

Data sheet FM 250S (250-1BS00)

Technical data

Type FM 250S General information Note - Features 1 SSI channel RS422 12/24 Bit Direct power supply to the SSI transducer Baud rate: 100/300/06 Nbit/s (datalt: 300 Kbit/s) 2x parameterizable DO, DC 2 dV, 1 A One may be used as hold input Current consumption/power loss 120 mA Current consumption from backplane bus 120 mA Power loss 1 W Technical data digital inputs 1 Number of inputs 1 Cable length, shielded 0000 m Cable longth, unshielded 6000 m Rated load voltage yes Current consumption from load voltage yes Current consumption from backplane bus 1 Cable length, shielded 0000 m Cable longth, unshielded 600 m Rated load voltage yes Current consumption from load voltage L+ (without load) 5 mA Rated value DC 20.428.8 V Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis	Order no.	250-1BS00
General information Note - Features 1 SSI channel RS422 12/24 Bit Direct power supply to the SSI transducer Baud rate: 100/300600 Kbit/s (default: 300 Kbit/s) 2x parameterizable DO, DC 24 V, 1 A One may be used as hold input Current consumption/power loss 120 mA Power loss 1 W Technical data digital inputs 1 Number of inputs 1 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage yes Current consumption from load voltage L+ (without load) 5 mA Rated value DC 2428.8 V Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis -		FM 250S
Note-Features1 SSI channel RS422 12/24 Bit Direct power supply to the SSI transducer Baud rate: 100/300/600 Kbit/s (default: 300 Kbit/s) 2x parameterizable DO, DC 24 V, 1 A One may be used as hold inputCurrent consumption/power lossCurrent consumption from backplane bus120 mAPower loss1 WTechnical data digital inputsNumber of inputsCable length, shieldedCable length, unshielded600 mRated load voltageVerse polarity protection of rated load voltageyesCurrent consumption from load voltage L+ (without load)5 mARated valueInput voltage for signal "0"DC 1528.8 VInput voltage hysteresis-		
RS422 12/24 Bit Direct power supply to the SSI transducer Baud rate: 100/300/600 Kbit/s (default: 300 Kbit/s) 2x parameterizable DO, DC 24 V, 1 A One may be used as hold inputCurrent consumption/power loss120 mAPower loss1 WTechnical data digital inputs1Number of inputs1Cable length, shielded600 mCated load voltage900 mReverse polarity protection of rated load voltageyesCurrent consumption from load voltage L+ (without load)5 mARated valueDC 20.428.8 VInput voltage for signal "1"DC 1528.8 VInput voltage hysteresis-		
Current consumption from backplane bus120 mAPower loss1 WTechnical data digital inputs1Number of inputs1Cable length, shielded1000 mCable length, unshielded600 mRated load voltageDC 24 VReverse polarity protection of rated load voltageyesCurrent consumption from load voltage L+ (without load)5 mARated valueDC 20.428.8 VInput voltage for signal "0"DC 1528.8 VInput voltage hysteresis-		RS422 12/24 Bit Direct power supply to the SSI transducer Baud rate: 100/300/600 Kbit/s (default: 300 Kbit/s) 2x parameterizable DO, DC 24 V, 1 A
Power loss1 WTechnical data digital inputsNumber of inputs1Cable length, shielded1000 mCable length, unshielded600 mCable length, unshieldedDC 24 VReverse polarity protection of rated load voltageyesCurrent consumption from load voltage L+ (without load)5 mARated valueDC 20.428.8 VInput voltage for signal "0"DC 1528.8 VInput voltage hysteresis-	Current consumption/power loss	
Technical data digital inputsNumber of inputs1Cable length, shielded1000 mCable length, unshielded600 mRated load voltageDC 24 VReverse polarity protection of rated load voltageyesCurrent consumption from load voltage L+ (without load)5 mARated valueDC 20.428.8 VInput voltage for signal "0"DC 1528.8 VInput voltage hysteresis-	Current consumption from backplane bus	120 mA
Number of inputs1Cable length, shielded1000 mCable length, unshielded600 mRated load voltageDC 24 VReverse polarity protection of rated load voltageyesCurrent consumption from load voltage L+ (without load)5 mARated valueDC 20.428.8 VInput voltage for signal "0"DC 05 VInput voltage hysteresis-	Power loss	1 W
Cable length, shielded1000 mCable length, unshielded600 mRated load voltageDC 24 VReverse polarity protection of rated load voltageyesCurrent consumption from load voltage L+ (without load)5 mARated valueDC 20.428.8 VInput voltage for signal "0"DC 05 VInput voltage hysteresis-	Technical data digital inputs	
Cable length, unshielded600 mRated load voltageDC 24 VReverse polarity protection of rated load voltageyesCurrent consumption from load voltage L+ (without load)5 mARated valueDC 20.428.8 VInput voltage for signal "0"DC 05 VInput voltage hysteresis-	Number of inputs	1
Rated load voltageDC 24 VReverse polarity protection of rated load voltageyesCurrent consumption from load voltage L+ (without load)5 mARated valueDC 20.428.8 VInput voltage for signal "0"DC 05 VInput voltage for signal "1"DC 1528.8 VInput voltage hysteresis-	Cable length, shielded	1000 m
Reverse polarity protection of rated load voltage yes Current consumption from load voltage L+ (without load) 5 mA Rated value DC 20.428.8 V Input voltage for signal "0" DC 05 V Input voltage for signal "1" DC 1528.8 V	Cable length, unshielded	600 m
Current consumption from load voltage L+ (without load) 5 mA 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 -	Rated load voltage	DC 24 V
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 -	Reverse polarity protection of rated load voltage	yes
Input voltage for signal "0" DC 05 V Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis -	Current consumption from load voltage L+ (without load)	5 mA
Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis -	Rated value	DC 20.428.8 V
Input voltage hysteresis -	Input voltage for signal "0"	DC 05 V
	Input voltage for signal "1"	DC 1528.8 V
Frequency range -	Input voltage hysteresis	-
······································	Frequency range	-
Input resistance -	Input resistance	-
Input current for signal "1" 7 mA	Input current for signal "1"	7 mA
Connection of Two-Wire-BEROs possible -	Connection of Two-Wire-BEROs possible	-
Max. permissible BERO quiescent current -	Max. permissible BERO quiescent current	-
Input delay of "0" to "1" 3 ms	Input delay of "0" to "1"	3 ms
Input delay of "1" to "0" 3 ms	Input delay of "1" to "0"	3 ms
Number of simultaneously utilizable inputs horizontal 1 configuration		1
Number of simultaneously utilizable inputs vertical configuration 1	Number of simultaneously utilizable inputs vertical configuration	1
Input characteristic curve IEC 61131-2, type 1	Input characteristic curve	IEC 61131-2, type 1
Initial data size 4 Byte	Initial data size	4 Byte
Technical data digital outputs	Technical data digital outputs	
Number of outputs 2	Number of outputs	2
Cable length, shielded 1000 m	Cable length, shielded	1000 m
Cable length, unshielded 600 m	Cable length, unshielded	600 m
Rated load voltage DC 24 V	Rated load voltage	DC 24 V
Reverse polarity protection of rated load voltage yes	Reverse polarity protection of rated load voltage	yes
Current consumption from load voltage L+ (without load) 5 mA	Current consumption from load voltage L+ (without load)	5 mA
Total current per group, horizontal configuration, 40°C 2 A	Total current per group, horizontal configuration, 40°C	2 A

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Total current per group, horizontal configuration, 60°C	2 A
Total current per group, vertical configuration	2 A
Output voltage signal "1" at min. current	L+ (-0.8 V)
Output voltage signal "1" at max. current	L+ (-125 mV)
Output current at signal "1", rated value	1 A
Output current, permitted range to 40°C	-
Output current, permitted range to 60°C	-
Output current at signal "0" max. (residual current)	-
Output delay of "0" to "1"	max. 100 μs
Output delay of "1" to "0"	max. 350 μs
Minimum load current	
Lamp load	5 W
Parallel switching of outputs for redundant control of a load	not possible
Parallel switching of outputs for increased power	not possible
Actuation of digital input	
Switching frequency with resistive load	max. 1000 Hz
Switching frequency with inductive load	max. 0.5 Hz
Switching frequency on lamp load	max. 10 Hz
Internal limitation of inductive shut-off voltage	L+ (-52 V)
Short-circuit protection of output	yes, electronic
Trigger level	1.8 A
Number of operating cycle of relay outputs	-
Switching capacity of contacts	-
Output data size	4 Byte
Status information, clarma, discussion	
Status information, alarms, diagnostics	
Status information, alarms, diagnostics Status display	yes
	yes no
Status display	
Status display Interrupts	no
Status display Interrupts Process alarm	no
Status display Interrupts Process alarm Diagnostic interrupt	no no
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions	no no no no
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out	no no no no none
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display	no no no no none yes
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display	no no no no no none yes yes
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display	no no no no no none yes yes
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display Isolation	no no no no no none yes yes
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display Isolation Between channels	no no no no none yes yes none -
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display Isolation Between channels Between channels of groups to	no no no no no none yes yes none - - -
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display Isolation Between channels Between channels of groups to Between channels and backplane bus	no no no no none yes yes none - -
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display Isolation Between channels Between channels of groups to Between channels and backplane bus Between channels and power supply	no no no no no none yes yes none - - yes yes - - yes - - yes - <
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display Isolation Between channels Between channels and backplane bus Between channels and power supply Max. potential difference between circuits	no no no no no none yes yes none - - yes yes - yes - - yes - <
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display Isolation Between channels Between channels of groups to Between channels and backplane bus Between channels and power supply Max. potential difference between inputs (Ucm)	no no no no no no no no none yes yes none yes yes yes yes yes yes -
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display Isolation Between channels Between channels of groups to Between channels and backplane bus Between channels and power supply Max. potential difference between inputs (Ucm) Max. potential difference between Mana and Mintern (Uiso)	no no no no no none yes yes none - - yes - -
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display Isolation Between channels Between channels of groups to Between channels and backplane bus Between channels and power supply Max. potential difference between inputs (Ucm) Max. potential difference between inputs and Mana (Ucm)	no no no no no none yes yes none yes yes yes yes one -
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display Isolation Between channels Between channels of groups to Between channels and backplane bus Between channels and power supply Max. potential difference between inputs (Ucm) Max. potential difference between inputs and Mana (Ucm) Max. potential difference between inputs and Mana (Ucm)	no no no no no none yes yes none - - yes - -
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display Isolation Between channels Between channels of groups to Between channels and backplane bus Between channels and power supply Max. potential difference between inputs (Ucm) Max. potential difference between inputs and Mana (Ucm) Max. potential difference between inputs and Mana (Ucm) Max. potential difference between inputs and Mintern (Uiso)	no no no no none yes yes none yes yes o - <tr tr=""> <tr tr=""> -<</tr></tr>
Status display Interrupts Process alarm Diagnostic interrupt Diagnostic functions Diagnostics information read-out Supply voltage display Group error display Channel error display Isolation Between channels Between channels of groups to Between channels and backplane bus Between channels and power supply Max. potential difference between inputs (Ucm) Max. potential difference between inputs and Mintern (Uiso) Max. potential difference between inputs and Mana (Ucm) Max. potential difference between inputs and Mintern (Uiso) Max. potential difference be	no no no no none yes yes none yes yes o - <tr tr=""> <tr tr=""> -<</tr></tr>

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Encoder frequency / baud rate	parameterizable (100k, 300kHz)
SSI pause time	35µs
Normalization	-
Bit length encoder data	24 Bit
Mode master	yes
Mode monitoring operation	-
Shift direction MSB first	yes
Shift direction LSB first	-
Binary code	yes
Gray code	yes
Datasizes	
Input bytes	4
Output bytes	4
Parameter bytes	6
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 78 mm
Net weight	100 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	-