# Product data sheet
## Characteristics

# TM3AI8G
analog input module, Modicon TM3, 8 inputs, spring, 24V DC



## Main

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|---|---|
| Range of product | Modicon TM3 |
| Product or component type | Analog input module |
| Range compatibility | Modicon M221<br>Modicon M241<br>Modicon M251<br>Modicon M262 |
| Analogue input number | 8 |

## Complementary

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|---|---|
| Analogue input type | Current 4...20 mA<br>Current 0...20 mA<br>Voltage 0...10 V<br>Voltage - 10...10 V |
| Analogue input resolution | 12 bits<br>11 bits + sign |
| Permissible continuous overload | 13 V, analogue input type: voltage<br>40 mA, analogue input type: current |
| Input impedance | <= 50 Ohm<br>>= 1 MOhm |
| Sampling duration | 1 Ms |
| Conversion time | 1 ms + 1 ms per channel + 1 controller cycle time |
| Absolute accuracy error | +/- 1 % of full scale<br>+/- 0.2 % of full scale at 25 °C |
| Repeat accuracy | +/-0.5 %FS |
| Cross talk | <= 1 LSB |
| Type of cable | Twisted shielded pairs cable <30 m for input circuit |
| Electrical connection | 10 x 1.5 mm² removable spring terminal block with pitch 3.81 mm adjustment for inputs and sup<br>10 x 1.5 mm² removable spring terminal block with pitch 3.81 mm adjustment for inputs |
| LSB value | 2.44 mV, 0...10 V<br>4.88 mV, - 10...10 V<br>4.88 µA, 0...20 mA<br>3.91 µA, 4...20 mA |
| Insulation | Between input and supply at 1500 V AC<br>Between input and internal logic at 500 V AC |
| Immunity to microbreaks | 10 Ms |
| Temperature drift | +/- 0.01 %FS/°C |
| Non-linearity | +/- 0.2 %FS |
| Typical current consumption | 40 MA at 5 V DC full load<br>35 MA at 5 V DC no load<br>30 MA at 24 V DC no load<br>40 MA at 24 V DC full load |
| Local signalling | 1 LED green for PWR |

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| Mounting support | Top hat type TH35-15 rail conforming to IEC 60715<br>Top hat type TH35-7.5 rail conforming to IEC 60715<br>plate or panel with fixing kit |
| Height | 90 Mm |
| Width | 23.6 Mm |
| Depth | 70 Mm |
| Net weight | 0.1 Kg |

## Environment

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| IP degree of protection | IP20 |
| Marking | CE |
| Product certifications | CE[RETURN]UKCA[RETURN]RCM[RETURN]EAC[RETURN]CULus[RETURN]CULus HazLoc |
| Standards | IEC 61131-2 |
| Electromagnetic emission | Radiated emissions - test level: 40 dBµV/m QP class A ( 10 m) at 30…230 MHz conforming to IEC<br>Radiated emissions - test level: 47 dBµV/m QP class A ( 10 m) at 230…1000 MHz conforming to |
| Ambient air temperature for operation | -10…55 °C (horizontal installation)<br>-10…35 °C (vertical installation) |
| Ambient air temperature for storage | -25…70 °C |
| Relative humidity | 10…95 % without condensation |
| Operating altitude | 0...2000 m |
| Pollution degree | 2 |
| Vibration resistance | 3.5 mm (f = 5…8.4 Hz) on DIN rail<br>3 gn (f = 8.4…150 Hz) on DIN rail |
| Shock resistance | 15 gn for 11 ms |

## Packing Units

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|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 7.5 Cm |
| Package 1 Width | 12.5 Cm |
| Package 1 Length | 10.5 Cm |
| Package 1 Weight | 195.0 G |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 9 |
| Package 2 Height | 15 Cm |
| Package 2 Width | 30 Cm |
| Package 2 Length | 40 Cm |
| Package 2 Weight | 2.292 Kg |
| Unit Type of Package 3 | P12 |
| Number of Units in Package 3 | 288 |
| Package 3 Height | 75 Cm |
| Package 3 Width | 80 Cm |
| Package 3 Length | 120 Cm |
| Package 3 Weight | 60 Kg |

## Offer Sustainability

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| Recyclability potential, in % | 3 |
| Total lifecycle Carbon footprint | 41 kg CO2 eq. |
| Carbon footprint of the manufacturing phase [A1 to A3] | 12.711334999066082 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 13 kg CO2 eq. |
| Carbon footprint of the distribution phase [A4] | 0.04393186640076018 |
| Carbon footprint of the distribution phase [A4] | 0 kg CO2 eq. |
| Carbon footprint of the installation phase [A5] | 0.00518087971352722 |
| Carbon footprint of the installation phase [A5] | 0 kg CO2 eq. |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 27.321139884613935 |
| Carbon footprint of the use phase [B2, B3, B4, B6] | 27 kg CO2 eq. |
| Toxic heavy metal free | Yes |

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|---|---|
| Mercury free | Yes |
| Sustainable packaging | Yes |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.47040137511005103 |
| Carbon footprint of the end-of-life phase [C1 to C4] | 0.5 kg CO2 eq. |
| Environmental Disclosure | Product Environmental Profile |
| Total lifecycle Carbon footprint | 41 |
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | Yes |
| SCIP Number | 7cc01735-94b8-432b-9a81-f9da4dd7709d |
| REACh Regulation | Reference contains Substances of Very High Concern above the threshold |
| EU RoHS Directive | Compliant |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, wh |
| PVC free | Yes |
| End of life manual availability | End Of Life Information |
| Take-back | No |
| WEEE Label | The product must be disposed on European Union markets following specific waste collection a |

## Contractual warranty

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| Warranty (in months) | 18 |

Product Life Status : Commercialised