

Data sheet SM 022 - Digital output (022-1BF01)

Technical data

| Order no. | 022-1BF01 |
|---------------------------------------------------------------|---------------------------|
| Туре | SM 022 - Digital output |
| Module ID | 0125 AFC8 |
| General information | |
| Note | - |
| Features | 8x DO DC 24 V 0.5 A |
| Current consumption/power loss | |
| Current consumption from backplane bus | 50 mA |
| Power loss | 0.7 W |
| Technical data digital outputs | |
| Number of outputs | 8 |
| Cable length, shielded | 1000 m |
| Cable length, unshielded | 600 m |
| Rated load voltage | DC 20.428.8 V |
| Current consumption from load voltage L+ (without load) | 15 mA |
| Total current per group, horizontal configuration, 40°C | 4 A |
| Total current per group, horizontal configuration, 60°C | 4 A |
| Total current per group, vertical configuration | 4 A |
| Output current at signal "1", rated value | 0.5 A |
| Signal logic output | Sourcing output |
| Output delay of "0" to "1" | 70 µs |
| Output delay of "1" to "0" | 175 µs |
| Minimum load current | - |
| Lamp load | 10 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 | 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+ (-53 V) |
| Short-circuit protection of output | yes, electronic |
| Trigger level | 1 A |
| Number of operating cycle of relay outputs | - |
| Switching capacity of contacts | - |
| Output data size | 8 Bit |
| Status information, alarms, diagnostics | |
| Status display | green LED per channel |
| Interrupts | no |
| Process alarm | no |
| Diagnostic interrupt | no |

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| Diagnostics information read-outnoneSupply voltage displaygreen LEDGroup reror displayred LEDChannel error displaynoneIsolationIsolationBetween channels of groups to-Between channels of groups toyesInsulation tested withDC 500 VPWM datPWM dtamels-PWM dtamels-PWM dtamels-PWM dtamels-PWM dtamels-Proto length-Mainium pulse width-Type of output-Datasizes0Output bytes0Diagnostic bytes0Diagnostic bytes0Diagnostic bytes0Diagnostic bytes0Diagnostic bytes0Diagnostic bytes0Diagnostic bytes0Diagnostic bytes12.9 rms x109 rms x76.5 rmNet weight58.9Weight including accessories58.9Group error starter-26.° C to 0°CStorage temperature-26.° C to 0°CStorage temperature-26.° C to 0°CCertification-Ut Cartification-Certification-ChinaRoHS certification-ChinaRoHS certification-ChinaRoHS certification-Certification-ChinaRoHS certification-ChinaRoHS certification-ChinaRoHS certification- </th <th>Diagnostic functions</th> <th>no</th> | Diagnostic functions | no |
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| Group error display red LED Channel error display none Isolation - Between channels - Between channels and backplane bus yes Insulation tested with DC 500 V PWM data - PWM channels - PWM data - Public basis - Period length - Minimum pulse width - Type of output - Datasizes 0 Input bytes 0 Diagnostic bytes 0 Diagnostic bytes 0 Diagnostic bytes 0 Material PPE / PPE GF10 Mounting Profile rail 35 mm Mechanical data PIE Dimensions (WxHxD) 1.2.9 mm x 109 mm x 76.5 mm Net weight 58 g Weight including accessories 58 g Gross weight 73 g Environmental conditions - Uc certification - Uc certification | Diagnostics information read-out | none |
| Channel error display none Isolation . Between channels - Between channels of groups to - Between channels and backplane bus yes Insulation tested with DC 500 V PWM data - PWM data - PWM data - PWM time basis - Period length - Minimum pulse width - Type of output - Datasizes 0 Output bytes 0 Output bytes 0 Output bytes 0 Diagnostic bytes 0 Housing Pref PPE GF10 Mounting Pref /PPE GF10 Mounting Pref /PPE GF10 Mounting 12.9 mm x 109 mm x 76.5 mm Net weight 58 g Gross weight 7.3 g Environmental conditions 68 g Gross weight 7.3 g Environmental conditions - Uc certification - Uc certification - | Supply voltage display | green LED |
| Isolation Between channels - Between channels and backplane bus yes Insulation tested with D 500 V PWM data - PWM tamels - PWM tamels - PVM time basis - Period length - Minimum pulse width - Type of output - Datasizes 0 Input bytes 0 Output bytes 1 Parameter bytes 0 Output bytes 0 Iagnostic bytes 0 Moring PPE / PPE GP10 Mouring PDE / PPE GP10 Mouring POE rall 35 mm Mechanical data D Dimensions (WxHxD) 1.2 mm x 109 mm x 76.5 mm Net weight 58 g Weight including accessories 58 g Gross weight 7.3 g Environmental conditions - Uc certification - Uc certification - Uc certification - KC certification | Group error display | red LED |
| Between channels - Between channels of groups to - Between channels and backplane bus yes Insulation tested with DC 500 V PWM data - PWM channels - PWM thime basis - Period length - Minimum pulse width - Type of output - Datasizes 0 Output bytes 0 Output bytes 0 Output bytes 0 Parameter bytes 0 Diagnostic bytes 0 Muning PPE / PPE GF10 Mounting Profile rail 35 mm Mechanical data PE Dimensions (WxHxD) 12.9 mm x 109 mm x 76.5 mm Net weight 58 g Gross weight 73 g Environmental conditions -25 °C to 70 °C Certification -25 °C to 70 °C Certification -25 °C to 70 °C | Channel error display | none |
| Between channels of groups to - Between channels and backplane bus yes Insulation tested with DC 500 V PWM data - PWM channels - PWM drannels - PWM drannels - PWM drannels - Period length - Minimum pulse width - Type of output - Datasizes 0 Input bytes 0 Output bytes 1 Parameter bytes 0 Output bytes 0 Diagnostic bytes 0 Material PPE / PPE GF10 Mounting Profile rail 35 mm Mechanical data U Dimensions (WxHxD) 12.9 mm x 109 mm x 76.5 mm Net weight 58 g Gross weight 73 g Environmental conditions - Coertification -25 °C to 70 °C Certification - UL certification - VKCA certification - | Isolation | |
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| Insulation tested with DC 500 V PWM data - PWM channels - PWM time basis - Period length - Minimum pulse width - Type of output - Datasizes - Input bytes 0 Output bytes 1 Parameter bytes 0 Diagnostic bytes 0 Housing - Material PPE / PPE GF10 Mounting Profile rail 35 mm Mechanical data - Dimensions (WxHxD) 12.9 mm x 109 mm x 76.5 mm Net weight 58 g Veight including accessories 58 g Gross weight 73 g Environmental conditions - Operating temperature 0 °C to 60 °C Storage temperature 0 °C to 60 °C Storage temperature - UL certification - UL certification - UL certification - | Between channels of groups to | - |
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| Period length-Minimum pulse width-Type of output-Datasizes-Input bytes0Output bytes1Parameter bytes0Diagnostic bytes0HousingPPE / PPE GF10MaterialPPE / PPE GF10MoutingProfile rail 35 mmMechanical data-Dimensions (WXHxD)12.9 mm x 109 mm x 76.5 mmNet weight58 gGross weight73 gEnvironmental conditions-Operating temperature0 °C to 60 °CStorage temperature-25 °C to 70 °CCertification-UL certification-KC certification-KCA certification-UKCA certification-UKCA certification-UKCA certification- | PWM channels | - |
| Minimum pulse width-Type of output-Datasizes0Input bytes0Output bytes1Parameter bytes0Diagnostic bytes0HousingPref / PPE GF10MaterialPPE / PPE GF10MountingProfile rail 35 mmMechanical data2.9 mm x 109 mm x 76.5 mmNet weight58 gWeight including accessories58 gGross weight73 gEnvironmental conditions-25 °C to 70 °CCertification-25 °C to 70 °CKC certification-UL certification-KCA certification-UKCA certification-UKCA certification-UKCA certification-UKCA certification-UKCA certification-UKCA certification- | PWM time basis | - |
| Type of output-DatasizesInput bytes0Output bytes1Parameter bytes0Diagnostic bytes0HousingPPE / PPE GF10MaterialPPE / PPE GF10MountingProfile rail 35 mmMechanical dataDimensions (WxHxD)Dimensions (WxHxD)12.9 mm x 109 mm x 76.5 mmNet weight58 gWeight including accessories58 gGross weight73 gEnvironmental conditionsO °C to 60 °CStorage temperature-25 °C to 70 °CCertification-UL certification-KC certification-UKCA certification- | Period length | - |
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| MaterialPPE / PPE GF10MountingProfile rail 35 mmMechanical dataProfile rail 35 mmDimensions (WxHxD)12.9 mm x 109 mm x 76.5 mmNet weight58 gVeight including accessories58 gGross weight73 gEnvironmental conditionsOperating temperature0 °C to 60 °CStorage temperature-25 °C to 70 °CCertificationUL certification-KC certification-KC certification-UKCA certification- | Diagnostic bytes | 0 |
| MountingProfile rail 35 mmMechanical dataDimensions (WxHxD)12.9 mm x 109 mm x 76.5 mmNet weight58 gWeight including accessories58 gGross weight73 gEnvironmental conditionsOperating temperature0 °C to 60 °CStorage temperature-25 °C to 70 °CCertificationUL certification-KC certification-UC certification-KC certification-UKCA certification- | Housing | |
| Mechanical dataDimensions (WxHxD)12.9 mm x 109 mm x 76.5 mmNet weight58 gWeight including accessories58 gGross weight73 gEnvironmental conditionsOperating temperature0 °C to 60 °CStorage temperature-25 °C to 70 °CCertificationUL certification-KC certification-KC certification-UL certification-KC certification-UL certification- | Material | PPE / PPE GF10 |
| Dimensions (WxHxD)12.9 mm x 109 mm x 76.5 mmNet weight58 gWeight including accessories58 gGross weight73 gEnvironmental conditionsOperating temperature0 °C to 60 °CStorage temperature-25 °C to 70 °CCertificationsUL certification-KC certification-UKCA certification-UKCA certification- | Mounting | Profile rail 35 mm |
| Net weight58 gWeight including accessories58 gGross weight73 gEnvironmental conditions0 °C to 60 °COperating temperature0 °C to 60 °CStorage temperature-25 °C to 70 °CCertificationsImage: Certification of the section of the | Mechanical data | |
| Weight including accessories58 gGross weight73 gEnvironmental conditions0 °C to 60 °COperating temperature0 °C to 60 °CStorage temperature-25 °C to 70 °CCertifications-UL certification-KC certification-UKCA certification- | Dimensions (WxHxD) | 12.9 mm x 109 mm x 76.5 mm |
| Gross weight73 gEnvironmental conditions0 °C to 60 °COperating temperature0 °C to 60 °CStorage temperature-25 °C to 70 °CCertifications-UL certification-KC certification-UKCA certification-UKCA certification- | Net weight | 58 g |
| Environmental conditionsOperating temperature0 °C to 60 °CStorage temperature-25 °C to 70 °CCertifications-UL certification-KC certification-UKCA certification- | Weight including accessories | 58 g |
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| Storage temperature-25 °C to 70 °CCertifications-UL certification-KC certification-UKCA certification- | Environmental conditions | |
| Certifications - UL certification - KC certification - UKCA certification - | Operating temperature | 0 °C to 60 °C |
| UL certification-KC certification-UKCA certification- | Storage temperature | -25 °C to 70 °C |
| KC certification-UKCA certification- | Certifications | |
| UKCA certification - | UL certification | - |
| | KC certification | - |
| ChinaRoHS certification - | UKCA certification | - |
| | ChinaRoHS certification | - |