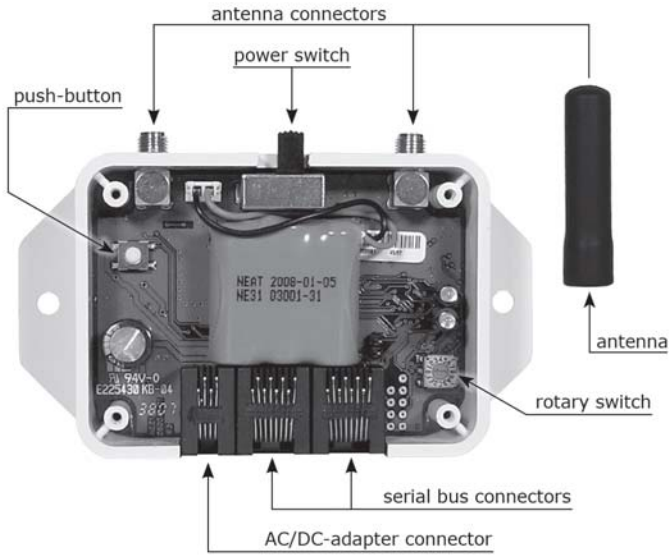
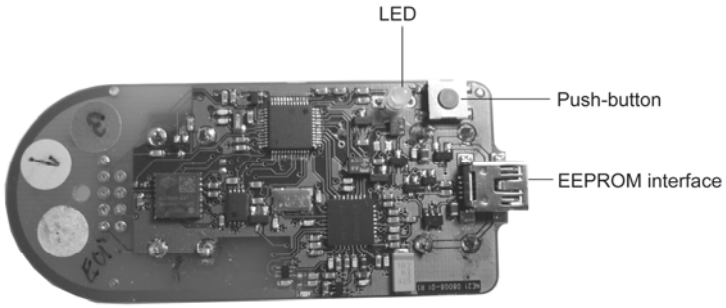
SENSOR, D-TECT & REPO+

Overview D-TECT & REPO+



Note: Serial bus is not used for REPO+

Overview SENSOR



Note: EEPROM interface used for service purpose only, to be used with
NEAT NPU kit P/N NE10 04006-01

Installation, D-TECT

Due to the environment this system is intended for, nursing homes and hospitals, installation may only be carried out by ArjoHuntleigh technicians or by ArjoHuntleigh trained personnel knowing the restrictions this gives to the installation.

Connect the supplied antennas by screwing them into the antenna connectors.
Mount the D-TECT unit in an appropriate place. Make sure the antennas are in a vertical position.
Connect one cable for the serial bus to the connector marked BUS .
Connect the AC/DC-adapter to the jack marked DC . Then connect the AC/DC adapter to a mains outlet.
Turn on the D-TECT unit with the power switch marked ON OFF .

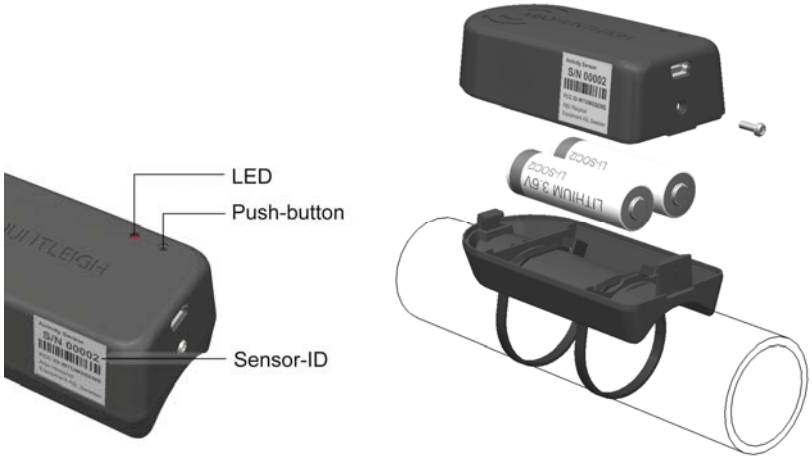
Installation, REPO+

Due to the environment this system is intended for, nursing homes and hospitals, installation may only be carried out by ArjoHuntleigh technicians or by ArjoHuntleigh trained personnel knowing the restrictions this gives to the installation.

Connect the supplied antennas by screwing them into the antenna connectors.
Mount the REPO+ unit in an appropriate place. Make sure the antennas are in a vertical position.
Connect the AC/DC-adapter to the jack marked DC . Then connect the AC/DC adapter to a mains outlet.
Turn on the REPO+ unit with the power switch marked ON OFF .

Installation, SENSOR

When installed one should be able to see the LED, the label with the SENSOR-ID, as well as reach the push-button without detaching the SENSOR from the equipment.
Fasten the base of the SENSOR onto the equipment, make sure that it's placed in a way that it's out of the way from caregivers and caretakers during normal use of the equipment.



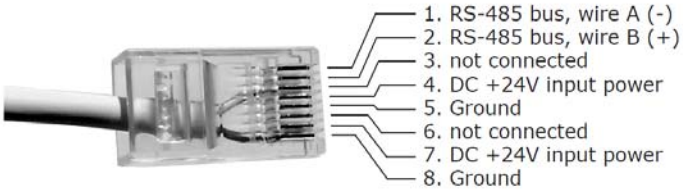
Insert the two supplied batteries, observe the polarity indicated on the PCB.
Fasten the top of the SENSOR to the base with the supplied screw.

Replacing batteries, SENSOR

When the battery voltage goes under a certain level, the SENSOR will report this to the database. This information will be displayed in the surveillance application as "sensors reporting low battery" with the corresponding SENSOR-ID and SENSOR placement, ward and room. Locate the SENSOR, dismount the upper part of the enclosure leaving the equipment attachment plate in place.
Replace the two batteries with the same type, 3.6V Li-SOCl2 AA-size, observe the polarity indicated on the PCB.
Make sure to recycle the old battery cells.

Serial communication D-TECT

The serial bus cable is connected as shown in the image below.



Recommended converter for RS485 to USB:
Vscom USB-COMi-Si, optical isolated from www.visionsystems.com

LED-status D-TECT

The green LED marked Power burns with a steady light as long as the unit is powered on.
The red LED marked Activity blinks to indicate that D-TECT is communicating on the serial bus.
If both the red and the green LED are blinking in phase with each other, the REPO+ unit is not working properly. Please contact ArjoHuntleigh.

LED-status REPO+

The green LED marked Power indicates whether REPO+ is running on mains power or battery power. When mains power is present, the LED burns with a steady green light. When running on battery power, the LED blinks once every 5 seconds.
The red LED marked Activity blinks to indicate that radio transmission is in progress. When no radio signal is transmitted, the red LED is off.
If both the red and the green LED are blinking in phase with each other, the REPO+ unit is not working properly. Please contact ArjoHuntleigh.

Push-button and LED-status SENSOR

To activate the push-button use a paper clip through the hole in the enclosure.

Modes:

Sleep	Ultra Low power, only push-button is monitored.
Standby	Low power, accelerometer is powered in intervals, if then in motion SENSOR switches to Active mode.
Active	Normal power, accelerometer always on, if in no motion for a certain time SENSOR switches to Standby mode.

Go from 'Standby' or 'Active' to 'Sleep', push the button until the LED turns red (typical 3s).
Go from 'Sleep' to 'Active', push the button until the LED turns green (typical 3s).

When the SENSOR is in 'Standby' or 'Active' mode, a "heartbeat" can be sent if the push-button are activated more than 1s and deactivated before (typical <3s) going to 'Sleep' mode.

When a message is sent by the radio the LED turns red. If an "ACK" is received within ~75ms the LED turns green. It lits green for 100ms if more messages are on queue or 1000ms if it was the last message in the queue.

Technical specifications, SENSOR

Length:	85mm
With:	45mm
Height:	32mm
Weight:	80g
Battery:	2 pcs of 3.6 V Primary lithium – thionyl chloride (Li-SOCl2)
Power Consumption “Sleep” “Stand-By” “Active” “Radio TX”	 78 µA 443 µA 1,95 mA 61,5 mA max Normal use, expected battery life > 1 year
Operating Temperature:	10 - 32 °C
Storage Temperature	-10 - 40 °C
Operating Humidity	15 - 85 % Rel. humidity
Storage Humidity	10 - 90 % Rel. humidity
Enclosure	IP 20
Range	30 - 80 m
Maximum output power	0.43 mW e.r.p
Frequency Min Typical Max	 903.2125 MHz 906.2125 MHz 913.2125 MHz
Channel width	25 kHz
Modulation	GFSK
Data coding	Manchester
Data speed	2400 baud (4800 in air)
Packed length	48 bytes, 153,3 ms
Complies to the following standard	FCC15.249 FCC ID: W7UMSSENS

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

Any tampering or modification to the equipment will void the users' authority to operate the unit, render the equipment in violation of FCC part 15 and will void the warranty.

To comply with FCC RF exposure compliance requirements, this unit should be placed in such a way that it provide a separation distance of at least 8 inches (20 cm) from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Technical specifications, D-TECT & REPO+

Length:	115 mm
With:	105 mm
Height:	30 mm
Power:	12 VDC
Operating Temperature:	10 - 32 °C
Storage Temperature	-10 - 40 °C
Operating Humidity	15 - 85 % Rel. humidity
Storage Humidity	10 - 90 % Rel. humidity
Enclosure	IP 20
Range	80 - 500 m
Maximum output power	10 mW e.r.p
Frequency Min Max	FHSS, 50 channels 100 kHz separation 903.2125 MHz 913.2125 MHz
Channel width	25 kHz
Modulation	GFSK
Data coding	Manchester
Data speed	2400 baud (4800 in air)
Packed length	48 bytes, 153,3 ms
Complies to the following standard	FCC15.247 FCC ID: W7UMSTRANS

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

Any tampering or modification to the equipment will void the users' authority to operate the unit, render the equipment in violation of FCC part 15 and will void the warranty.

To comply with FCC RF exposure compliance requirements, this unit should be placed in such a way that it provide a separation distance of at least 8 inches (20 cm) from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Additional hardware:

AC adapter	MASCOT 9725000116 (12VDC 7.2W US-plug, UL-recognized)
DC cable	3 meters with modular connector RJ22

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