

## Data sheet

SM 323 (323-1BH01)

## Technical data

Order no.	323-1BH01
Туре	SM 323
General information	
Note	8 inputs/ 8 outputs
Features	Output current 1 A
SPEED-Bus	-
Current consumption/power loss	
Current consumption from backplane bus	70 mA
Power loss	4 W
Technical data digital inputs	
Number of inputs	8
Cable length, shielded	1000 m
Cable length, unshielded	600 m
Rated load voltage	DC 24 V
Current consumption from load voltage L+ (without load)	15 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	-
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	8
Number of simultaneously utilizable inputs vertical configuration	8
Input characteristic curve	IEC 61131-2, type 1
Initial data size	1 Byte
Technical data digital outputs	
Number of outputs	8
Cable length, shielded	1000 m
Cable length, unshielded	600 m
Rated load voltage	DC 24 V
Reverse polarity protection of rated load voltage	yes
Current consumption from load voltage L+ (without load)	15 mA
Output current at signal "1", rated value	1 A

## YASKAWA VIPA CONTROLS

Output delay of "1" to "0"         150 µs           Output delay of "1" to "0"         100 µs           Minimum load current         -           Lamp load         5 W           Parallel switching of outputs for redundant control of a load         possible (only outputs group)           Parallel switching of outputs for increased power         not possible           Actuation of digital input         yes           Switching frequency with industive load         max. 100 Hz           Switching frequency on lamp 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         1.5 A           Number of operating cycle of relay outputs         -           Switching capacity of contacts         1.8 yte           Status information, alarms, diagnostics         Status information, alarms, diagnostics           Status display         green LED per channel           Interrupts         no           Plagnostic functions         no           Diagnostic functions         no           Diagnostic functions         no           Supply voltage display         green LED per group	Output datas of NOI to NAII	450
Minimum load current         -           Lamp load         5 W           Parallel switching of outputs for redundant control of a load         possible (only outputs group)           Parallel switching of outputs for increased power         not possible           Actuation of digital input         yes           Switching frequency with inductive load         max. 1000 Hz           Switching frequency on lamp load         max. 10 Hz           Internal limitation of inductive shur-off voltage         L+ (-52 V)           Short-circuit protection of output         yes, electronic           Trigger level         1.5 A           Number of operating cycle of relay outputs         -           Switching capacity of contacts         -           Output data size         1 Byte           Status information, alarms, diagnostics         Status information, alarms, diagnostics           Status display         green LED per channel           Interrupts         no           Process alarm         no           Diagnostic functions         no           Diagnostic information read-out         no           Channel error display         red SE LED           Channel error display         red SE LED           Channel error display         red SE LED           <		·
Lamp load		·
Parallel switching of outputs for redundant control of a load         possible (only outputs group)           Parallel switching of outputs for increased power         not possible           Actuation of digital input         yes           Switching frequency with inductive load         max. 0.05 Hz           Switching frequency with inductive load         max. 0.10 Hz           Internal limitation of inductive shut-off voltage         L < (52 V)           Short-circuit protection of output         yes, electronic           Trigger lovel         1.5 A           Number of operating cycle of relay outputs         -           Status information, alarms, diagnostics         -           Status information, alarms, diagnostics         It Byte           Status display         green LED per channel           Interrupts         no           Pocoses alarm         no           Diagnostic functions         no           Diagnostic functions         no           Output data size         green LED per channel           Group error display         green LED per group           Group error display         green LED per group           Group error display         genen LED per group           Between channels of groups to         8           Between channels of groups to         <		
Parallel switching of outputs for increased power         not possible           Actuation of digital input         yes           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         1.5 A           Number of operating cycle of relay outputs         -           Switching capacity of contacts         -           Cutput data size         1 Byte           Status information, plarms, diagnostics         Status information, plarms, diagnostics           Status information and plarms, diagnostics         Status information and plarms, diagnostics           Status display         green LED per channel           Interrupts         no           Diagnostic information read-out         no           Diagnostic information read-out         none           Supply voltage display         green LED per group           Group error display         green LED per group           Group error display         per           Between channels of groups to         8           Betwee		
Actuation of digital input         yes           Switching frequency with resistive load         max. 1000 Hz           Switching frequency with inductive load         max. 0.5 Hz           Switching frequency on lamp load         max. 0.1 Hz           Internal limitation of inductive shuf-off voltage         L+ (-52 V)           Short-circuit protection of output         yes, electronic           Trigger level         1.5 A           Number of operating cycle of relay outputs         -           Switching capacity of contacts         -           Output data size         1 Byte           Status information, alarms, diagnostics         status information, alarms, diagnostics           Status display         green LED per channel           Interrupts         no           Process alarm         no           Process alarm         no           Diagnostic information read-out         none           Diagnostic information read-out         none           Supply voltage display         green LED per group           Group arer display         green LED per group           Group arer display         green LED per group           Between channels         yes           Between channels and backplane bus         yes           Insult of the state of	· · ·	
Switching frequency with resistive load         max. 1000 Hz           Switching frequency with inductive load         max. 0.5 Hz           Switching frequency with inductive load         max. 10 Hz           Internal limitation of inductive shut-off voltage         Lx (52 V)           Short-circuit protection of output         yes, electronic           Trigger level         1.5 A           Number of operating cycle of relay outputs         -           Switching capacity of contacts         -           Output data size         1 Byte           Status information, alarms, diagnostics         It Byte           Status display         green LED per channel           Interrupts         no           Process alarm         no           Diagnostic functions         no           Diagnostic information read-out         none           Group error display         green LED per group           Group error display         red SF LED           Channel error display         red SF LED           Channel error display         yes           Between channels of groups to         8           Between channels of groups to         8           Between channels and backplane bus         yes           Input bytes         1		not possible
Switching frequency with inductive load max. 10 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 1.5 A Number of operating cycle of relay outputs - Switching capacity of contacts - Cutput data size 1 Byte  Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no Diagnostic information read-out none Supply voltage display green LED per group Group error display red SF LED Channel error display red SF LED Setween channels of groups to 8 Between channels and backplane bus yes Insulation tested with DC SOO V  Datasizes  Input bytes 1 Output bytes 1 Diagnostics bytes 0 Output bytes 1 Diagnostics bytes 0 Mechanical data Dimensions (Wrktx) 40 mm x 125 mm x 120 mm Net weight Levels weight including accessories - Gross weight Set weel flouding accessories Set weight including		<u> </u>
Switching frequency on lamp load         max. 10 Hz           Internal limitation of inductive shur-off voltage         L+ (-52 V)           Short-circuit protection of output         yes, electronic           Trigger level         1.5 A           Number of operating cycle of relay outputs         -           Switching capacity of contacts         -           Output data size         1 Byte           Status information, alarms, diagnostics         status information, alarms, diagnostics           Status display         green LED per channel           Interrupts         no           Process alarm         no           Diagnostic interrupt         no           Diagnostic functions         no           Diagnostic information read-out         none           Supply voltage display         green LED per group           Group error display         red SF LED           Channel error display         red SF LED           Channel error display         pse           Between channels         yes           Between channels of groups to         8           Between channels and backplane bus         yes           Input bytes         1           Output bytes         1           Parameter bytes         0		max. 1000 Hz
Internal limitation of inductive shur-off voitage	Switching frequency with inductive load	max. 0.5 Hz
Short-circuit protection of output         yes, electronic           Trigger level         1.5 A           Number of operating cycle of relay outputs         -           Switching capacity of contacts         -           Cutput data size         1 Byte           Status information, alarms, diagnostics         seren LED per channel           Status display         green LED per channel           Interrupts         no           Process alarm         no           Diagnostic interrupt         no           Diagnostic functions         no           Diagnostic functions read-out         none           Supply voltage display         green LED per group           Group error display         red SF LED           Channel error display         red SF LED           Channel error display         pas           Between channels         yes           Between channels of groups to         8           Between channels and backplane bus         yes           Insulation tested with         DC 500 V           Datasizes           Input bytes         1           Output bytes         1           Parameter bytes         0           Diagnostic bytes         0      <		max. 10 Hz
Trigger level   1.5 A   Number of operating cycle of relay outputs   -	Internal limitation of inductive shut-off voltage	L+ (-52 V)
Number of operating cycle of relay outputs   -	Short-circuit protection of output	yes, electronic
Switching capacity of contacts         -           Output data size         1 Byte           Status information, alarms, diagnostics           Status display         green LED per channel           Interrupts         no           Process alarm         no           Diagnostic interrupt         no           Diagnostic information read-out         none           Supply voltage display         green LED per group           Group error display         red SF LED           Channel error display         none           Isolation           Between channels           Between channels of groups to         8           Between channels of droups to         8           Between channels and backplane bus         yes           Insulation tested with         DC 500 V           Datasizes           Input bytes         1           Output bytes         1           Parameter bytes         0           Diagnostic bytes         0           Housing           Material         PPE           Mounting         Rail System 300           Mechanical data           Dimensions (WxHxD)         40 mm x 125	Trigger level	1.5 A
Output data size         1 Byte           Status information, alarms, diagnostics         Status display           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         green LED per group           Group error display         red SF LED           Channel error display         none           Isolation         yes           Between channels of groups to         8           Between channels and backplane bus         yes           Insulation tested with         DC 500 V           Datasizes         1           Uput bytes         1           Output bytes         1           Parameter bytes         0           Diagnostic bytes         0           Housing         Rail System 300           Mechanical data         PPE           Mounting         40 mm x 125 mm x 120 mm           Net weight         240 g           Weight including accessories         -           Gross weight         - <td>Number of operating cycle of relay outputs</td> <td>-</td>	Number of operating cycle of relay outputs	-
Status information, alarms, diagnostics  Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no Diagnostic functions no Diagnostic functions no Diagnostics information read-out none Supply voltage display green LED per group Group error display red SF LED Channel error display none  Isolation  Between channels yes Between channels of groups to 8 Between channels and backplane bus yes Insulation tested with DC 500 V  Datasizes  Input bytes 1 Output bytes 1 Output bytes 1 Parameter bytes 0 Diagnostic bytes 0  Material PPE Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 40 mm x 125 mm x 120 mm Net weight including accessories - Gross weight Process alarm no no No (A)  green LED per channel no (A)  Real System 300  ### Automatical contents of the conten	Switching capacity of contacts	-
Status display         green LED per channel           Interrupts         no           Process alarm         no           Diagnostic interrupt         no           Diagnostic interrupt         no           Diagnostic information read-out         none           Supply voltage display         green LED per group           Group error display         red SF LED           Channel error display         none           Isolation           Between channels         yes           Between channels and backplane bus         yes           Insulation tested with         DC 500 V           Datasizes           Input bytes         1           Output bytes         1           Parameter bytes         0           Diagnostic bytes         0           Diagnostic bytes         0           Weight including accessories         40 mm x 125 mm x 120 mm           Net weight         440 g           Weight including accessories         -           Gross weight         -	Output data size	1 Byte
Interrupts no no Process alarm no Diagnostic interrupt no no Diagnostic interrupt no no Diagnostic interrupt none Diagnostic interru	Status information, alarms, diagnostics	
Process alarm no Diagnostic interrupt no Diagnostic functions no Diagnostic functions none Supply voltage display green LED per group Group error display none  Supply voltage display green LED per group Group error display none  Isolation  Between channels yes Between channels yes Between channels yes Insulation tested with DC 500 V  Datasizes  Input bytes 1  Output bytes 1  Parameter bytes 0  Diagnostic bytes 0  Housing Material PPE Mounting Rail System 300  Mechanical data  Dimensions (WXHXD) 40 mm x 125 mm x 120 mm Net weight including accessories Gross weight 1  Element on the service of the control of the con	Status display	green LED per channel
Diagnostic interrupt         no           Diagnostic functions         no           Diagnostics information read-out         none           Supply voltage display         green LED per group           Group error display         red SF LED           Channel error display         none           Isolation           Between channels         yes           Between channels of groups to         8           Between channels and backplane bus         yes           Insulation tested with         DC 500 V           Datasizes           Input bytes         1           Output bytes         1           Parameter bytes         0           Diagnostic bytes         0           Housing         Rail System 300           Mechanical data         PPE           Mounting         Rail System 300           Mechanical data         Use weight         40 mm x 125 mm x 120 mm           Wet weight         240 g           Weight including accessories         -           Gross weight         -	Interrupts	no
Diagnostic functions         no           Diagnostics information read-out         none           Supply voltage display         green LED per group           Group error display         none           Isolation           Between channels         yes           Between channels of groups to         8           Between channels and backplane bus         yes           Insulation tested with         DC 500 V           Datasizes           Input bytes         1           Output bytes         1           Parameter bytes         0           Diagnostic bytes         0           Housing           Material         PPE           Mounting         Rail System 300           Mechanical data           Dimensions (WxHxD)         40 mm x 125 mm x 120 mm           Net weight         240 g           Weight including accessories         -           Gross weight         -	Process alarm	no
Diagnostics information read-out none  Supply voltage display green LED per group  Group error display red SF LED  Channel error display none  Isolation  Between channels yes  Between channels of groups to 8  Between channels and backplane bus yes  Insulation tested with DC 500 V  Datasizes  Input bytes 1  Output bytes 1  Parameter bytes 0  Diagnostic bytes 0  Diagnostic bytes 0  Meerial PPE  Mounting Rail System 300  Mechanical data  Dimensions (WXHXD) 40 mm x 125 mm x 120 mm  Net weight including accessories  Gross weight  Gross weight  Seleve and SF LED  red SF LED  Real SE LED  Real S	Diagnostic interrupt	no
Supply voltage display green LED per group Group error display red SF LED Channel error display none  Isolation  Between channels yes Between channels of groups to 8 Between channels and backplane bus yes Insulation tested with DC 500 V  Datasizes  Input bytes 1 Output bytes 1 Parameter bytes 0 Diagnostic bytes 0 Diagnostic bytes 0  Metrial PPE Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 40 mm x 125 mm x 120 mm Net weight including accessories Gross weight Gross weight  Between LED per group Fed SF LED  Fed SF LED  None  Rail System 300  ### ST LED	Diagnostic functions	no
Group error display red SF LED Channel error display none  Isolation  Between channels  Between channels of groups to  Between channels and backplane bus Insulation tested with  DC 500 V  Datasizes  Input bytes  1 Output bytes  1 Parameter bytes  0 Diagnostic bytes  O  Housing  Material  PPE  Mounting  Mechanical data  Dimensions (WxHxD)  Net weight  Ves  Rail System x 120 mm  Net weight  Ves  Gross weight  -  Gross weight  A  Between channels and service  yes  8  8  8  8  8  8  8  8  8  8  8  8  8	Diagnostics information read-out	none
Isolation  Between channels yes Between channels of groups to 8 Between channels and backplane bus yes Insulation tested with DC 500 V  Datasizes  Input bytes 1 Output bytes 1 Parameter bytes 0 Diagnostic bytes 0  Housing  Material PPE Mounting PPE Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 40 mm x 125 mm x 120 mm Net weight including accessories - Gross weight Gross weight Gross weight  Between channels and backplane bus yes  8  8  8  8  8  8  8  8  8  8  8  8  8	Supply voltage display	green LED per group
Between channels yes Between channels of groups to 8 Between channels and backplane bus yes Insulation tested with DC 500 V  Datasizes  Input bytes 1 Output bytes 1 Parameter bytes 0 Diagnostic bytes 0 Diagnostic bytes 0  Material PPE Mounting PPE Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 40 mm x 125 mm x 120 mm Net weight 1 Weight including accessories 6 Gross weight	Group error display	red SF LED
Between channels yes Between channels of groups to 8 Between channels and backplane bus yes Insulation tested with DC 500 V  Datasizes Input bytes 1 Output bytes 1 Parameter bytes 0 Diagnostic bytes 0  Housing Material PPE Mounting PPE Mounting Rail System 300  Mechanical data Dimensions (WxHxD) 40 mm x 125 mm x 120 mm Net weight 1240 g  Weight including accessories - Gross weight - Gross weight - Gross Washer and Same and	Channel error display	none
Between channels of groups to  Between channels and backplane bus  Insulation tested with  DC 500 V  Datasizes  Input bytes  1 Output bytes  1 Parameter bytes  0 Diagnostic bytes  Material  PPE  Mounting  PPE  Mounting  PPE  Mounting  Mechanical data  Dimensions (WxHxD)  Net weight  Veight including accessories  Gross weight  PSE  A 0 mm x 125 mm x 120 mm  240 g  Weight including accessories  Gross weight  -	Isolation	
Between channels and backplane bus Insulation tested with DC 500 V  Datasizes Input bytes	Between channels	yes
Insulation tested with  DC 500 V  Datasizes  Input bytes Input byt	Between channels of groups to	8
Input bytes 1 Output bytes 1 Parameter bytes 0 Diagnostic bytes 0  Housing Material PPE Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 40 mm x 125 mm x 120 mm  Net weight 1 Weight including accessories - Gross weight -  Including 1 Including Accessories -	Between channels and backplane bus	yes
Input bytes  Output bytes  1  Parameter bytes  O  Diagnostic bytes  O  Housing  Material  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  Net weight  Net weight  Weight including accessories  Gross weight  1  1  A  A  A  A  A  A  A  A  A  A  A	Insulation tested with	DC 500 V
Input bytes  Output bytes  1  Parameter bytes  O  Diagnostic bytes  O  Housing  Material  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  Net weight  Net weight  Weight including accessories  Gross weight  1  1  A  A  A  A  A  A  A  A  A  A  A	Datasizas	
Parameter bytes  Diagnostic bytes  O  Housing  Material  PPE  Mounting  Rail System 300  Mechanical data  Dimensions (WxHxD)  40 mm x 125 mm x 120 mm  Net weight  Veight including accessories  Gross weight  -  Gross weight  O  O  O  O  O  O  O  O  O  O  O  O  O		1
Diagnostic bytes  Housing  Material PPE  Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 40 mm x 125 mm x 120 mm  Net weight Netwight 240 g  Weight including accessories -  Gross weight -	Output bytes	1
Housing  Material PPE  Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 40 mm x 125 mm x 120 mm  Net weight 240 g  Weight including accessories -  Gross weight -	Parameter bytes	0
Material PPE  Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 40 mm x 125 mm x 120 mm  Net weight 240 g  Weight including accessories -  Gross weight -	Diagnostic bytes	0
Mounting Rail System 300  Mechanical data  Dimensions (WxHxD) 40 mm x 125 mm x 120 mm  Net weight 240 g  Weight including accessories - Gross weight -	Housing	
Mechanical data  Dimensions (WxHxD) 40 mm x 125 mm x 120 mm  Net weight 240 g  Weight including accessories -  Gross weight -	Material	PPE
Dimensions (WxHxD) 40 mm x 125 mm x 120 mm  Net weight 240 g  Weight including accessories -  Gross weight -  -  -  -  -  -  -  -  -  -  -  -  -	Mounting	Rail System 300
Net weight Weight including accessories - Gross weight	Mechanical data	
Net weight Weight including accessories - Gross weight	Dimensions (WxHxD)	40 mm x 125 mm x 120 mm
Weight including accessories - Gross weight -		240 g
Gross weight -		
Environmental conditions		
	Environmental conditions	



Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C
Certifications	
UL certification	yes
KC certification	yes