



MS4 Module

CAUTION

1. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance.

Cleaning and user maintenance shall not be made by children without supervision.

(for EU market only)

2. The appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.

Children being supervised not to play with the appliance.

(not for EU market)

3. This appliance must only be supplied at safety extra low voltage corresponding to the marking on the appliance.

4. The battery must be removed from the appliance before it is scrap;

The appliance must be disconnected from the supply mains when removing the battery;

The battery is to be disposed of safely.

5. WARNING: Important safety instructions. It is important for the safety of persons to follow these instructions. Save these instructions.

WARNING: the drive shall be disconnected from its power source during cleaning, maintenance and when replacing parts

WARNING: Important safety instructions. Follow all instructions, since incorrect installation can lead to severe injury

6. - do not allow children to play with fixed controls. Keep remote controls away from children



- Frequently examine the installation for imbalance and signs of wear or damage to cables and springs. Do not use if repair or adjustment is necessary
 - do not operate when maintenance, such as window cleaning, is being carried out in the vicinity;
 - Before installing the drive, remove any unnecessary cords or components and disable any equipment not needed for powered operation;
 - That the characteristics of the driven part must be compatible with the rated load and rated operating time;
7. - the mass and the dimension of the driven part shall be compatible with the rated torque and rated operating time;
- fixed controls have to be clearly visible after installation;
8. $L_pA \leq 70 \text{ dB(A)}$.

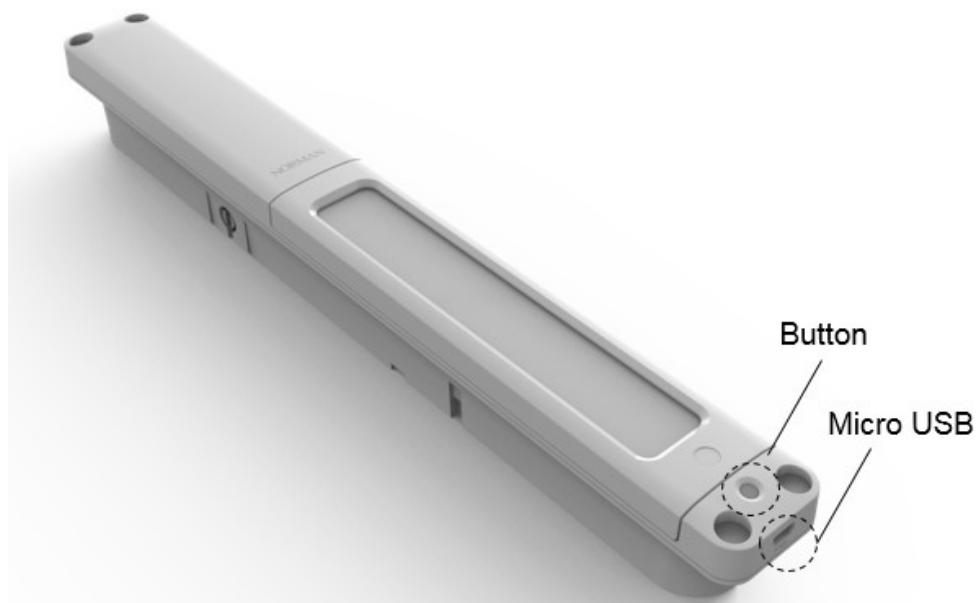
RF Information

1. Frequency band(s): 2.4GHz
2. Receiver category: Category 2

3. EU declaration;

EN 300 328 V2.1.1 (2016-11)
EN 301 489-1 V2.1.1 (2017-02)
EN 301 489-17 V3.1.1 (2017-02)
EN 55032:2015 +AC:2016, Class B
EN 61000-3-2:2014 (Not Applicable)
EN 61000-3-3:2013 (Not Applicable)
EN 61000-4-2:2009
EN 61000-4-3:2006 +A1:2008 +A2:2010
EN 61000-4-4:2012 (Not Applicable)
EN 61000-4-5:2014+A1:2017 (Not Applicable)
EN 61000-4-6:2014 (Not Applicable)
EN 61000-4-11:2004+A1:2017 (Not Applicable)
EN 62311: 2008

1. MS4 Module Specification



NO	Item		Specification
1	Power source		3.7V,3000mAh,18650 Li-ion battery cell x2 parallel
2	Battery operating voltage range		4.2V~3.2V
3	Radio type		proprietary 2.4G RF
4	Motor type		Brush DC motor
6	Output torque		5.0 kgf-cm@7V, 1.8A
7	Solar panel		Solar cell : 5V, 120mA@1000W/m ² a-Silicon, efficiency>19.2%
8	Interface		USB micro B receptor (water proof)
9	Charge type		USB, Solar
10	Charge capability		USB
11	Charge time @ 3000mAh battery cell x2	Solar	4W(5V, 0.8A)
		USB	0.06W@37000lux (5V,12mA)
12	Power consumption	Solar	10hrs
		Standby	300hr@37000lux
13	HW thermal protection	Radio	<0.2mW
		Motor@ torque 5kgf-cm	<30mW
		Charge	<5W @ 8 sec from bottom to top
14	FW thermal	Discharge	H: ≥65°C L: ≤0°C

	protection	Charge	H: $\geq 65^{\circ}\text{C}$ L: N/A
15	Water and dust proof	Discharge	H: $\geq 60^{\circ}\text{C}$ L: $\leq 0^{\circ}\text{C}$
		IP54	H: $\geq 60^{\circ}\text{C}$ L: $\leq -10^{\circ}\text{C}$
16	Operation temperature		$-5^{\circ}\text{C} \sim 55^{\circ}\text{C}$
17	Storage temperature		$-30^{\circ}\text{C} \sim 75^{\circ}\text{C}$
18	Dimension (mm)		L332.5*W38.5*H37.5
19	Weight		335.3g

2. MS4 Module Button Define

No	Name	Description
1	Button	- On/Off: Turn On/off power of MS4 Module. - Pair: In to MS4 Module pair mode. - Hardware reboot: Reboot MS4 Module.

3. MS4 Module Functions

No	Function	Description
1	Power on	- Press the button for 3 seconds when MS4 Module powered off. - Green LED blinking for 1 second. - MS4 Module powered on and start calibration.
2	Power off	- Press the button for 3 seconds when MS4 Module powered on. - Red LED on for 1 second. - MS4 Module powered off.
3	Hardware reboot (while Firmware crash)	- Press the button for 10 seconds. - MS4 Module powered off. - Release the button and press another 3 seconds. - MS4 Module powered on and start calibration.
4	USB charging	- User can charge MS4 Module by Micro USB interface with 5V.1A power bank or adaptor. Green LED will blinking while charging, and green LED will on while full charged. - Red LED on indicated no battery or battery opposite installed, which is abnormal situation, needs check immediately.

Federal Communication Commission Interference Statement

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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Industry Canada statement:

This device complies with ISED's licence-exempt RSSs. 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.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.