in mechanism at the supporting foot of the base part allows the device to be safely earthed via the DIN rail. As no components of the protective circuit are situated in the base part, maintenance operation is only required for the protection modules.

BXT BAS

Operating temperature range	-40°C...+80°C
Degree of protection	IP 20
For mounting on	35 mm DIN rail according to EN 60715
Connection input / output	screw / screw
Cross-sectional area, solid	0.08 - 4 mm ²
Cross-sectional area, flexible	0.08 - 2.5 mm ²
Tightening torque (terminals)	0.4 Nm
Earthing by	35 mm DIN rail according to EN 60715
Enclosure material	polyamide PA 6.6
Colour	yellow
Approvals, Certifications	CSA, UL, VdS

Ordering information

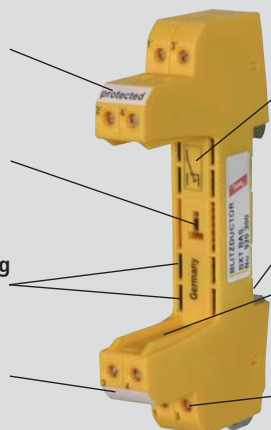
Type	BXT BAS
Part No.	920 300
Packing unit	1 pc(s).

Clear identification of the „protected“ side for faultless installation

Module release spring for removing the protection module without problems

Lightning current carrying laminated contacts

Designation space for marking the circuits



Make-before-break leading/retarded switch contacts for uninterrupted removal and insertion during operation

The **earthing foot** ensures cost-effective installation. No additional earth connection is required since the device is safely earthed via the DIN rail

Reverse polarity protection prevents incorrect insertion of the protection module

High-quality, four-pole screw terminals for the following cross-sections:
stranded: 2,5 mm² (AWG 14)
solid: 4 mm² (AWG 10)

Accessory Part for BLITZDUCTOR® SP

EMC Spring terminals

Two spring terminals for permanent low-impedance shield contacting of the protected and unprotected side of a BLITZDUCTOR device. With integrated terminal coding for direct or indirect shield earthing, cable ties and insulating strips included.



Type	PU pc(s)	Part No.
SAK BXT LR	1	920 395

Marking system 1-50

Plate with 2 plate numbers from 1 to 50 for attaching to base parts or modules.



Type	PU pc(s)	Part No.
BS 1 50 BXT	1	920 399

BLITZDUCTOR® SP Modules

Pluggable, multipole, universal surge arrester for use in IT systems. SPD module and base part have to be ordered separately.

BSP M4 BE 5 – BE 180

Space-saving surge arrester module for protecting 4 single lines with common reference potential and unbalanced interfaces.

Type	BE 5	BE 12	BE 24	BE 48	BE 60	BE 180
SPD class	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt
Max. continuous operating d.c. voltage U_c	6.0 V	15 V	33 V	54 V	70 V	180 V
Nominal current for 45°C I_L	1.0 A	0.75 A	0.75 A	0.75 A	1.0 A	1.0 A
	PU		Part			
Type	pc(s)		No.			
BSP M4 BE 5	1		926 320			
BSP M4 BE 12	1		926 322			
BSP M4 BE 24	1		926 324			
BSP M4 BE 48	1		926 325			
BSP M4 BE 60	1		926 326			
BSP M4 BE 180	1		926 327			



BSP M4 BD 5 – BD 180

Space-saving surge arrester module for protecting 2 pairs at balanced interfaces with electrical isolation.

Type	BD 5	BD 12	BD 24	BD 48	BD 60	BD 180
SPD class	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt
Max. continuous operating d.c. voltage U_c	6.0 V	15 V	33 V	54 V	70 V	180 V
Nominal current for 45°C I_L	1.0 A	1.0 A	1.0 A	1.0 A	1.0 A	0.75 A
	PU		Part			
Type	pc(s)		No.			
BSP M4 BD 5	1		926 340			
BSP M4 BD 12	1		926 342			
BSP M4 BD 24	1		926 344			
BSP M4 BD 48	1		926 345			
BSP M4 BD 60	1		926 346			
BSP M4 BD 180	1		926 347			



BSP M4 BE HF 5

Space-saving surge arrester module for protecting 4 single lines with common reference potential and high-frequency transmissions without electrical isolation.

Type	BSP M4 BE HF 5	
SPD class	TYPE 2 Pt	
Max. continuous operating d.c. voltage U_c	6.0 V	
Nominal current for 45°C I_L	1.0 A	
	PU	Part
Type	pc(s)	No.
BSP M4 BE HF 5	1	926 370



BSP M4 BD HF 5 / 24

Space-saving surge arrester module for protecting 2 pairs of high-frequency bus systems or video transmissions.

Type	BSP M4 BD HF 5	BSP M4 BD HF 24
SPD class	TYPE 2 Pt	TYPE 1 Pt
Max. continuous operating d.c. voltage U_c	6.0 V	33 V
Nominal current for 45°C I_L	1.0 A	1.0 A
	PU	Part
Type	pc(s)	No.
BSP M4 BD HF 5	1	926 371
BSP M4 BD HF 24	1	926 375



Accessory Part for BLITZDUCTOR® SP

Earthing module

For direct earthing of lines connected to the BLITZDUCTOR base part.

Type	PU	Part
	pc(s)	No.
BXT M4 E	1	920 308



BSP M2 BE 5 – BE 180

Space-saving surge arrester module for protecting 2 single lines with common reference potential and unbalanced interfaces.

Type	BE 5	BE 12	BE 24	BE 48	BE 60	BE 180
SPD class	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt
Max. continuous operating d.c. voltage U_c	6.0 V	15 V	33 V	54 V	70 V	180 V
Nominal current for 45°C I_L	1.0 A	0.75 A	0.75 A	0.75 A	1.0 A	1.0 A
	PU		Part			
Type	pc(s)		No.			
BSP M2 BE 5	1		926 220			
BSP M2 BE 12	1		926 222			
BSP M2 BE 24	1		926 224			
BSP M2 BE 48	1		926 225			
BSP M2 BE 60	1		926 226			
BSP M2 BE 180	1		926 227			

BSP M2 BD 5 – BD 180

Space-saving surge arrester module for protecting 1 pair of balanced interfaces with electrical isolation.

Type	BD 5	BD 12	BD 24	BD 48	BD 60	BD 180
SPD class	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt	TYPE 2 Pt
Max. continuous operating d.c. voltage U_c	6.0 V	15 V	33 V	54 V	70 V	180 V
Nominal current for 45°C I_L	1.0 A	1.0 A	1.0 A	1.0 A	1.0 A	0.75 A
	PU		Part			
Type	pc(s)		No.			
BSP M2 BD 5	1		926 240			
BSP M2 BD 12	1		926 242			
BSP M2 BD 24	1		926 244			
BSP M2 BD 48	1		926 245			
BSP M2 BD 60	1		926 246			
BSP M2 BD 180	1		926 247			

BSP M2 BE HF 5

Space-saving surge arrester module for protecting 2 single lines with common reference potential and high-frequency transmissions without electrical isolation.

Type	BSP M2 BE HF 5	
SPD class	TYPE 2 Pt	
Max. continuous operating d.c. voltage U_c	6.0 V	
Nominal current for 45°C I_L	1.0 A	
	PU	Part
Type	pc(s)	No.
BSP M2 BE HF 5	1	926 270

BSP M2 BD HF 5 / 24

Space-saving surge arrester module for protecting 1 pair in high-frequency bus systems or video transmissions.

Type	BSP M2 BD HF 5	BSP M2 BD HF 24
SPD class	TYPE 2 Pt	TYPE 1 Pt
Max. continuous operating d.c. voltage U_c	6.0 V	33 V
Nominal current for 45°C I_L	1.0 A	1.0 A
	PU	Part
Type	pc(s)	No.
BSP M2 BD HF 5	1	926 271
BSP M2 BD HF 24	1	926 275

*) available in the first quarter of 2010

Accessory Part for BLITZDUCTOR® SP

Test / Disconnection module

Module for testing lines, for plugging into the BLITZDUCTOR base part.

Type	PU	Part
	pc(s)	No.
BXT M4 T	1	920 309



Interface Signal	BLITZDUCTOR SP	
	4-pole module	2-pole module
0-20 mA, 4-20 mA (also with HART)	926 324	926 224
4-20 mA (also with HART) according to NAMUR recommendation NE 21 or according to EN 61000-4-5, open-circuit voltage 1 kV A-PG	926 344	926 244
ADVANT	926 370	926 270
ADSL	926 347	926 247
Binary signals	926 320 – 327	926 220 – 225
Bitbus	926 370	926 270
BLN	926 342 926 345	926 242 926 245
CAN Bus (data line only)	926 370	926 270
C Bus (Honeywell)	926 370	926 270
Data Highway Plus	926 242	926 242
Delta Net Peer Bus	926 370	926 270
Datex-P	926 375	926 275
Device Net (data line only)	926 370	926 270
E Bus (Honeywell)	926 345	926 245
ET 200	926 370	926 270
Fieldbus Foundation	926 344	926 244
FIPIO/FIPWAY	926 344	926 244
FIP I/O	926 370	926 270
FSK	926 370	926 270
Genius I/O Bus	926 342	926 242
HDSL up to 30 dBm for 600 W	926 375	926 275
IEC Bus (RS 485)	926 370	926 270
INTERBUS-INLINE (I/O)	926 345	926 245
K Bus	926 344	926 244
KBR Energy bus	926 370	926 270
ISDN S ₀	926 371	926 271
ISDN S _{2m} / U _{2m}	926 375	926 275
ISDN U _{K0} / U _{P0}	926 347	926 247
LON TP/XF 78	926 340	926 240
TP/FTT 10 up to 1 A and TP/LPT10	926 345	926 245
TP/FTT 10	926 371	926 271
LUXMATE Bus	926 344	926 244
M Bus	926 345	926 245
MODBUS	926 370	926 270
Modem M1	926 322	926 222
MPI Bus	926 370	926 270
N1 LAN	926 371	926 271

Interface Signal	BLITZDUCTOR SP	
	4-pole module	2-pole module
N2 Bus (Johnson Controls, LON, FTT 10)	926 371	926 271
Procontic CS31 (RS 232)	926 322	
Procontic T200 (RS 422)	926 371	
PROFIBUS-DP/FMS	926 370	926 270
PROFIBUS-PA	926 344	926 244
PROFIBUS	926 370	
SIMATIC NET		926 270
PSM-EG-RS 422	926 371	
PSM-EG-RS 485	926 371	926 271
Rackbus (RS 485)	926 371	926 271
R Bus	926 340	926 240
RS 485	926 370	926 270
RS 422, V11	926 370	926 270
S Bus	926 370	926 270
SafetyBUS p	926 370	926 270
SDLC	926 370	926 270
Securilan LON BUS	926 340	926 240
SHDSL	926 375	
SIGMASYS	926 345 926 325	926 245 926 225
SINEC L1	926 370	926 270
SINEC L2	926 370	926 270
SS97 SINIS (RS 232)	926 322	926 222
SUCONET	926 370	926 270
T-DSL	926 347	926 247
Telephony, System Telephony e. g. Siemens, HICOM, Alcatel	926 347	926 247
TELEPERM M Analogue input	926 322 926 324	926 222 926 224
TELEPERM M Binary input/output	926 325	926 225
TELEPERM MES 100 K	926 322	926 222
TELEPERM MFM 100	926 342	926 242
TELEPERM M Coupling AG S5 ET 100	926 324	926 224
Temperature measurement PT 100, PT 1000, Ni 1000, NTC, PTC	926 320	926 220
TTL	926 322	926 222
V 24 (RS 232 C)	926 322	
Video (2-wire)	926 370 926 371	926 270 926 271

BLITZDUCTOR CT		BLITZDUCTOR SP		
Part No.	Type	Part No.	Type	
919 506	BCT BAS	920 300	BXT BAS	
919 310	BCT MLC B 110	—		
919 320	BCT MLC BE 5	926 220 926 320	BSP M2 BE 5 BSP M4 BE 5	or
919 321	BCT MLC BE 12	926 222 926 322	BSP M2 BE 12 BSP M4 BE 12	or
919 322	BCT MLC BE 15	926 222 926 322	BSP M2 BE 12 BSP M4 BE 12	or
919 323	BCT MLC BE 24	926 224 926 324	BSP M2 BE 24 BSP M4 BE 24	or
919 324	BCT MLC BE 30	926 224 926 324	BSP M2 BE 24 BSP M4 BE 24	or
919 325	BCT MLC BE 48	926 225 926 325	BSP M2 BE 48 BSP M4 BE 48	or
919 326	BCT MLC BE 60	926 326	BSP M4 BE 60	
919 327	BCT MLC BE 110	926 327	BSP M4 BE 180	
919 360	BCT MLC BE C 5	—		
919 361	BCT MLC BE C 12	—		
919 362	BCT MLC BE C 24	—		
919 363	BCT MLC BE C 30	—		
919 340	BCT MLC BD 5	926 240 926 340	BSP M2 BD 5 BSP M4 BD 5	or
919 341	BCT MLC BD 12	926 242 926 342	BSP M2 BD 12 BSP M4 BD 12	or
919 342	BCT MLC BD 15	926 242 926 342	BSP M2 BD 12 BSP M4 BD 12	or
919 343	BCT MLC BD 24	926 244 926 344	BSP M2 BD 24 BSP M4 BD 24	or
919 344	BCT MLC BD 30	926 244 926 344	BSP M2 BD 24 BSP M4 BD 24	or
919 345	BCT MLC BD 48	926 245 926 345	BSP M2 BD 48 BSP M4 BD 48	or
919 346	BCT MLC BD 60	926 346	BSP M4 BD 60	
919 347	BCT MLC BD 110	926 247 926 347	BSP M2 BD 180 BSP M4 BD 180	or
919 349	BCT MLC BD 250	—		
919 370	BCT MLC BD HF 5	926 270 926 370	BSP M2 BE HF 5 BSP M4 BE HF 5	or
919 371	BCT MLC BD HFD 5	926 271 926 371	BSP M2 BD HF 5 BSP M4 BD HF 5	or
919 375	BCT MLC BD HFD 24	926 275 926 375	BSP M2 BD HF 5 BSP M4 BD HF 5	or
919 520	BCT MOD ME 5	926 220 926 320	BSP M2 BE 5 BSP M4 BE 5	or
919 521	BCT MOD ME 12	926 222 926 322	BSP M2 BE 12 BSP M4 BE 12	or
919 522	BCT MOD ME 15	926 222 926 322	BSP M2 BE 12 BSP M4 BE 12	or
919 523	BCT MOD ME 24	926 224 926 324	BSP M2 BE 24 BSP M4 BE 24	or

BLITZDUCTOR CT		BLITZDUCTOR SP		
Part No.	Type	Part No.	Type	
919 524	BCT MOD ME 30	926 224 926 324	BSP M2 BE 24 BSP M4 BE 24	or
919 525	BCT MOD ME 48	926 225 926 325	BSP M2 BE 48 BSP M4 BE 48	or
919 526	BCT MOD ME 60	926 226 926 326	BSP M2 BD HF 5 BSP M4 BD HF 5	or
919 527	BCT MOD ME 110	926 227 926 327	BSP M2 BD HF 5 BSP M4 BD HF 5	or
919 560	BCT MOD ME C 5	—		
919 561	BCT MOD ME C 12	—		
919 562	BCT MOD ME C 24	—		
919 563	BCT MOD ME C 30	—		
919 540	BCT MOD MD 5	926 240 926 340	BSP M2 BD 5 BSP M4 BD 5	or
919 541	BCT MOD MD 12	926 242 926 342	BSP M2 BD 12 BSP M4 BD 12	or
919 542	BCT MOD MD 15	926 242 926 342	BSP M2 BD 12 BSP M4 BD 12	or
919 543	BCT MOD MD 24	926 244 926 344	BSP M2 BD 24 BSP M4 BD 24	or
919 544	BCT MOD MD 30	926 244 926 344	BSP M2 BD 24 BSP M4 BD 24	or
919 545	BCT MOD MD 48	926 245 926 345	BSP M2 BD 48 BSP M4 BD 48	or
919 546	BCT MOD MD 60	926 246 926 346	BSP M2 BD 48 BSP M4 BD 48	or
919 547	BCT MOD MD 110	926 247 926 347	BSP M2 BD 180 BSP M4 BD 180	or
919 570	BCT MOD MD HF 5	926 270 926 370	BSP M2 BE HF 5 BSP M4 BE HF 5	or
919 571	BCT MOD MD HFD 5	926 271 926 371	BSP M2 BD HF 5 BSP M4 BD HF 5	or
919 575	BCT MOD MD HFD 24	926 375	BSP M4 BD HF 24	
919 552	BCT MOD MD TC N	—		
919 589	BCT MOD MY 250	—		

SPDs for hazardous (potentially explosive) areas

919 507	BCT BAS EX	920 301	BXT BAS EX
919 580	BCT MOD MD EX 24	920 381	BXT M4 BD EX 24
919 581	BCT MOD MD EX 30	920 381	BXT M4 BD EX 24
919 583	BCT MOD MD HFD EX 6	—	

Accessories

919 502	GDT 90	—	
919 504	BCT MOD PTS	920 309	BXT M4 T
919 505	EKS BCT	920 308	BXT M4 E
919 508	EFK BCT	920 395	SAK BXT LR



**Lightning Protection
Surge Protection
Safety Equipment**

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Fort Pierce, FL 34945

Local Phone: 772.460.9315
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