

## Data sheet

SM 221 (221-1BH30)

## Technical data

Type SM 221  General information  Note - Features 16x DI DC 24 V  Current consumption/power loss  Current consumption from backplane bus 45 mA  Power loss 3.5 W  Technical data digital inputs  Number of inputs 16  Cable length, shielded 1000 m  Cable length, shielded 600 m  Rated load voltage 1- Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load) - Current consumption from load voltage I+ (without load) - Current consumption from load voltage L+ (without load) - Current consumption from load voltage I+ (without load) - Current consumption from load voltage I+ (without load) - Current consumption from load voltage I+ (without load) - Current consumption from load voltage I+ (without load) - Current consumption from load voltage I+ (without load) - Current consumption from load voltage I+ (without load) - Current consumption I+ Current Signal I+ (without load) - Current consumption I+ Current Signal I+ (without load) - Current Signal I+ (without	Order no.	221-1BH30
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Rated value DC 20.428.8 V Input voltage for signal "0" DC 05 V Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis - Signal logic input Sinking input Frequency range - Input resistance - Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 1.5 mA Input delay of "0" to "1" 3 ms Input delay of "1" to "0" 3 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve IEC 61131-2, type 1 Initial data size 2 Byte  Status information, alarms, diagnostics Siatus display green LED per channel Interrupts no Diagnostic interrupt no Diagnostic interrupt no Diagnostics information read-out none Supply voltage display none	Rated load voltage	-
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Signal logic input Frequency range Input resistance Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible Max. permissible BERO quiescent current Input delay of "0" to "1" 3 ms Input delay of "0" to "1" 3 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve IEC 61131-2, type 1 Initial data size Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no Diagnostic functions no Diagnostics information read-out none Supply voltage display none	Input voltage for signal "1"	DC 1528.8 V
Input resistance   -	Input voltage hysteresis	
Input resistance - Input current for signal "1" 7 mA  Connection of Two-Wire-BEROs possible yes  Max. permissible BERO quiescent current 1.5 mA  Input delay of "0" to "1" 3 ms  Input delay of "1" to "0" 3 ms  Number of simultaneously utilizable inputs horizontal configuration  Number of simultaneously utilizable inputs vertical configuration 16  Input characteristic curve IEC 61131-2, type 1  Initial data size 2 Byte  Status information, alarms, diagnostics  Status display green LED per channel  Interrupts no  Process alarm no  Diagnostic interrupt no  Diagnostic functions no  Diagnostics information read-out none  Supply voltage display none	Signal logic input	Sinking input
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Number of simultaneously utilizable inputs horizontal configuration  Number of simultaneously utilizable inputs vertical configuration  Input characteristic curve  IEC 61131-2, type 1  Initial data size  2 Byte  Status information, alarms, diagnostics  Status display  green LED per channel  Interrupts  no  Process alarm  no  Diagnostic interrupt  no  Diagnostic functions  no  Diagnostics information read-out  Supply voltage display  none	Input delay of "0" to "1"	3 ms
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Initial data size 2 Byte  Status information, alarms, diagnostics  Status display green LED per channel Interrupts no  Process alarm no  Diagnostic interrupt no  Diagnostic functions no  Diagnostics information read-out none  Supply voltage display none	Number of simultaneously utilizable inputs vertical configuration	16
Status information, alarms, diagnostics  Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no Diagnostic functions no Diagnostics information read-out none Supply voltage display none	Input characteristic curve	IEC 61131-2, type 1
Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no Diagnostic functions no Diagnostics information read-out none Supply voltage display none	Initial data size	2 Byte
Interrupts no Process alarm no Diagnostic interrupt no Diagnostic functions no Diagnostics information read-out none Supply voltage display none	Status information, alarms, diagnostics	
Process alarm no  Diagnostic interrupt no  Diagnostic functions no  Diagnostics information read-out none  Supply voltage display none	Status display	green LED per channel
Diagnostic interrupt     no       Diagnostic functions     no       Diagnostics information read-out     none       Supply voltage display     none	Interrupts	no
Diagnostic functions no Diagnostics information read-out none Supply voltage display none	Process alarm	no
Diagnostics information read-out none Supply voltage display none	Diagnostic interrupt	no
Supply voltage display none	Diagnostic functions	no
	Diagnostics information read-out	none
Group error display none	Supply voltage display	none
	Group error display	none



Channel error display	none	
Isolation		
Between channels		
Between channels of groups to	16	
Between channels and backplane bus	yes	
Insulation tested with	DC 500 V	
Datasizes		
Input bytes	2	
Output bytes	0	
Parameter bytes	0	
Diagnostic bytes	0	
Housing		
Material	PPE / PA 6.6	
Mounting	Profile rail 35 mm	
Mechanical data		
Dimensions (WxHxD)	25.4 mm x 76 mm x 88 mm	
Net weight	90 g	
Weight including accessories	-	
Gross weight	-	
Environmental conditions		
Operating temperature	0 °C to 60 °C	
Storage temperature	-25 °C to 70 °C	
Certifications		
UL certification	yes	
KC certification	-	