

BMXART0814

analog input module M340 - 8 inputs - temperature



Main

Range of product	Modicon M340 automation platform
Product or component type	Analog input module
Product specific application	For severe environments
Electrical connection	2 connectors 40 ways
Input level	Low level
Analogue input number	8
Analogue input type	Resistor 400 Ohm 2 wires Resistor 400 Ohm 3 wires Resistor 400 Ohm 4 wires Resistor 4000 Ohm 2 wires Resistor 4000 Ohm 3 wires Resistor 4000 Ohm 4 wires Temperature probe -200...+850 °C Pt 100 IEC Temperature probe -100...+450 °C Pt 100 UL/JIS Temperature probe -200...+850 °C Pt 1000 IEC Temperature probe -100...+450 °C Pt 1000 UL/JIS Temperature probe -100...+260 °C Cu 10 Temperature probe -60...+180 °C Ni 100 Temperature probe -60...+180 °C Ni 1000 Thermocouple +130...+1820 °C thermocouple B Thermocouple -270...+1000 °C thermocouple E Thermocouple -200...+760 °C thermocouple J Thermocouple -270...+1370 °C thermocouple K Thermocouple -200...+900 °C thermocouple L Thermocouple +270...+1300 °C thermocouple N Thermocouple -50...+1769 °C thermocouple R Thermocouple -50...+1769 °C thermocouple S Thermocouple -270...+400 °C thermocouple T Thermocouple -200...+600 °C thermocouple U Voltage +/- 40 mV Voltage +/- 80 mV Voltage +/- 160 mV Voltage +/- 320 mV Voltage +/- 640 mV Voltage +/- 1.28 V
Differential mode rejection	60 dB 50/60 Hz
Type of filter	First order digital filtering

Complementary

Input output isolation	Isolated
Analog/Digital conversion	Sigma delta 16 bits
Analogue input resolution	15 bits + sign
Input impedance	10 MOhm
Permitted overload on inputs	+/- 7.5 V +/- 40 mV +/- 7.5 V +/- 80 mV +/- 7.5 V +/- 160 mV +/- 7.5 V +/- 320 mV +/- 7.5 V +/- 640 mV +/- 7.5 V +/- 1.28 V
Common mode rejection	120 dB 50/60 Hz
Cold junction compensation	External by Pt100 probe
Nominal read cycle time	200 ms with thermocouple 400 ms with temperature probe

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Measurement error	0.05 % of full scale +/- 40 mV 25 °C 0.05 % of full scale +/- 80 mV 25 °C 0.05 % of full scale +/- 160 mV 25 °C 0.05 % of full scale +/- 320 mV 25 °C 0.05 % of full scale +/- 640 mV 25 °C 0.05 % of full scale +/- 1.28 V 25 °C 0.12 % of full scale 400 Ohm 25 °C 0.12 % of full scale 4000 Ohm 25 °C +/- 0.7 °C Ni 1000 25 °C +/- 1.5 °C Ni 1000 - 25...70 °C +/- 2.1 °C Pt 100 25 °C +/- 2.1 °C Pt 1000 25 °C +/- 2.1 °C Ni 100 25 °C +/- 2.7 °C thermocouple U 25 °C +/- 2.8 °C thermocouple J 25 °C +/- 3.2 °C thermocouple R 25 °C +/- 3.2 °C thermocouple S 25 °C +/- 3.5 °C Ni 100 - 25...70 °C +/- 3.5 °C Pt 1000 - 25...70 °C +/- 3.5 °C Pt 100 - 25...70 °C +/- 3.5 °C thermocouple B 25 °C +/- 3.7 °C thermocouple E 25 °C +/- 3.7 °C thermocouple K 25 °C +/- 3.7 °C thermocouple N 25 °C +/- 3.7 °C thermocouple T 25 °C +/- 3 °C thermocouple L 25 °C +/- 4.5 °C Cu 10 - 25...70 °C +/- 4 °C Cu 10 25 °C +/- 5.5 °C thermocouple U - 25...70 °C +/- 5.5 °C thermocouple S - 25...70 °C +/- 5.5 °C thermocouple R - 25...70 °C +/- 5.5 °C thermocouple L - 25...70 °C +/- 5.5 °C thermocouple J - 25...70 °C +/- 6 °C thermocouple T - 25...70 °C +/- 6 °C thermocouple N - 25...70 °C +/- 6 °C thermocouple K - 25...70 °C +/- 6 °C thermocouple E - 25...70 °C +/- 6 °C thermocouple B - 25...70 °C <= 0.2 % of full scale +/- 640 mV - 25...70 °C <= 0.2 % of full scale +/- 160 mV - 25...70 °C <= 0.2 % of full scale +/- 80 mV - 25...70 °C <= 0.2 % of full scale +/- 40 mV - 25...70 °C <= 0.2 % of full scale +/- 1.28 V - 25...70 °C <= 0.2 % of full scale +/- 320 mV - 25...70 °C <= 0.3 % of full scale 4000 Ohm - 25...70 °C <= 0.3 % of full scale 400 Ohm - 25...70 °C
Temperature drift	25 ppm/°C 400 Ohm 25 ppm/°C 4000 Ohm 25 ppm/°C Ni 1000 25 ppm/°C thermocouple B 25 ppm/°C thermocouple E 25 ppm/°C thermocouple J 25 ppm/°C thermocouple K 25 ppm/°C thermocouple L 25 ppm/°C thermocouple N 25 ppm/°C thermocouple R 25 ppm/°C thermocouple S 25 ppm/°C thermocouple T 25 ppm/°C thermocouple U 30 ppm/°C +/- 40 mV 30 ppm/°C +/- 80 mV 30 ppm/°C +/- 160 mV 30 ppm/°C +/- 320 mV 30 ppm/°C +/- 640 mV 30 ppm/°C +/- 1.28 V 30 ppm/°C Pt 100 30 ppm/°C Pt 1000 30 ppm/°C Cu 10 30 ppm/°C Ni 100
Recalibration	Internal
Isolation between channels	750 V DC
Isolation between channels and ground	750 V DC
Isolation between channels and bus	1400 V DC

Detection type	Open circuit Pt 100 Open circuit Pt 1000 Open circuit Cu 10 Open circuit Ni 100 Open circuit Ni 1000 Open circuit thermocouple B Open circuit thermocouple E Open circuit thermocouple J Open circuit thermocouple K Open circuit thermocouple L Open circuit thermocouple N Open circuit thermocouple R Open circuit thermocouple S Open circuit thermocouple T Open circuit thermocouple U
Maximum wiring resistance	20 Ohm 3 wires Pt 100 20 Ohm 2 wires Pt 100 20 Ohm 3 wires Cu 10 20 Ohm 2 wires Cu 10 20 Ohm 3 wires Ni 100 20 Ohm 2 wires Ni 100 50 Ohm 4 wires Pt 100 50 Ohm 4 wires Cu 10 50 Ohm 4 wires Ni 100 200 Ohm 3 wires Pt 1000 200 Ohm 2 wires Pt 1000 200 Ohm 3 wires Ni 1000 200 Ohm 2 wires Ni 1000 500 Ohm 4 wires Pt 1000 500 Ohm 4 wires Ni 1000
Measurement resolution	0.1 °C Pt 100 0.1 °C Pt 1000 0.1 °C Cu 10 0.1 °C Ni 100 0.1 °C Ni 1000 0.1 °C thermocouple B 0.1 °C thermocouple E 0.1 °C thermocouple J 0.1 °C thermocouple K 0.1 °C thermocouple L 0.1 °C thermocouple N 0.1 °C thermocouple R 0.1 °C thermocouple S 0.1 °C thermocouple T 0.1 °C thermocouple U 40/2exp14 mV +/- 40 mV 40/2exp14 mV 400 Ohm 80/2exp14 mV +/- 80 mV 160/2exp14 mV +/- 160 mV 320/2exp14 mV +/- 320 mV 640/2exp14 mV +/- 640 mV 1280/2exp14 mV +/- 1.28 V 4000/2exp14 mV 4000 Ohm
Maximum conversion value	+/- 100 % 400 Ohm +/- 100 % 4000 Ohm +/- 102.5 % +/- 40 mV +/- 102.5 % +/- 80 mV +/- 102.5 % +/- 160 mV +/- 102.5 % +/- 320 mV +/- 102.5 % +/- 640 mV +/- 102.5 % +/- 1.28 V
Status LED	1 LED green RUN 1 LED red ERR 1 LED red I/O 1 LED per channel green channel diagnostic
Product weight	0,165 kg

Environment

Ambient air temperature for operation	-25...70 °C
Relative humidity	10...95 % without condensation
IP degree of protection	IP20
Protective treatment	TC Conformal coating Humiseal 1A33
Environmental characteristic	3C3 EN/IEC 60721-3-3 3C4 EN/IEC 60721-3-3

RoHS EUR conformity date	0805
RoHS EUR status	Compliant
