# Product datasheet

## HMISCU8A5

### Characteristics

<table>
<thead>
<tr>
<th>Main</th>
<th>Magelis SCU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range of product</td>
<td>Magelis SCU</td>
</tr>
<tr>
<td>Product or component type</td>
<td>Small touch HMI controller</td>
</tr>
<tr>
<td>Display size</td>
<td>5.7 inch</td>
</tr>
<tr>
<td>Display type</td>
<td>With backlit LED colour TFT LCD</td>
</tr>
<tr>
<td>Touch panel</td>
<td>Analogue</td>
</tr>
<tr>
<td>Device presentation</td>
<td>Complete product</td>
</tr>
</tbody>
</table>

### Complementary

| Display resolution            | 320 x 240 pixels QVGA          |
| Backlight lifespan            | 50000 hours with 65000 colours |
| Brightness                    | 16 levels via touch panel      |
| View angle horiz x vert       | 60° left                       |
|                               | 60° right                      |
|                               | 40° top                        |
|                               | 60° bottom                     |
| Character font                | ASCII                         |
|                               | Chinese (simplified Chinese)  |
|                               | Japanese (ANK, Kanji)         |
|                               | Korean                        |
|                               | Taiwanese (traditional Chinese)|
| 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        | 24 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 |
|                               | 128 kB internal data storage memory, type: FRAM |
|                               | 128 MB application run memory, type: DRAM |
| Integrated connection type    | 1 RJ45 connector serial link with RS232/RS485 interface at <= 115.2 kbits/s |
|                               | 1 RJ45 connector Ethernet TCP/IP |
|                               | 1 USB 2.0 type mini B         |
|                               | 1 USB 2.0 type A             |
|                               | SUB-D 9 connector CANopen master bus |
| Realtime clock                | Built-in                      |
| Downloadable protocols        | Modbus                        |
|                               | Modbus TCP/IP                 |
|                               | CANopen                       |
| Fixing mode                   | By 1 nut - diameter: Ø 22 mm, mounting on: 1...6 mm thick panel |
| Enclosure material            | PC/PBT and PAA                |
| Shock resistance              | 147 m/s² (duration=11 ms) conforming to IEC 60068-2-27 on DIN rail |
|                               | 294 m/s² (duration=6 ms) conforming to IEC 60068-2-27 on panel mounting |
| Vibration resistance          | +/- 3.5 mm (f=5...9 Hz) conforming to IEC 60068-2-6 |
|                               | 1 gn (f=9...150 Hz) conforming to IEC 60068-2-6 |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

1 / 6
### Electromagnetic compatibility

- **Electrostatic discharge immunity test**
  - Test level: 8 kV, air discharge conforming to IEC 61000-4-2
  - Test level: 6 kV, contact discharge conforming to IEC 61000-4-2
- **Susceptibility to electromagnetic fields**
  - Test level: 10 V/m, 80 MHz...3 GHz conforming to IEC 61000-4-3
- **Electrical fast transient/burst immunity test**
  - Test level: 2 kV, power lines conforming to IEC 61000-4-4
  - Test level: 1 kV, between analogue I/O and operating voltage conforming to IEC 61000-4-4
- **Surge immunity test**
  - Test level: 2 kV, power supply (common mode) conforming to IEC 61000-4-5
  - Test level: 1 kV, power supply (differential mode) conforming to IEC 61000-4-5
  - Test level: 0.5 kV differential mode, digital I/O conforming to IEC 61000-4-5
  - Test level: 0.5 kV common mode, digital I/O conforming to IEC 61000-4-5
- **Conducted RF disturbances**
  - Test level: 10 V, 0.15...80 MHz conforming to IEC 61000-4-6
- **Conducted emission**
  - Test level: 30 MHz...1 GHz conforming to EN 55011
- **Radiated emission**
  - Test level: 150 kHz...30 MHz conforming to EN 55011

### Discrete input number
- 2 fast input (normal mode) conforming to IEC 61131-2 Type 1
- 14 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)
- 2 digital input

### Input impedance
- 4.7 kOhm
- 2.81 kOhm

### Sensor power supply
- 15...28.8 V DC, voltage (state 1): >= 15 V, current (state 1): >= 5 mA, voltage (state 0): <= 1.5 mA
- 15...28.8 V DC, voltage (state 1): >= 15 V, current (state 1): >= 2.5 mA, voltage (state 0): <= 1.5 mA

### Configurable filtering time
- 0 ms no filter (none)
- 0.004...0.04 ms bounce filter (latch/event and cumulative filter by step Nx0.5ms (64>=N>=2))
- 3...12 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
- 8 digital output, output logic: source

### Discrete output voltage
- 24 V DC (voltage limit: 19.2...28.8 V) with transistor discrete output(s)
- 24 V DC (voltage limit: 5...30 V) with relay discrete output(s)
- 220 V AC (voltage limit: 100...250 V) with relay discrete output(s)

### Input/output number
- 2 fast input, terminal(s): FI0...FI1
- 14 digital input, terminal(s): DI0...DI13
- 2 fast output, terminal(s): FQ0...FQ1
- 8 digital output, terminal(s): DQ0...DQ7

### Discrete output current
- 300 mA, response time 2 ms for fast output (normal mode)
- 50 mA, response time 2 ms for fast output (PWM or PTO mode)
- 2 A (current per output common:4 A), response time 5 ms with opening contact for digital output
- 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
> 10 MOhm between power supply and earth

Output frequency
<= 100 kHz for fast output (PTO mode)
<= 1 kHz for fast output (PWM mode)

Absolute accuracy error
 +/- 0.1 % of full scale of cyclic ratio 1...99% fast output (PWM or PTO mode)
1 % of full scale of cyclic ratio 1...99% fast output (PWM or PTO mode)
 +/- 5 % of full scale of cyclic ratio 10...90% fast output (PWM or PTO mode)
 +/- 10 % of full scale of cyclic ratio 20...80% fast output (PWM or PTO mode)
 +/- 15 % of full scale of cyclic ratio 30...70% fast output (PWM or PTO mode)

Height
5.09 in (129.4 mm)
Width
6.42 in (163 mm)
Depth
3 in (76.22 mm)
Product weight
1.68 lb(US) (0.764 kg)

Environment
standards
EN 61131-2
FCC Class A
IEC 61000-6-2
RoHS compliant
UL 508
ANSI/ISA 12-12-01
WEEE directive 2002/96/EC
CSA C22.2 No 213 Class I Division 2
RoHS China SJ/T 11363-2006

product certifications
C-Tick
CULus 508
GOST
CUL 1604 Class 1 Division 2
KCC
CULus CSA 22-2 No 142

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...10000 m
maximum pressure
800...1114 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

Offer Sustainability
Green Premium product
Compliant - since 0844 - Schneider Electric declaration of conformity
Reference not containing SVHC above the threshold
Available

Dimensions
Recommended Mounting position

(1) Horizontal mounting
(2) Vertical mounting

No Recommended Mounting Position

Mounting on a Slanted Panel
Clearance

Keep adequate spacing for proper ventilation to maintain an ambient temperature between 0...50 °C (32...122 °F) for horizontal installation and 0...40 °C (32...104 °F) for vertical installation.

Wiring Diagram

(1) Slow-blow 2A type T fuse

Wiring Diagram of Digital Inputs
Wiring Diagram of Digital Outputs

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

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