

Technical Data of the SensFloor® Receiver SE10



SE10H with power supply for DIN rail mounting



SE10F in flat compartment with mains plug adapter

Overview:

The SE10 is a receiver for wireless data transmitted by the SensFloor® sensor underlay. The device consists of a Raspberry Pi single board computer of the Raspberry Pi foundation, an expansion board that is plugged on the IO-port of the Raspberry Pi and a real time clock (RTC) that is plugged on the expansion board. The SE10 exists in two versions: the SE10H has a compartment that can be mounted on the DIN rail in the electrical installation box and comes with a DIN rail power supply. A special opening in the housing gives access to nine screw terminals for eight potential-free relays with one common pole. Refer to the wiring diagram printed on the label. The relays are configured using the Future-Shape software that comes on the micro SD card. The SE10F has a flat compartment and comes with a mains plug adapter with international plug adapters. In the SE10F, the potential-free relays are not accessible, however all regular connectors of the Raspberry Pi are usable in both versions of the device. Depending on the region, the radio frequency of the SE10, indicated on its label, is either 868.3 MHz (Europe) or 920 MHz (USA, Canada, Australia).

Details about the SE10's built-in functions and on how the SensFloor data can be accessed from external devices is contained in the software documentation available from Future-Shape.

Technical Data:

Component	Parameters	Note	
Raspberry Pi single board computer	Version 3 Model B	refer to the manufacturer's data sheet available from the Raspberry Pi foundation at http://www.raspberrypi.org	
Real-time clock (RTC)	Himalaya DS3231	refer to the manufacturer's data sheet available at http://himalayansolution.com	
DIN rail power supply (SE10H)	Mean Well DR-15-5, 5VDC, 2.4A	refer to the manufacturer's data sheet available at https://www.meanwell-web.com	
Cable for power supply	1m, 2 open wire ends, micro USB plug	required for SE10H	
Mains plug power supply (SE10F)	Stontronics DSA-13PFC-05 FCA, 5.1VDC, 2.5A, micro USB plug	Refer to the manufacturer's data sheet available at http://stontronics.com	
Wireless expansion board 	Size	55.8 x 41.9 x 27.5mm ³	
	Power	5VDC, 80mA max.	
	Relays	8x ASSR-4118-503E 60VDC, 0.1A, 35Ohm	powered by Raspberry Pi IO-expansion port opto MOSFET, normally open contact (NOC), one common pole, relay configuration via Future-Shape software, for switching currents >0.1A use external contactor!
	Connector	13x2 pole socket/plug	loophrough connection to Raspberry Pi IO-expansion port
	Operating Temp	-10°C to +40°C	
	Serial interface	115kBaud, 8N1, UART	connection to Raspberry Pi UART via IO-expansion port
	Frequency	868.3MHz or 920.0MHz	depends on region (see label)
	Output power	+10dBm max.	
	Range	approx. 25m indoor	
Antenna	integrated PCB	optional SMA connector for external antenna	
Micro SD card	Transcend Ultimate 600x, 32GB	with Linux OS and Future-Shape software	
DIN rail compartment (SE10H)	ABS, size 91 x 72 x 62mm ³ , 134g	for 35mm standard DIN rail, about 5 free width units (incl. AC/DC adapter) required	
Flat compartment (SE10F)	ABS, size 105 x 75 x 46mm ³ , 137g		

SE10 Data Sheet

FUTURE SHAPE

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Safety instructions:

The device should be installed by authorized electricians only! The device is for fixed installation only and must be placed out of reach of unauthorized persons! Before connecting and using the device, please also read the manual for the SensFloor® System! Have faulty units checked by the manufacturer! Do not open the unit housing, keep it away from moisture and do not change any parts of the device unauthorizedly!

Intended use:

The transceiver SE10H/F is sold in combination with appropriate software only and may be used in this combination only. Running the software requires a license from Future-Shape. Unauthorized copies, modifications or updates of the software render this license void.

The device must be tested for proper function and a working wireless connection to the dedicated SensFloor® products on a regular basis. This can be achieved by means of an appropriate service contract with the distributor. The manufacturer is not liable for damages caused by inappropriate or unintended usage or handling.

Connection:

Appliances you want to control by means of the SE10H can be connected to the relay-terminals 1-8 (maximal 60VDC and 0.1A per relay, for higher currents use external contactors!). Use terminal 9 as common pole (e.g. VDD of the appliances).

After switching on the power supply of the Raspberry Pi the LED shows proper connection. The LED on the internal expansion board flashes when wireless data is received from the SensFloor® products. The Future-Shape software is started up automatically which takes around 2 minutes.

Configure the relays using the webserver of the SE10/H as described in the software manual.

To test the proper function of the entire system, please activate the functions indicated in the manual of your SensFloor® product and check whether the appropriate action (e.g. relay switch) is taken by the SE10. Please run a complete system check after every re-connection or after a power breakdown.

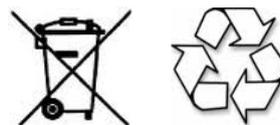
Warranty:

Within the statutory warranty period we undertake to rectify free of charge by repair or replacement any product defects arising from material or production faults. Any unauthorised tampering with, or modifications to, the product shall render this warranty null and void.

Disposal instructions:

Waste electrical products should not be disposed of with household waste!

Dispose of the waste product via a collection point for electronic scrap or via your specialist dealer. Put the packaging material into a container for cardboard and paper.



Conformity

This product complies with the essential requirements of DIN EN 60601-1-2; VDE 0750-1-2:2007-12 including IEC 60601-1-2:2007. It is in accordance with the Radio Equipment Directive 2014/53/EU and complies with the standards according to ETSI i.e.: EN 300 220-1 V3.1.1, EN 300 220-2 V3.1.1, EN 62479:2010 and EN 301 489-3 V1.4.1.



Under the unique identifier 2ARCY-FSSE10, this device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



The declaration of conformity can be requested from your distributor or from Future-Shape.

Customer Service

If, despite correct handling, faults or malfunctions occur or if the product was damaged, please contact your dealer or Future-Shape at <http://www.future-shape.com>.