## Product data sheet <br> Characteristics

## HMISBC <br> Rear Module controller panel - Dig 8 inputs/8 outputs +Ana 4 In/2 Out

Green
Premium

Product availability: Non-Stock - Not normally stocked in distribution facility


| Main |  |
| :--- | :--- |
| Range of product | Magelis SCU |
| Product or component <br> type | Controller |
| Device presentation | Basic element |

Complementary

| Supply | External source |
| :---: | :---: |
| [Us] rated supply voltage | 24 V at 20.4...28.8 V DC |
| Immunity to microbreaks | <= 10 ms |
| Inrush current | <= 30 A |
| Power consumption in W | 15 W |
| Local signalling | No indicator |
| Number of pages | Limited by internal memory capacity |
| Software designation | SoMachine |
| Operating system | Magelis |
| Processor name | CPU RISC |
| Processor frequency | 333 MHz |
| Memory description | 128 MB flash memory, type: NAND <br> 128 kB internal data storage memory, type: FRAM <br> 128 MB application run memory, type: DRAM |
| Integrated connection type | 1 RJ45 connector serial link with RS232/RS485 interface at <= 115.2 kbits/s <br> 1 RJ45 connector Ethernet TCP/IP <br> 1 USB 2.0 type mini B <br> 1 USB 2.0 type A <br> SUB-D 9 connector CANopen master bus |
| Realtime clock | Built-in |
| Downloadable protocols | Modbus CANopen Modbus TCP/IP |
| Fixing mode | By 1 nut - diameter: $\varnothing 22 \mathrm{~mm}$, mounting on: $1 . . .6$ mm thick panel |
| Enclosure material | PC/PBT |
| Shock resistance | $147 \mathrm{~m} / \mathrm{s}^{2}$ (duration=11 ms) conforming to IEC 60068-2-27 on DIN rail $294 \mathrm{~m} / \mathrm{s}^{2}$ (duration=6 ms) conforming to IEC 60068-2-27 on panel mounting |
| Vibration resistance | $+/-3.5 \mathrm{~mm}(\mathrm{f}=5 \ldots . .9 \mathrm{~Hz}$ ) conforming to IEC 60068-2-6 $1 \mathrm{gn}(\mathrm{f}=9 . . .150 \mathrm{~Hz}$ ) conforming to IEC 60068-2-6 |


| Electromagnetic compatibility | Electrostatic discharge immunity test - test level: 8 kV , air discharge conforming to IEC 61000-4-2 <br> Electrostatic discharge immunity test - test level: 6 kV , contact discharge conforming to IEC 61000-4-2 <br> Susceptibility to electromagnetic fields - test level: $10 \mathrm{~V} / \mathrm{m}, 80 \mathrm{MHz} . .3 \mathrm{GHz}$ conforming to IEC 61000-4-3 <br> Electrical fast transient/burst immunity test - test level: 2 kV , power lines conforming to IEC 61000-4-4 <br> Electrical fast transient/burst immunity test - test level: 1 kV , between analogue I/ <br> O and operating voltage conforming to IEC 61000-4-4 <br> Electrical fast transient/burst immunity test - test level: 2 kV , relay wires conforming to IEC 61000-4-4 <br> Electrical fast transient/burst immunity test - test level: 1 kV , Ethernet line conforming to IEC 61000-4-4 <br> Electrical fast transient/burst immunity test - test level: 1 kV , COM line conforming to IEC 61000-4-4 <br> Electrical fast transient/burst immunity test - test level: 1 kV , CAN line conforming to IEC 61000-4-4 <br> Surge immunity test - test level: 2 kV , power supply (common mode) conforming to IEC 61000-4-5 <br> Surge immunity test - test level: 1 kV , power supply (differential mode) conforming to IEC 61000-4-5 <br> Surge immunity test - test level: 1 kV common mode, digital I/O conforming to IEC 61000-4-5 <br> Surge immunity test - test level: 0.5 kV differential mode, digital I/O conforming to IEC 61000-4-5 <br> Conducted RF disturbances - test level: $10 \mathrm{~V}, 0.15 \ldots 80 \mathrm{MHz}$ conforming to IEC 61000-4-6 <br> Conducted emission - test level: $150 \mathrm{kHz} . .30 \mathrm{MHz}$ conforming to EN 55011 <br> Radiated emission - test level: $30 \mathrm{MHz} . .1 \mathrm{GHz}$ conforming to EN 55011 |
| :---: | :---: |
| Discrete input number | 2 fast input (normal mode) conforming to IEC 61131-2 Type 1 6 digital input conforming to IEC 61131-2 Type 1 |
| Discrete input voltage | 24 V DC discrete input logic:sink or source (positive/negative) |
| Number of common point | 1 fast input (HSC mode) 1 digital input |
| Discrete input current | 7.83 mA fast input 5 mA digital |
| Input impedance | 2.81 kOhm 4.7 kOhm |
| Sensor power supply | $15 . . .28 .8 \mathrm{~V} \mathrm{DC}$, voltage (state 1 ): >= 15 V , current (state 1 ): >= 5 mA , voltage (state 0 ): $<=5 \mathrm{~V}$, current (state 0 ): $<=1.5 \mathrm{~mA}$ <br> $15 \ldots 28.8 \mathrm{~V}$ DC, voltage (state 1 ): $>=15 \mathrm{~V}$, current (state 1 ): >= 2.5 mA , voltage (state 0): <= 5 V , current (state 0 ): $<=1 \mathrm{~mA}$ |
| Configurable filtering time | 0 ms no filter (none) 0.004... 0.04 ms bounce filter (latch/event and cumulative filter by step $\mathrm{Nx0.5ms}$ (64>=N>=2)) <br> $3 . . .12 \mathrm{~ms}$ integrator (none/run/stop) |
| Input frequency | 100 kHz for fast input (encoder mode) - control type A/B 100 kHz for fast input - control type single phase 100 kHz for fast input - control type pulse/direction |
| Cable distance between devices | Shielded cable: 10 m for fast input Shielded cable: 100 m for digital input Unshielded cable: 50 m for digital input |
| Connection pitch | 0.14 in ( 3.5 mm ) |
| Overvoltage protection | With |
| Isolation between channels and internal logic | 500 V DC |
| Isolation between channels | None |
| Discrete output number | 2 fast output (normal mode), output logic: source 6 digital output, output logic: source |
| Discrete output voltage | 24 V DC (voltage limit: $19.2 \ldots 28.8 \mathrm{~V}$ ) with transistor discrete output(s) <br> 24 V DC (voltage limit: $5 \ldots 30 \mathrm{~V}$ ) with relay discrete output(s) <br> 220 V AC (voltage limit: $100 \ldots 250 \mathrm{~V}$ ) with relay discrete output(s) |
| Input/output number | 2 fast input, terminal(s): FI0...FI1 <br> 2 fast output, terminal(s): FQ0...FQ1 <br> 6 digital input, terminal(s): DIO...DI5 <br> 6 digital output, terminal(s): DQ0...DQ5 |
| Discrete output current | 300 mA , response time 2 ms fast output (normal mode) <br> 50 mA , response time 2 ms fast output (PWM or PTO mode) <br> 2 A (current per output common:4 A), response time 5 ms with opening contact for digital output <br> 2 A (current per output common: 4 A ), response time 2 ms with closing contact for digital output |


| Insulation resistance | > 10 MOhm between the I/O and internal logic <br> > 10 MOhm between power supply and earth |
| :---: | :---: |
| Output frequency | $\begin{aligned} & \text { <= } 100 \mathrm{kHz} \text { for fast output (PTO mode) } \\ & \text { <= } 1 \mathrm{kHz} \text { for fast output (PWM mode) } \end{aligned}$ |
| Absolute accuracy error | +/- $0.1 \%$ of full scale of cyclic ratio 1...99\% fast output (PWM or PTO mode) <br> $1 \%$ of full scale of cyclic ratio $1 . . .99 \%$ fast output (PWM or PTO mode) <br> $+/-5 \%$ of full scale of cyclic ratio 10...90\% fast output (PWM or PTO mode) <br> +/- $10 \%$ of full scale of cyclic ratio 20 ... $80 \%$ fast output (PWM or PTO mode) <br> +/- $15 \%$ of full scale of cyclic ratio 30 ... $70 \%$ fast output (PWM or PTO mode) |
| Analogue input number | 2 analog input 2 RTDs |
| Analogue input range | $0 \ldots 20 \mathrm{~mA} / 4 \ldots 20 \mathrm{~mA}$ - resolution: 12 bits, input impedance: 250 Ohm (tolerance: +/- 1 \%) <br> $-10 \ldots+10 \mathrm{~V}$ or $0 . . .10 \mathrm{~V}$ - resolution: 12 bits + sign, input impedance: >= 1 MOhm |
| Analogue input type | RTD at - 200... $600^{\circ} \mathrm{C}$ - resolution: 16 bits temperature probe: Pt 100/Pt 1000 <br> RTD at - $50 \ldots . .200^{\circ} \mathrm{C}$ - resolution: 16 bits temperature probe: Ni 100/Ni 1000 <br> RTD at - 200... $760^{\circ} \mathrm{C}$ - resolution: 16 bits (thermocouple J) <br> RTD at - $240 \ldots 1370^{\circ} \mathrm{C}$ - resolution: 16 bits (thermocouple K) <br> RTD at $0 . . .1600^{\circ} \mathrm{C}$ - resolution: 16 bits (thermocouple R) <br> RTD at 200... $1800^{\circ} \mathrm{C}$ - resolution: 16 bits (thermocouple B) <br> RTD at $0 . . .1600^{\circ} \mathrm{C}$ - resolution: 16 bits (thermocouple S) <br> RTD at - 200... $400^{\circ} \mathrm{C}$ - resolution: 16 bits (thermocouple T) <br> RTD at - 200... $900^{\circ} \mathrm{C}$ - resolution: 16 bits (thermocouple E) <br> RTD at - 200... $1300^{\circ} \mathrm{C}$ - resolution: 16 bits (thermocouple N) |
| Analogue output number | 2 resistive load 12 bits + sign |
| Analogue output range | 0... $20 \mathrm{~mA} / 4 \ldots 20 \mathrm{~mA}$ (> 300 Ohm ) for open-circuit -10... $10 \mathrm{~V} / 0 . . .10 \mathrm{~V}$ (> 2 kOhm ) short-circuit |
| Height | 1.99 in ( 50.65 mm ) |
| Width | 5.04 in (128 mm) |
| Depth | 4.02 in (102 mm) |
| Product weight | $0.88 \mathrm{lb}(\mathrm{US})(0.398 \mathrm{~kg})$ |

Environment

| Standards | IEC 61000-6-2 <br> RoHS compliant <br> ANSI/ISA 12-12-01 <br> RoHS China SJ/T 11363-2006 <br> WEEE directive 2002/96/EC <br> CSA C22.2 No 213 Class I Division 2 <br> FCC Class A <br> UL 508 <br> EN 61131-2 |
| :---: | :---: |
| Product certifications | CULus CSA 22-2 No 142 <br> GOST <br> CULus 508 <br> C-Tick <br> KCC <br> CUL 1604 Class 1 Division 2 |
| Marking | CE |
| Ambient air temperature for operation | $32 . . .122^{\circ} \mathrm{F}\left(0 . . .50^{\circ} \mathrm{C}\right)$ |
| Ambient air temperature for storage | $-4 \ldots 140{ }^{\circ} \mathrm{F}\left(-20 . .60^{\circ} \mathrm{C}\right)$ |
| Relative humidity | $5 . .85 \%$ without condensation |
| Operating altitude | <= $6561.68 \mathrm{ft}(2000 \mathrm{~m})$ |
| Storage altitude | 0... 10000 m |
| Maximum pressure | $800 \ldots 1114 \mathrm{hPa}$ |
| IP degree of protection | IP65 front panel conforming to IEC 60529 IP20 rear panel conforming to IEC 60529 |
| NEMA degree of protection | NEMA 4X front panel |
| Pollution degree | 2 conforming to IEC 60664 |
| Environmental characteristic | Corrosive gas free |

Ordering and shipping details

| Category | 22569 - MAGELIS XBT-GT (AND XBT-G) |
| :--- | :--- |
| Discount Schedule | MC2 |
| GTIN | 003606480564802 |
| Nbr. of units in pkg. | 1 |
| Package weight(Lbs) | 1 |
| Returnability | N |
| Country of origin | CN |

Offer Sustainability

| Sustainable offer status | Green Premium product |
| :--- | :--- |
| RoHS (date code: YYWW) | Compliant - since 1346-Schneider Electric declaration of conformity <br> der Electric declaration of conformity |
| REACh | Reference not containing SVHC above the threshold |
| Product environmental profile | Available |
| Product end of life instructions | Available |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and <br> lead compounds, which is known to the State of California to cause can- <br> cer and birth defects or other reproductive harm. For more information go to <br> www.P65Warnings.ca.gov |
| - Le--- Substance 1 | Lead and lead compounds, which is known to the State of California to cause can- <br> cer and birth defects or other reproductive harm. |
| - For more information go to www.p65warnings.ca.gov |  |




No Recommended Mounting Position


Clearance


Keep adequate spacing for proper ventilation to maintain an ambient temperature between $0 . . .50^{\circ} \mathrm{C}\left(32 \ldots 122^{\circ} \mathrm{F}\right)$ for horizontal installation and $0 . . .40^{\circ} \mathrm{C}\left(32 \ldots 104^{\circ} \mathrm{F}\right)$ for vertical installation.

(1) Slow-blow 2A type $T$ fuse

Wiring Diagram of the Analog Inputs and Analog Outputs
Voltage for Analog Inputs

(C14) AIC1


Current for Analog Inputs


Voltage and Current for Analog Outputs


3 Wiring for Analog Inputs PT100



Thermocouple
(C9) EX0+
(C8)
(D8)
(D9)


(1) HSC inputs with pin assignment of terminal blocks C,D.
(2) Digital inputs with pin assignment of terminal blocks C,D.

Wiring Diagram of Digital Outputs
(1)

(2)

(1) Digital outputs with pin assignment of terminal blocks A,B.
(2) PWM outputs with pin assignment of terminal blocks C,D.

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