

# Product data sheet

Specifications



## Controller, Harmony SCU, Rear Module panel, Dig 16 inputs/10 outputs

HMISAC

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

### Main

Range of Product	Harmony SCU
Product or Component Type	Controller
Device presentation	Basic element

### Complementary

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
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 Modbus TCP/IP CANopen
Fixing mode	By 1 nut Ø 22 mm 1...6 mm thick panel
Enclosure Material	PC/PBT
Shock resistance	147 m/s <sup>2</sup> 11 ms on DIN rail)IEC 60068-2-27 294 m/s <sup>2</sup> 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

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

<b>Electromagnetic compatibility</b>	<p>Electrostatic discharge immunity test - test level: 8 kV (air discharge) conforming to IEC 61000-4-2</p> <p>Electrostatic discharge immunity test - test level: 6 kV (contact discharge) conforming to IEC 61000-4-2</p> <p>Susceptibility to electromagnetic fields - test level: 10 V/m (80 MHz...3 GHz) conforming to IEC 61000-4-3</p> <p>Electrical fast transient/burst immunity test - test level: 2 kV (power lines) conforming to IEC 61000-4-4</p> <p>Electrical fast transient/burst immunity test - test level: 1 kV (between analogue I/O and operating voltage) conforming to IEC 61000-4-4</p> <p>Electrical fast transient/burst immunity test - test level: 2 kV (relay wires) conforming to IEC 61000-4-4</p> <p>Electrical fast transient/burst immunity test - test level: 1 kV (Ethernet line) conforming to IEC 61000-4-4</p> <p>Electrical fast transient/burst immunity test - test level: 1 kV (COM line) conforming to IEC 61000-4-4</p> <p>Electrical fast transient/burst immunity test - test level: 1 kV (CAN line) conforming to IEC 61000-4-4</p> <p>Surge immunity test - test level: 2 kV (power supply (common mode)) conforming to IEC 61000-4-5</p> <p>Surge immunity test - test level: 1 kV (power supply (differential mode)) conforming to IEC 61000-4-5</p> <p>Surge immunity test - test level: 1 kV common mode (digital I/O) conforming to IEC 61000-4-5</p> <p>Surge immunity test - test level: 0.5 kV differential mode (digital I/O) conforming to IEC 61000-4-5</p> <p>Conducted RF disturbances - test level: 10 V (0.15...80 MHz) conforming to IEC 61000-4-6</p> <p>Conducted emission - test level: 150 kHz...30 MHz conforming to EN 55011</p> <p>Radiated emission - test level: 30 MHz...1 GHz conforming to EN 55011</p>
<b>Discrete input number</b>	2 fast input (normal mode) IEC 61131-2 Type 1 14 digital input IEC 61131-2 Type 1
<b>Discrete input voltage</b>	24 V DC sink or source (positive/negative)
<b>Number of common point</b>	1 fast input (HSC mode) 2 digital input
<b>Discrete input current</b>	7.83 mA fast input 5 mA digital
<b>Input impedance</b>	4.7 kOhm 2.81 kOhm
<b>Sensor power supply</b>	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
<b>Configurable filtering time</b>	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
<b>Maximum input frequency</b>	100 kHz fast input (encoder mode) A/B 100 kHz fast input single phase 100 kHz fast input pulse/direction
<b>Maximum cable distance between devices</b>	Shielded cable <32.8 ft (10 m) fast input Shielded cable <328.08 ft (100 m) digital input Unshielded cable <164.04 ft (50 m) digital input
<b>Connection pitch</b>	0.1 in (3.5 mm)
<b>Overvoltage protection</b>	With
<b>Isolation between channels and internal logic</b>	500 V DC
<b>Isolation between channels</b>	None
<b>Discrete output number</b>	2 fast output (normal mode) source 8 digital output source
<b>Discrete output voltage</b>	24 V DC 19.2...28.8 V)transistor 24 V DC 5...30 V)relay 220 V AC 100...250 V)relay

<b>Input/output number</b>	2 fast input FI0...FI1 14 digital input DI0...DI13 2 fast output FQ0...FQ1 8 digital output DQ0...DQ7
<b>Discrete output current</b>	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)
<b>Insulation resistance</b>	> 10 MOhm between the I/O and internal logic > 10 MOhm between power supply and earth
<b>Maximum output frequency</b>	100 kHz fast output (PTO mode) 1 kHz fast output (PWM mode)
<b>Absolute accuracy error</b>	+/- 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)
<b>Height</b>	1.99 in (50.65 mm)
<b>Width</b>	5.04 in (128 mm)
<b>Depth</b>	4.02 in (102 mm)
<b>Net Weight</b>	0.791 lb(US) (0.359 kg)

## Environment

<b>Standards</b>	FCC Class A ANSI/ISA 12-12-01 UL 508 IEC 61000-6-2 EN 61131-2 CSA C22.2 No 213 Class I Division 2
<b>Product Certifications</b>	GOST C-tick KCC cULus 508 cULus CSA 22-2 No 142 cUL 1604 Class 1 Division 2
<b>Marking</b>	CE
<b>Ambient Air Temperature for Operation</b>	32...122 °F (0...50 °C)
<b>Ambient Air Temperature for Storage</b>	-4...140 °F (-20...60 °C)
<b>Relative humidity</b>	5...85 % without condensation
<b>Operating altitude</b>	<= 6561.68 ft (2000 m)
<b>Storage altitude</b>	0...32808.4 ft (0...10000 m)
<b>Maximum pressure</b>	800...1114 hPa
<b>IP degree of protection</b>	IP20 IEC 60529 rear panel) IP65 IEC 60529 front panel)
<b>NEMA degree of protection</b>	NEMA 4X front panel
<b>Pollution degree</b>	2 IEC 60664
<b>Environmental characteristic</b>	Corrosive gas free

## Ordering and shipping details

<b>Category</b>	US10MC222569
<b>Discount Schedule</b>	0MC2
<b>GTIN</b>	3595864175591

<b>Returnability</b>	No
<b>Country of origin</b>	ID

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Nbr. of units in pkg.</b>	1
<b>Package 1 Height</b>	3.622 in (9.200 cm)
<b>Package 1 Width</b>	7.480 in (19.000 cm)
<b>Package 1 Length</b>	10.551 in (26.800 cm)
<b>Package weight(Lbs)</b>	34.850 oz (988.000 g)
<b>Unit Type of Package 2</b>	S03
<b>Number of Units in Package 2</b>	6
<b>Package 2 Height</b>	11.811 in (30.000 cm)
<b>Package 2 Width</b>	11.811 in (30.000 cm)
<b>Package 2 Length</b>	15.748 in (40.000 cm)
<b>Package 2 Weight</b>	14.720 lb(US) (6.677 kg)

## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

### Environmental footprint

Carbon footprint (kg CO2 eq, Total Life cycle) 664

Environmental Disclosure [Product Environmental Profile](#)

## Use Better

### Materials and Substances

F-gas usage performance Only air and vacuum used for insulation / breaking, no F-gas including SF6

Packaging made with recycled cardboard Yes

Packaging without single use plastic No

[EU RoHS Directive](#) Pro-active compliance (Product out of EU RoHS legal scope)

SCIP Number 0fd86373-eda5-4dea-806b-9b9833dc484c

REACH Regulation [REACH Declaration](#)

California proposition 65 **WARNING:** This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Halogen content performance Product contains halogen above thresholds

PVC free No

Silicon free No

## Use Again

### Repack and remanufacture

Circularity Profile [End of Life Information](#)

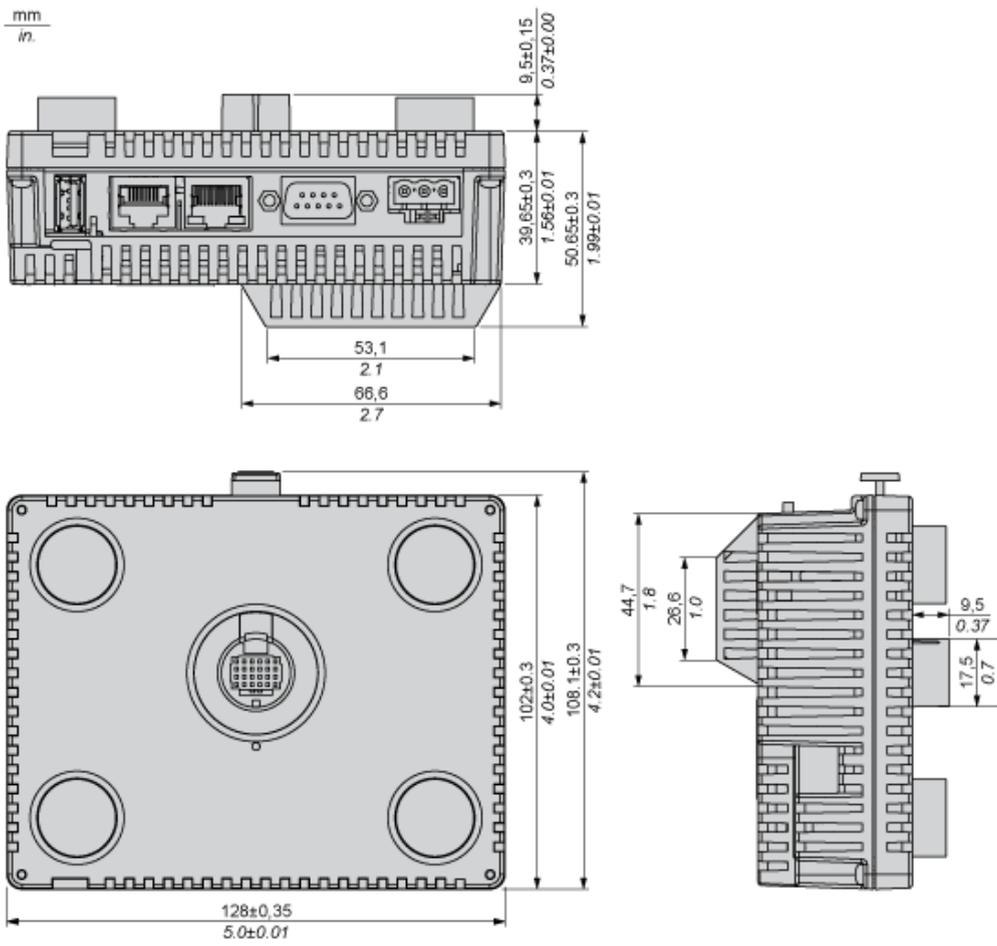
Removable battery User replaceable

Take-back No

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

Dimensions Drawings

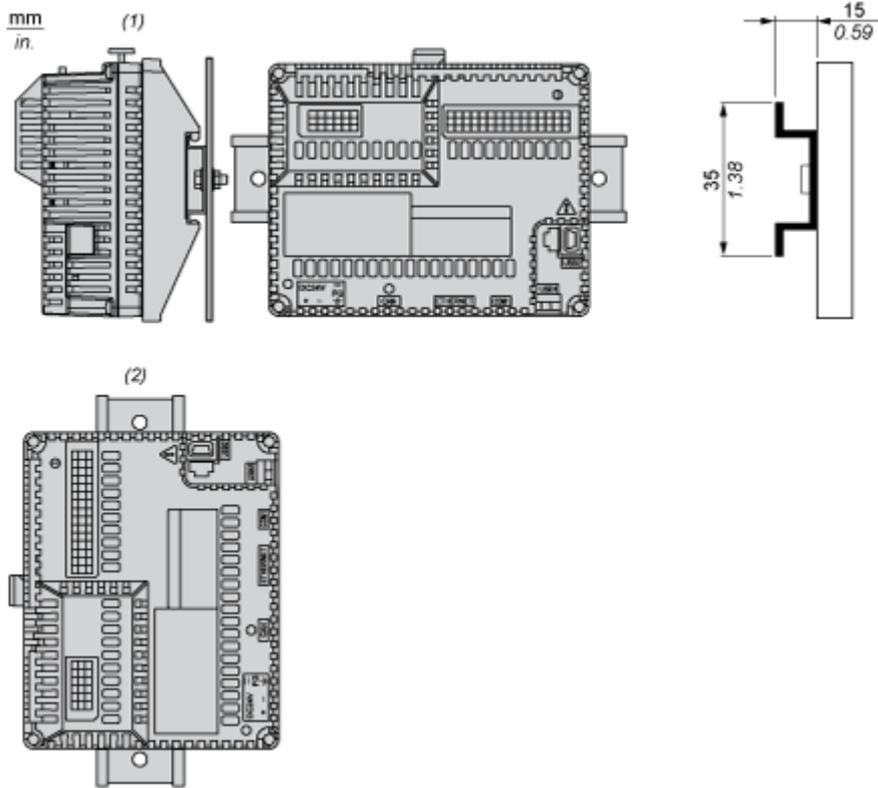
Dimensions



Mounting and Clearance

Recommended Mounting position

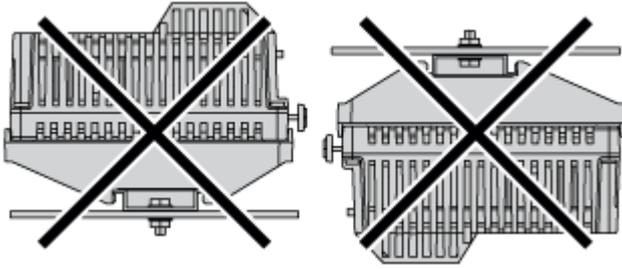
---



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

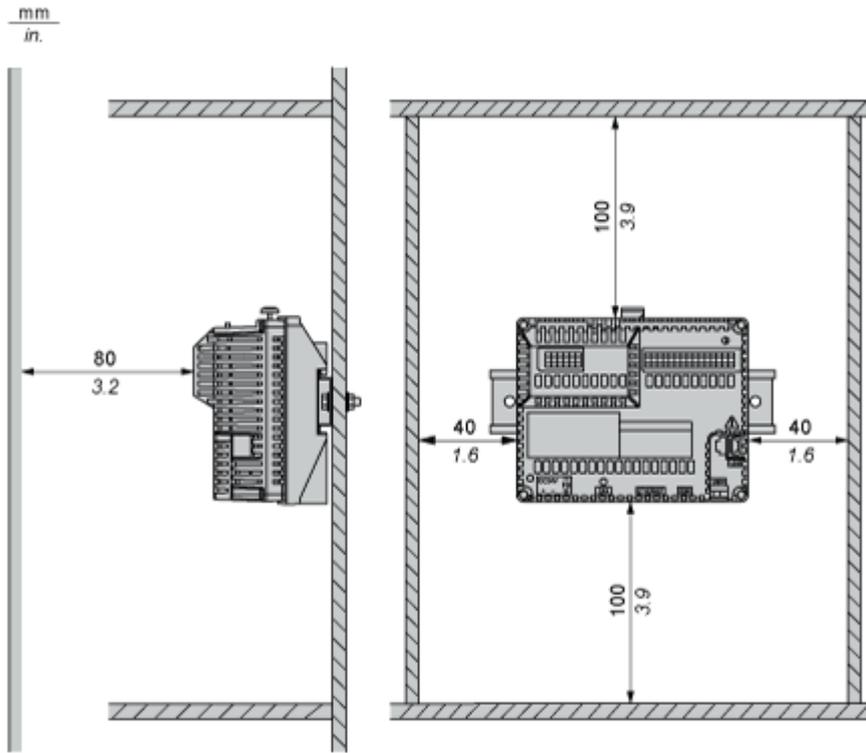
No Recommended Mounting Position

---



Clearance

---

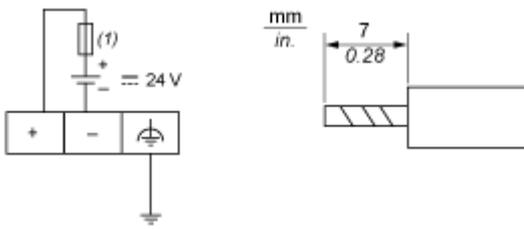


Keep adequate spacing for proper ventilation to maintain an ambient temperature between 0...50 °C (32...122 °F) for horizontal installation and 0...40 °C (32...104 °F) for vertical installation.

## Connections and Schema

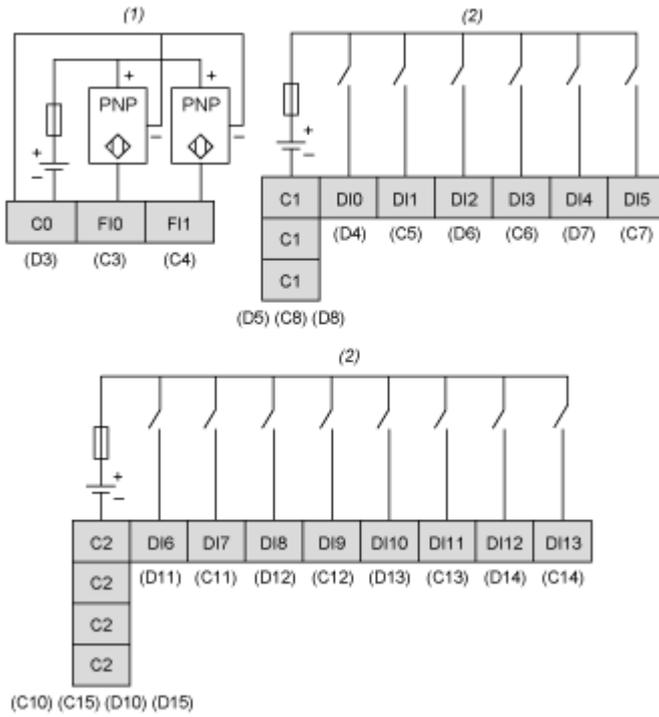
### Wiring Diagram

---



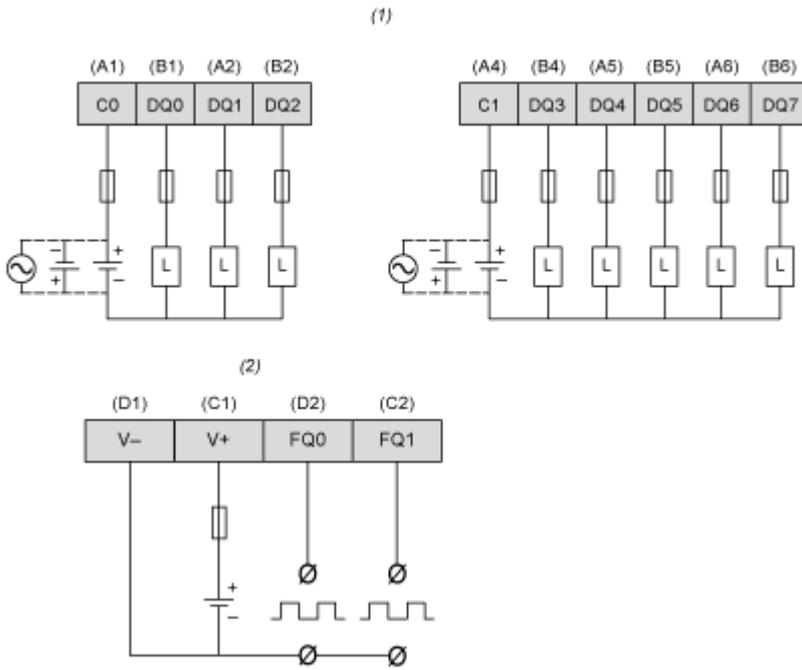
(1) Slow-blow 2A type T fuse

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