

B20M Vseries

- Lightning impulse current and surge arresters type T1+T2.
- The products consist of gas discharge tube with high discharge ability.
- Installed at the boundaries of LPZ 0 LPZ 2, in TN-S, TT power supply systems and in a special design also in IT power supply system.
- Balance the potential between the N and PE conductors in 1+1, 3+1 connection modes.
- Ensures zero leakage current through the PE conductor.
- **M** indication specifies a type of construction with removable module.

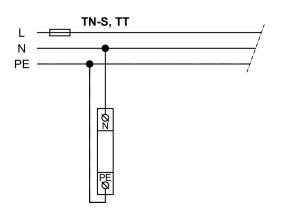
SystemTN-S, TTMaximum continuous operating voltage AC U_c 255 VImpulse discharge current for class I test (10/350) N/PE I_{mp} 20 kACharge (N/PE)Q10 AsSpecific energy for class I test (N/PE)W/R100 kJ/QNominal discharge current for class II test (8/20) N/PE I_n 20 kAVoltage protection level at I_{mp} U_p <1.3 kVTemporary overvoltage test (TOV) for $t_\tau = 0.2 s$ (N/PE) U_{τ} 1 200 VResponse time (N/PE) t_n <100 nsFollow current interrupt rating I_n 0.1 kA _{mm} Lightning protection zoneIP2 0-1, LPZ 1-2, LPZ 2-3Housing materialPolyamid PA6, UL94 V-0Degree of protectionIP20Operating temperature9-40 + 70 °CMinimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022S6 mm² (L, N)(doesn't apply to ,V' connection) for T116 mm² (PE, PEN)16 mm² (PE, PEN)Clamp fastening range (solid conductor)2.5 + 35 mm²11 HeOperating momentIMIM N11 HeOperating opsitionAnyOpticSignalling at the deviceMOpticImportance of local signalingCK - green targetRemote signallingIMNo	Туре		B20M Vseries
Aximum continuous operating voltage AC U_c 255 VImpulse discharge current for class I test (10/350) N/PE I_{imp} 20 kACharge (N/PE)Q10 AsSpecific energy for class I test (N/PE)W/R100 kJ/QNominal discharge current for class II test (8/20) N/PE I_n 20 kAVoltage protection level at I_{imp} U_p <1.3 kV	Test class according to EN 61643-11:2012 (IEC 61643-11:2011)		T1, T2
Impulse discharge current for class I test (10/350) N/PEImp20 kACharge (N/PE)Q10 AsSpecific energy for class I test (N/PE)W/R100 kJ/QNominal discharge current for class II test (8/20) N/PEIn20 kAVoltage protection level at ImpUp<1.3 kV	System		TN-S, TT
Charge (N/PE)Q10 AsSpecific energy for class I test (N/PE)W/R100 kJ/QNominal discharge current for class II test ($\beta/20$) N/PEIn20 kAVoltage protection level at ImpUp<1.3 kV	Maximum continuous operating voltage AC	U _c	255 V
Basel of the text of	Impulse discharge current for class I test (10/350) N/PE	I _{imp}	20 kA
Nominal discharge current for class II test (8/20) N/PEIn N20 kAVoltage protection level at ImpUp<1.3 kV	Charge (N/PE)	Q	10 As
Voltage protection level at I_{imp} Up< 1.3 kVTemporary overvoltage test (TOV) for $t_r = 0.2$ s (N/PE)Ur1 200 VResponse time (N/PE) t_A < 100 ns	Specific energy for class I test (N/PE)	W/R	100 kJ/Ω
Temporary overvoltage test (TOV) for $t_T = 0.2 s$ (N/PE) U_T 1 200 VResponse time (N/PE) t_A < 100 ns	Nominal discharge current for class II test (8/20) N/PE	l _n	20 kA
Response time (N/PE)t_A< 100 nsFollow current interrupt ratingIn0.1 kArmsLightning protection zoneILPZ 0-1, LPZ 1-2, LPZ 2-3Housing materialPolyamid PA6, UL94 V-0Degree of protectionIP20Operating temperature9-40 - 70 °CMinimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022S6 mm² (L, N)(doesn't apply to "V" connection) for T1I16 mm² (PE, PEN)Clamp fastening range (solid conductor)Z.5 + 35 mm²2.5 mm²Clamp fastening range (solid conductor)Z.5 + 25 mm²11 TEOperating boysitonIOn DIN rail 35 mmModular widthI1 TEOperating of local signalingOpticImportance of local signalingOK - green targetFAULT - red targetINoLifetimeINo	Voltage protection level at I _{imp}	Up	< 1.3 kV
Follow current interrupt ratingIn0.1 kArmsLightning protection zoneILPZ 0.1, LPZ 1.2, LPZ 2.3Housing materialPolyamid PA6, UL94 V-0Degree of protectionIP20Operating temperature9-40 ÷ 70 °CMinimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to "V" connection) for T1Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to "V" connection) for T2Clamp fastening range (solid conductor)Clamp fastening range (solid conductor)Clamp fastening range (stranded conductor)Tightening momentInstallationModular widthOperating positionSignalling at the deviceImportance of local signalingRemote signallingLifetimeLifeti	Temporary overvoltage test (TOV) for $t_T = 0.2 \text{ s} (N/PE)$	U _T	1 200 V
Lightning protection zoneLPZ 0-1, LPZ 1-2, LPZ 2-3Housing materialPolyamid PA6, UL94 V-0Degree of protection9Operating temperature9-40 ÷ 70 °CMinimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to ,V" connection) for T1SMinimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to ,V" connection) for T2SClamp fastening range (solid conductor)2.5 ± 35 mm²Clamp fastening range (solid conductor)2.5 ± 25 mm²Clamp fastening range (stranded conductor)2.5 ± 25 mm²Tightening momentMInstallationOn DIN rail 35 mmModular width1 T EOperating positionAnySignalling at the deviceOpticImportance of local signalingOK - green target FAULT - red targetRemote signalling> 100 000 h	Response time (N/PE)	t _A	< 100 ns
Housing materialPolyamid PA6, UL94 V-0Degree of protection9-40 ÷ 70 °COperating temperature9-40 ÷ 70 °CMinimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to ,,V" connection) for T1S6 mm² (L, N) 16 mm² (PE, PEN)Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to ,,V" connection) for T2S2.5 mm² (L, N) 6 mm² (PE, PEN)Clamp fastening range (solid conductor)22.5 ÷ 35 mm²2.5 mm²Clamp fastening range (stranded conductor)2.5 ÷ 25 mm²2.5 ± 25 mm²Tightening momentM4 Nm11 TEInstallationOn DIN rail 35 mmAnyModular widthIn TEAnySignalling at the deviceOpticOpticImportance of local signalingOK - green target FAULT - red targetRemote signallingImportance> 100 000 h	Follow current interrupt rating	l _{fi}	0.1 kA _{rms}
Degree of protectionIP20Operating temperature\$-40 ÷ 70 °CMinimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to ,V" connection) for T1S6 mm² (L, N) 16 mm² (PE, PEN)Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to ,V" connection) for T2S2.5 mm² (L, N) 6 mm² (PE, PEN)Clamp fastening range (solid conductor)2.5 ÷ 35 mm²2.5 mm²Clamp fastening range (stranded conductor)2.5 ÷ 25 mm²3Tightening moment4 Nm1 TEInstallationOn DIN rail 35 mmModular width1 TEOperating positionAnySignalling at the deviceOK - green target FAULT - red targetRemote signallingNoLifetime> 100 000 h	Lightning protection zone		LPZ 0-1, LPZ 1-2, LPZ 2-3
Operating temperature9-40 ÷ 70 °CMinimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022S6 mm² (L, N)(doesn't apply to "V" connection) for T116 mm² (PE, PEN)16 mm² (PE, PEN)Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022S2.5 mm² (L, N)(doesn't apply to "V" connection) for T22.5 ± 35 mm²2.5 ± 35 mm²Clamp fastening range (solid conductor)2.5 ± 25 mm²2.5 ± 25 mm²Clamp fastening range (stranded conductor)2.5 ± 25 mm²3Tightening moment4 Nm4 NmInstallationOn DIN rail 35 mmModular width1 TEOperating positionAnySignalling at the deviceOpticImportance of local signalingOK - green target FAULT - red targetRemote signalling> 100 000 h	Housing material		Polyamid PA6, UL94 V-0
Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to ,,V" connection) for T1S6 mm² (L, N) 16 mm² (PE, PEN)Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to ,,V" connection) for T2S2.5 mm² (L, N) 6 mm² (PE, PEN)Clamp fastening range (solid conductor)2.5 ÷ 35 mm²2.5 mm²Clamp fastening range (solid conductor)2.5 ÷ 25 mm²Clamp fastening range (stranded conductor)2.5 ÷ 25 mm²Tightening moment4 NmInstallationOn DIN rail 35 mmModular width1 TEOperating positionAnySignalling at the deviceOpticImportance of local signalingOK – green target FAULT – red targetRemote signalling> 100 000 h	Degree of protection		IP20
(doesn't apply to ,,V" connection) for T116 mm² (PE, PEN)Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to ,,V" connection) for T2S2.5 mm² (L, N) 6 mm² (PE, PEN)Clamp fastening range (solid conductor)2.5 ÷ 35 mm²2.5 ÷ 25 mm²Clamp fastening range (stranded conductor)2.5 ÷ 25 mm²3Tightening momentI4 NmInstallationOn DIN rail 35 mmModular widthI1 TEOperating positionAnySignalling at the deviceOpticImportance of local signalingOK - green target FAULT - red targetRemote signallingINoLifetime> 100 000 h	Operating temperature	θ	-40 ÷ 70 °C
(doesn't apply to "V" connection) for T26 mm² (PE, PEN)Clamp fastening range (solid conductor)2.5 ÷ 35 mm²Clamp fastening range (stranded conductor)2.5 ÷ 25 mm²Tightening moment4 NmInstallationOn DIN rail 35 mmModular width1 TEOperating positionAnySignalling at the deviceOpticImportance of local signalingOK – green target FAULT – red targetRemote signallingNoLifetime> 100 000 h	Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to "V" connection) for T1 $$	S	
Clamp fastening range (stranded conductor)2.5 ÷ 25 mm²Tightening moment2.5 ÷ 25 mm²InstallationOn DIN rail 35 mmModular width0n DIN rail 35 mmOperating position1 TESignalling at the deviceAnyImportance of local signalingOK - green target FAULT - red targetRemote signallingNoLifetime> 100 000 h	Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to "V" connection) for T2	S	
Tightening moment 4 Nm Installation On DIN rail 35 mm Modular width 1 TE Operating position Any Signalling at the device Optic Importance of local signaling OK – green target FAULT – red target Remote signalling No Lifetime > 100 000 h	Clamp fastening range (solid conductor)		$2.5 \div 35 \text{ mm}^2$
Installation On DIN rail 35 mm Modular width Operating position Any Signalling at the device Optic Optic Importance of local signaling OK – green target FAULT – red target Remote signalling OK – green target FAULT – red target Solution Solution S	Clamp fastening range (stranded conductor)		$2.5 \div 25 \text{ mm}^2$
Modular width1 TEOperating positionAnySignalling at the deviceOpticImportance of local signalingOK - green target FAULT - red targetRemote signallingNoLifetime> 100 000 h	Tightening moment		4 Nm
Operating position Any Signalling at the device Optic Importance of local signaling OK - green target FAULT - red target Remote signalling No Lifetime > 100 000 h	Installation		On DIN rail 35 mm
Signalling at the device Optic Importance of local signaling OK - green target FAULT - red target FAULT - red target Remote signalling No Lifetime > 100 000 h	Modular width		1 TE
Importance of local signaling OK - green target FAULT - red target Remote signalling No Lifetime > 100 000 h	Operating position		Any
FAULT - red target Remote signalling Lifetime > 100 000 h	Signalling at the device		Optic
Lifetime > 100 000 h	Importance of local signaling		
	Remote signalling		No
Modular design Yes	Lifetime		> 100 000 h
	Modular design		Yes



Туре		B20M Vseries
Article number of spare module		27 049
Designed according to standards		
Requirements and test methods for SPDs connected to low-voltage power systems		IEC 61643-11:2011
Safety of Flammability of Plastic Materials		UL 94
Application standards		
Protection against lightning		IEC 62305:2010
Selection and erection of electrical equipment - Switchgear and controlgear		HD 60364-5-53:2022
Selection and application principles for SPDs connected to low-voltage power systems		CLC/TS 61643-12:2009
Ordering, packaging and additional data		
Mass	m	132 g
Mass (including the packaging)	m	144 g
Packaging dimensions (H x W x D)		25 x 112 x 87 mm
Packaging value	V	0.24 dm ³
Customs tariff no.		85363010
EAN code		8590681270486
Art. number		27 048
The link in the QR code leads to the online presentation of the B20M Vseries. There, in addition to the always up-to-date data sheet, you will also find all diagram and drawings, declarations of conformity, or 2D or 3D models and other necessary		

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Application wiring diagram (installation)



Internal diagram

