

Product data sheet

Specifications



Small touch HMI controller,
Harmony SCU, 3.5 inch color panel,
Dig 16 inputs/10 outputs

HMISCU6A5

Main

Range Of Product	Harmony 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	Japanese (ANK, Kanji) ASCII Taiwanese (traditional Chinese) Korean Chinese (simplified Chinese)
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	Harmony
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

Disclaimer: 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

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	CANopen Modbus TCP/IP Modbus
Fixing Mode	By 1 nut Ø 22 mm 1...6 mm thick panel
Enclosure Material	PC/PBT
Shock Resistance	147 m/s² 11 ms on DIN rail)IEC 60068-2-27 294 m/s² 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 - test level: 8 kV (air discharge) conforming to IEC 61000-4-2 Electrostatic discharge immunity test - 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 Electrical fast transient/burst immunity test - test level: 1 kV (between analogue I/O and operating voltage) conforming to IEC 61000-4-4 Electrical fast transient/burst immunity test - test level: 2 kV (relay wires) conforming to IEC 61000-4-4 Electrical fast transient/burst immunity test - test level: 1 kV (Ethernet line) conforming to IEC 61000-4-4 Electrical fast transient/burst immunity test - test level: 1 kV (COM line) conforming to IEC 61000-4-4 Electrical fast transient/burst immunity test - test level: 1 kV (CAN line) conforming to IEC 61000-4-4 Surge immunity test - test level: 2 kV (power supply (common mode)) conforming to IEC 61000-4-5 Surge immunity test - test level: 1 kV (power supply (differential mode)) conforming to IEC 61000-4-5 Surge immunity test - test level: 1 kV common mode (digital I/O) conforming to IEC 61000-4-5 Surge immunity test - test level: 0.5 kV differential 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: 150 kHz...30 MHz conforming to EN 55011 Radiated emission - test level: 30 MHz...1 GHz conforming to EN 55011
Discrete Input Number	2 fast input (normal mode) IEC 61131-2 Type 1 14 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) 2 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 Nx0.5ms (64>=N>=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 <32.81 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 8 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 14 digital input DI0...DI13 2 fast output FQ0...FQ1 8 digital output DQ0...DQ7
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)
Height	2.95 in (74.95 mm)
Width	5.04 in (128 mm)
Depth	4.02 in (102 mm)
Net Weight	1.13 lb(US) (0.512 kg)

Environment

Standards	IEC 61000-6-2 FCC Class A UL 508 EN 61131-2 CSA C22.2 No 213 Class I Division 2 ANSI/ISA 12-12-01
Product Certifications	cULus 508 cUL 1604 Class 1 Division 2 KCC C-Tick cULus CSA 22-2 No 142 GOST UKCA UKEX
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	<= 2000 m
Storage Altitude	0.00...32808.40 ft (0...10000 m)

Maximum Pressure	800...1114 hPa
Ip Degree Of Protection	IP20 IEC 60529 rear panel) IP65 IEC 60529 front panel)
Nema Degree Of Protection	NEMA 4X front panel
Pollution Degree	2 IEC 60664
Environmental Characteristic	Corrosive gas free

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	4.65 in (11.800 cm)
Package 1 Width	7.48 in (19.000 cm)
Package 1 Length	10.63 in (27.000 cm)
Package 1 Weight	2.68 lb(US) (1.217 kg)
Unit Type Of Package 2	S03
Number Of Units In Package 2	4
Package 2 Height	11.81 in (30.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)
Package 2 Weight	12.33 lb(US) (5.595 kg)

Sustainability

Green Premium™ label is Schneider Electric’s commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product’s sustainability >](#)



Transparency RoHS/REACH

Resource performance

 Upgradeable Through Digital Modules
And Upgraded Components

Well-being performance

 Mercury Free

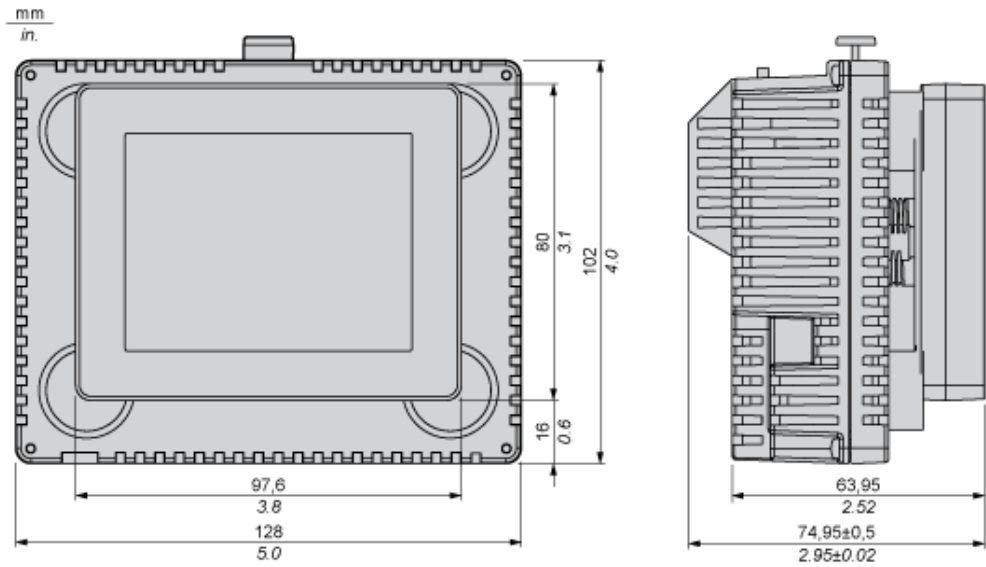
 Rohs Exemption Information [Yes](#)

Certifications & Standards

Reach Regulation	REACH Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	End of Life Information

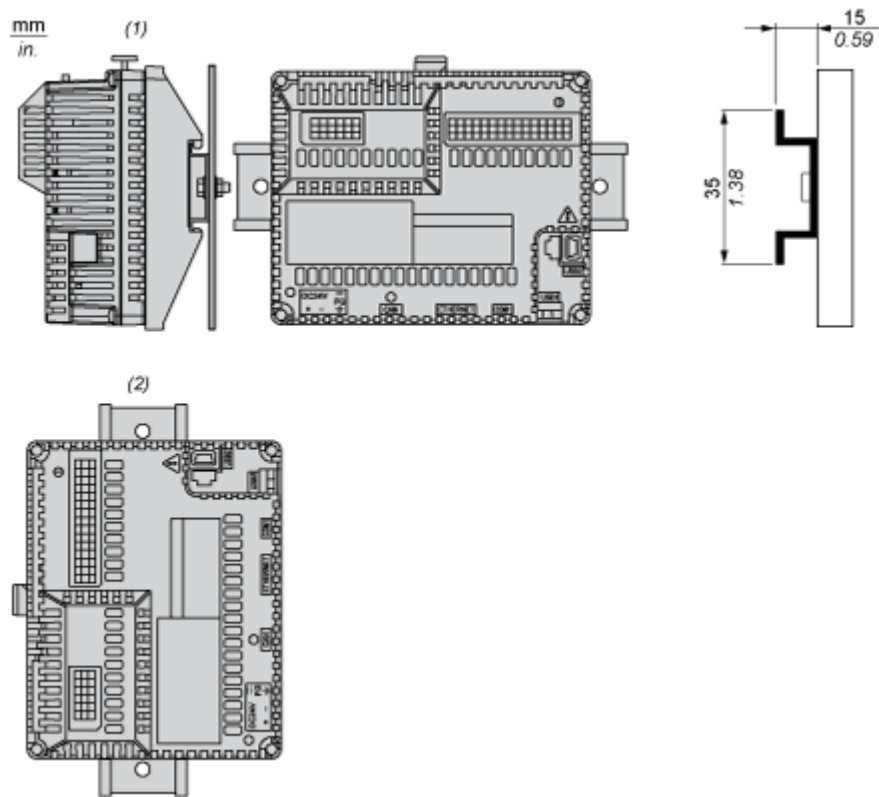
Dimensions Drawings

Dimensions



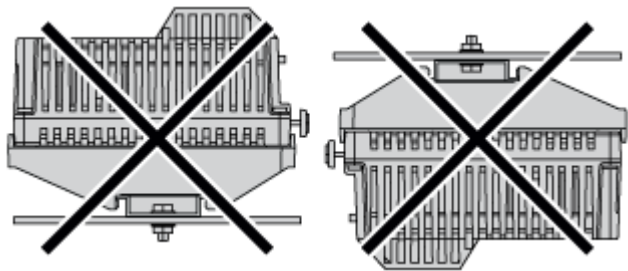
Mounting and Clearance

Recommended Mounting position

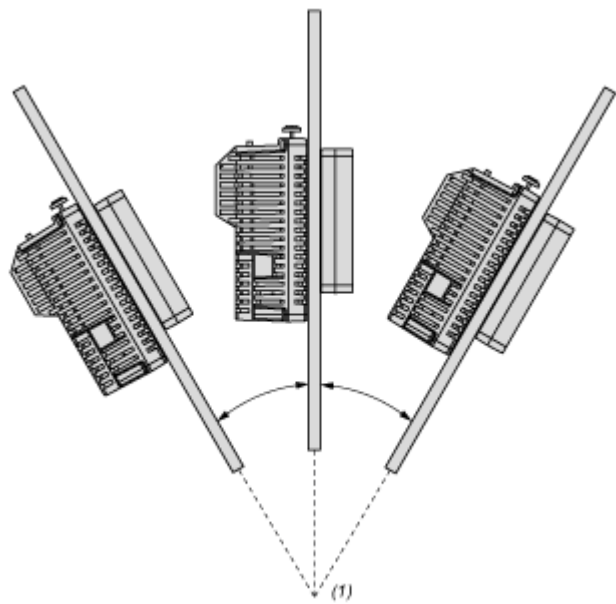


- (1) Horizontal mounting
- (2) Vertical mounting

No Recommended Mounting Position

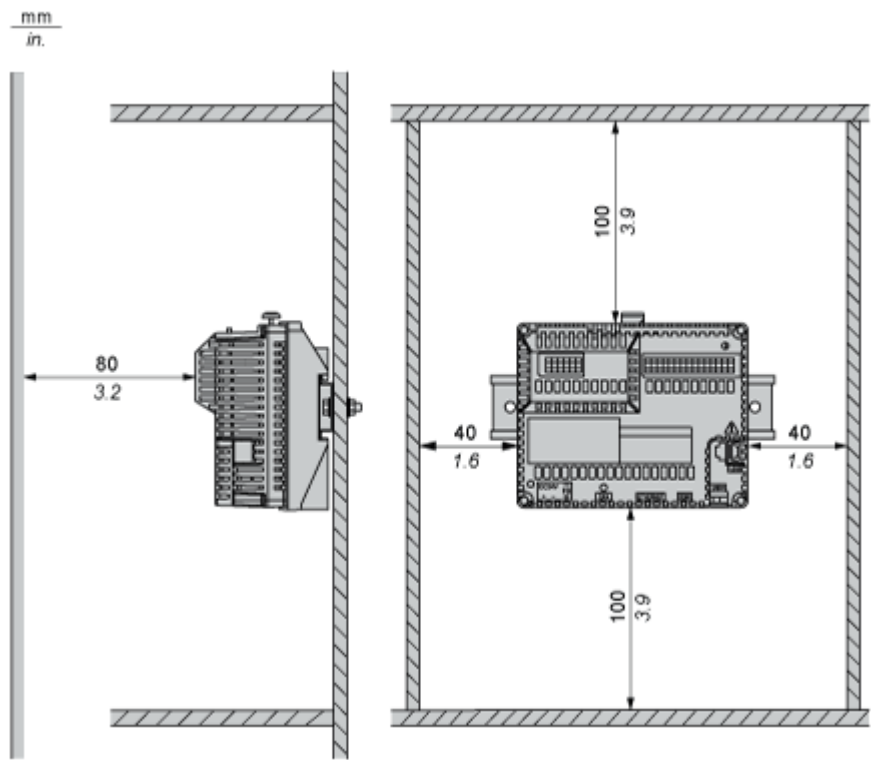


Mounting on a Slanted Panel



(1) 30° or less

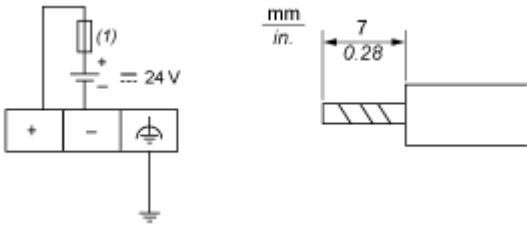
Clearance



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.

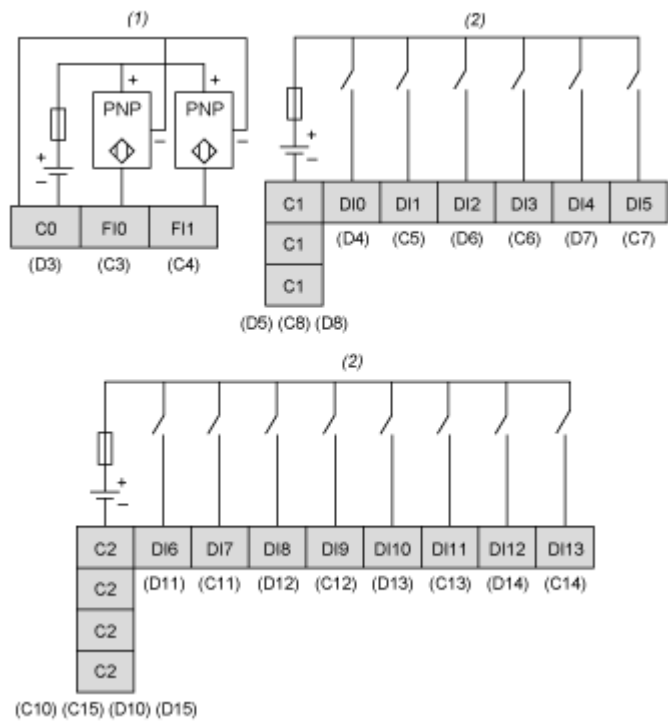
Connections and Schema

Wiring Diagram



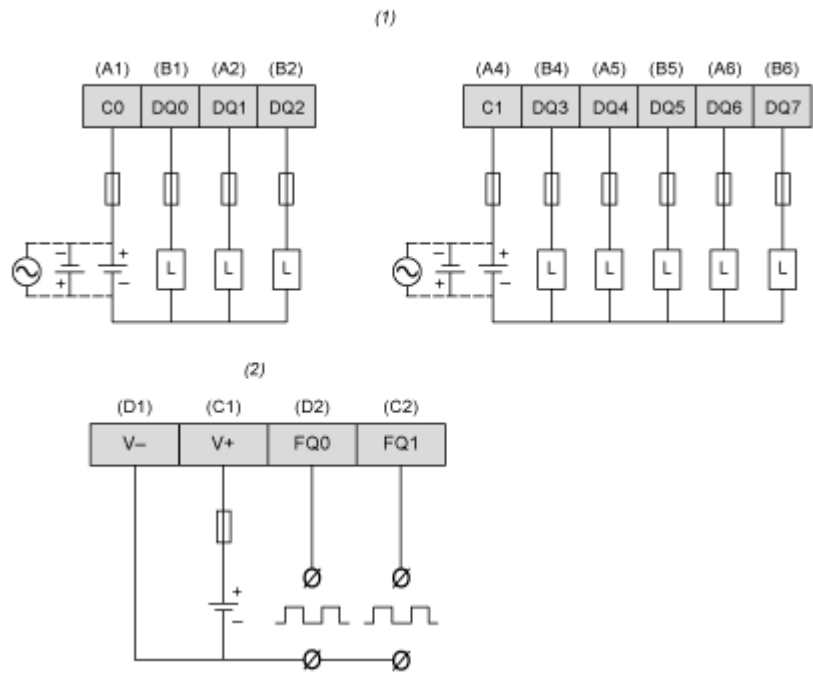
(1) Slow-blow 2A type T fuse

Wiring Diagram of Digital Inputs



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