

Main	
range of product	Magelis SCU
product or component type	Small touch HMI controller
display size	3.5 inch
display type	Backlit LED colour TFT LCD
touch panel	Analogue
device presentation	Complete product
Complementary	
display resolution	320 x 240 pixels QVGA
backlight lifespan	50000 hours 65000 colours
brightness	16 levels via touch panel
view angle horiz x vert	60° left 60° right 40° top 60° bottom
character font	Chinese (simplified Chinese) ASCII Taiwanese (traditional Chinese) Korean Japanese (ANK, Kanji)
supply	External source
[Us] rated supply voltage	24 V 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	Flash NAND, 128 MB Internal data storage FRAM, 128 kB Application run DRAM, 128 MB
integrated connection type	1 serial link - RJ45 - RS232/RS485 <= 115.2 kbits/s) 1 Ethernet TCP/IP - RJ45 1 USB 2.0 type mini B 1 USB 2.0 type A CANopen master bus - SUB-D 9
realtime clock	Built-in
downloadable protocols	Modbus TCP/IP CANopen Modbus
fixing mode	By 1 nut Ø 22 mm 1...6 mm thick panel
enclosure material	PC/PBT
shock resistance	147 m/s ² 11 ms on DIN rail)IEC 60068-2-27 294 m/s ² 6 ms on panel mounting)IEC 60068-2-27
vibration resistance	+/- 3.5 mm 5...9 Hz) IEC 60068-2-6 1 gn 9...150 Hz) IEC 60068-2-6

electromagnetic compatibility

Electrostatic discharge immunity test 8 kV
air discharge) IEC 61000-4-2

Electrostatic discharge immunity test 6 kV
contact discharge) IEC 61000-4-2

Susceptibility to electromagnetic fields 10
V/m 80 MHz...3 GHz) IEC 61000-4-3

Electrical fast transient/burst immunity test
2 kV power lines) IEC 61000-4-4

Electrical fast transient/burst immunity test
1 kV between analogue I/O and operating
voltage) IEC 61000-4-4

Electrical fast transient/burst immunity test
2 kV relay wires) IEC 61000-4-4

Electrical fast transient/burst immunity test
1 kV Ethernet line) IEC 61000-4-4

Electrical fast transient/burst immunity test
1 kV COM line) IEC 61000-4-4

Electrical fast transient/burst immunity test
1 kV CAN line) IEC 61000-4-4

Surge immunity test 2 kV power supply
(common mode) IEC 61000-4-5

Surge immunity test 1 kV power supply
(differential mode) IEC 61000-4-5

Surge immunity test 1 kV common mode
digital I/O) IEC 61000-4-5

Surge immunity test 0.5 kV differential
mode digital I/O) IEC 61000-4-5

Conducted RF disturbances 10 V 0.15...80
MHz) IEC 61000-4-6

Conducted emission 150 kHz...30 MHz EN
55011

Radiated emission 30 MHz...1 GHz EN
55011

discrete input number

2 fast input (normal mode) IEC 61131-2
Type 1

6 digital input IEC 61131-2 Type 1

discrete input voltage
24 V DC 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 V DC ≥ 15 V ≥ 5 mA ≤ 5 V
 ≤ 1.5 mA

15...28.8 V DC ≥ 15 V ≥ 2.5 mA ≤ 5 V
 ≤ 1 mA

configurable filtering time
0 ms no filter none)

0.004...0.04 ms bounce filter latch/event
and cumulative filter by step $N \times 0.5$ ms
($64 \geq N \geq 2$)

3...12 ms integrator none/run/stop)

maximum input frequency
100 kHz fast input (encoder mode) A/B

100 kHz fast input single phase

100 kHz fast input pulse/direction

**maximum cable distance
between devices**
Shielded cable < 328.1 ft (10 m) fast input

Shielded cable < 328.08 ft (100 m) digital
input

	Unshielded cable <164.04 ft (50 m) 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) source 6 digital output source
discrete output voltage	24 V DC 19.2...28.8 V)transistor 24 V DC 5...30 V)relay 220 V AC 100...250 V)relay
input/output number	2 fast input FI0...FI1 2 fast output FQ0...FQ1 6 digital input DI0...DI5 6 digital output DQ0...DQ5
discrete output current	2 A 4 A)5 ms opening contact digital output 2 A 4 A)2 ms closing contact digital output 300 mA2 ms fast output (normal mode) 50 mA2 ms fast output (PWM or PTO mode)

insulation resistance

> 10 MOhm between the I/O and internal logic

> 10 MOhm between power supply and earth

maximum output frequency

100 kHz fast output (PTO mode)

1 kHz fast output (PWM mode)

absolute accuracy error

+/- 0.1 % of full scale cyclic ratio 1...99% fast output (PWM or PTO mode)

1 % of full scale cyclic ratio 1...99% fast output (PWM or PTO mode)

+/- 5 % of full scale cyclic ratio 10...90% fast output (PWM or PTO mode)

+/- 10 % of full scale cyclic ratio 20...80% fast output (PWM or PTO mode)

+/- 15 % of full scale cyclic ratio 30...70% fast output (PWM or PTO mode)

analogue input number

2 analog input

2 RTDs

analogue input range

0...20 mA/4...20 mA 12 bits 250 Ohm +/- 1 %)

-10...+10 V or 0...10 V 12 bits + sign >= 1 MOhm

analogue input type

RTD - 200...600 °C 16 bits Pt 100/Pt 1000

RTD - 50...200 °C 16 bits Ni 100/Ni 1000

RTD - 200...760 °C 16 bits thermocouple
J)

RTD - 240...1370 °C 16 bits thermocouple
K)

RTD 0...1600 °C 16 bits thermocouple R)

RTD 200...1800 °C 16 bits thermocouple
B)

RTD 0...1600 °C 16 bits thermocouple S)

RTD - 200...400 °C 16 bits thermocouple
T)

RTD - 200...900 °C 16 bits thermocouple
E)

RTD - 200...1300 °C 16 bits thermocouple
N)

analogue output number

2 resistive load 12 bits + sign

analogue output range

0...20 mA/4...20 mA > 300 Ohm) open-
circuit

-10...10 V/0...10 V > 2 kOhm) short-circuit

height

2.95 in (74.95 mm)

width

5.04 in (128 mm)

depth	4.02 in (102 mm)
product weight	1.21 lb(US) (0.551 kg)
Environment standards	<p>CSA C22.2 No 213 Class I Division 2</p> <p>WEEE directive 2002/96/EC</p> <p>EN 61131-2</p> <p>RoHS China SJ/T 11363-2006</p> <p>IEC 61000-6-2</p> <p>ANSI/ISA 12-12-01</p> <p>UL 508</p> <p>RoHS compliant</p> <p>FCC Class A</p>
product certifications	<p>CULus CSA 22-2 No 142</p> <p>CUL 1604 Class 1 Division 2</p> <p>C-Tick</p> <p>GOST</p> <p>KCC</p> <p>CULus 508</p>
marking	CE
ambient air temperature for operation	32...122 °F (0...50 °C)
ambient air temperature for storage	-4...140 °F (-20...60 °C)
relative humidity	5...85 % without condensation
operating altitude	<= 6561.68 ft (2000 m)
storage altitude	0.00...32808.40 ft (0...10000 m)
maximum pressure	800...1114 hPa
IP degree of protection	<p>IP20 IEC 60529 rear panel)</p> <p>IP65 IEC 60529 front panel)</p>

NEMA degree of protection	NEMA 4X front panel
pollution degree	2 IEC 60664
environmental characteristic	Corrosive gas free
Ordering and shipping details	
Category	22568 - HMI CONTROLLERS
Discount Schedule	MC2
GTIN	7.85901E+11
Package weight(Lbs)	1.19 kg (2.62 lb(US))
Returnability	Yes
Country of origin	CN
Offer Sustainability	
Sustainable offer status	Green Premium product
California proposition 65	
<p>WARNING: This product can expose you to chemicals including: Lead and lead compounds which is known to the State of California to cause Carcinogen & Reproductive harm. For more information go to www.p65warnings.ca.gov</p>	
REACH Regulation	
<p>REACH Declaration</p>	
EU RoHS Directive	
<p>Pro-active compliance (Product out of EU RoHS legal scope)</p> <p>EU RoHS Declaration</p>	
Mercury free	Yes

RoHS exemption information

[Yes](#)

China RoHS Regulation

[China RoHS declaration](#)

Environmental Disclosure

[Product Environmental Profile](#)

Circularity Profile

[End of Life Information](#)

WEEE

The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.