

Manufacturer Information:



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Purpose and Scope:

The EU Waste Electronics and Electrical Equipment Directive requires producers to provide information on the different electronic and electrical materials and components found in their products at its end-of-life with disassembly instructions included.

This document includes the necessary information and guidelines for the following Reliable Controls products:

MACH-ProView™ LCD
MACH-ProWebSys™
MACH-ProAir™
MACH-ProZone™
MACH-ProWebCom™

MACH-ProCom™
MACH-Pro1™
MACH-Pro2™
MACH-ProPoint™
MACH-ProLight™

SMART-Sensor EPD™
SMART-Sensor Temperature 3™
SMART-Net Relay™

The disassembly information for these products has been prepared for use by a recognized treatment or recycling facility and is not intended to be used by others. This document provides the basic instructions for the disassembly of these products to remove components and materials requiring selective treatment and includes the following information:

1. Manufacturer and contact details
2. Product details
3. Materials and components list for selective treatment
4. Disassembly tools
5. Disassembly instructions

Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Product Details:

Product Model Name(s)	Mach ProWebCom	Mach ProCom
Description(s)	Web Enabled Controller	BacNet Controller

Materials and Components List for Selective Treatment:

Material or Substance of Concern	Quantity Present in Product	Location	Notes
Polychlorinated Biphenyls (PCB's)	Absent	N/A	
Batteries	Absent	N/A	
Printed circuit boards if larger than 10 cm ²	2	Main Enclosure	
Toner cartridges, liquid and pasty, as well as color toner	Absent	N/A	
Plastic containing regulated flame retardants	3	Main Enclosure	UL 94
Parts containing asbestos	Absent	N/A	
Cathode ray tubes (CRTs)	Absent	N/A	
Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC) or Hydrofluorocarbons (HFC), Fluid hydrocarbons (HC)	Absent	N/A	
Gas discharge lamps	Absent	N/A	
Liquid crystal displays of a surface greater than 100 cm ² and all those back-lighted with gas discharge lamps	Absent	N/A	
External electric cables	Absent	N/A	
Components containing refractory ceramic fibres	Absent	N/A	
Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	Absent	N/A	

Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Tools Required for Disassembly:

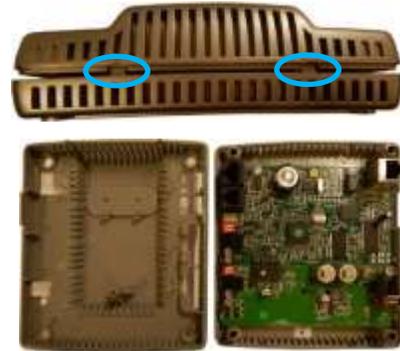
1 x Small Flathead Screwdriver

Disassembly Instructions:

Step # 1: Remove external connectors from controller.



Step # 2: Using small flat head screw driver depress the two plastic tabs on side of controller and pull two sides apart gently.



Step # 3: To remove PCB from enclosure use small flat head screw driver to depress the plastic tabs holding PCB in place allowing PCB to be easily separated from plastic.



Step # 4: Separate the two PCB's by pulling apart at the connector point.



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Product Details:

Product Model Name	Mach ProSys	Mach ProWebSys	Mach Pro1 / Mach Pro2
Description	BacNet Controller	Web Enabled Controller	Building Controller

Materials and Components List for Selective Treatment:

Material or Substance of Concern	Quantity Present in Product	Location	Notes
Polychlorinated Biphenyls (PCB's)	Absent	N/A	
Batteries	Absent	N/A	
Printed circuit boards if larger than 10 cm ²	2	Main Enclosure	
Toner cartridges, liquid and pasty, as well as color toner	Absent	N/A	
Plastic containing regulated flame retardants	3	Main Enclosure	UL 94 approved
Parts containing asbestos	Absent	N/A	
Cathode ray tubes (CRTs)	Absent	N/A	
Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC) or Hydrofluorocarbons (HFC), Fluid hydrocarbons (HC)	Absent	N/A	
Gas discharge lamps	Absent	N/A	
Liquid crystal displays of a surface greater than 100 cm ² and all those back-lighted with gas discharge lamps	Absent	N/A	
External electric cables	Absent	N/A	
Components containing refractory ceramic fibres	Absent	N/A	
Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	Absent	N/A	

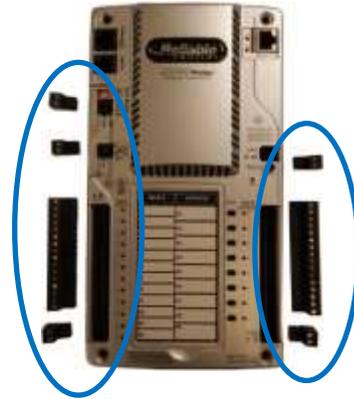
Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Tools Required for Disassembly:

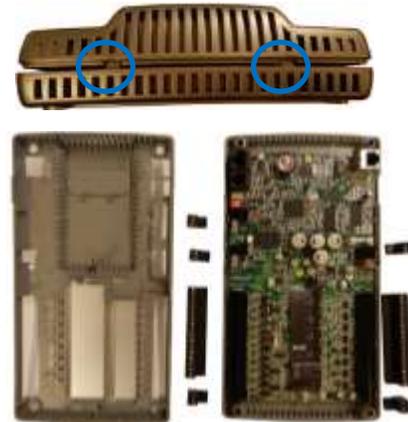
1 x Small Flathead Screwdriver

Disassembly Instructions:

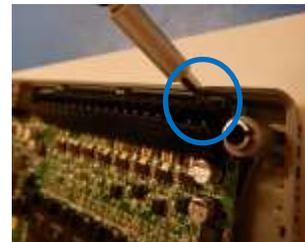
Step # 1: Remove external connectors from controller.



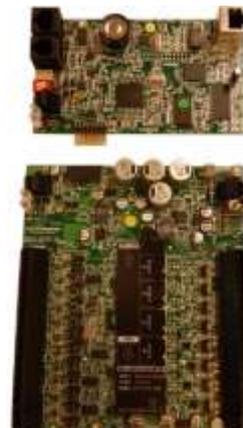
Step # 2: Using small flat head screw driver depress the two plastic tabs on side of controller and pull two sides apart gently.



Step # 3: To remove PCB from enclosure use small flat head screw driver to depress the plastic tabs holding PCB in place allowing PCB to be easily separated from plastic.



Step # 4: Separate the two PCB's by pulling apart at the connector point.



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Product Details:

Product Model Name	Mach ProPoint Input/output	Mach ProPoint Input	Mach ProPoint Output
Description	Input/output expansion module	Input expansion module	Output expansion module

Materials and Components List for Selective Treatment:

Material or Substance of Concern	Quantity Present in Product	Location	Notes
Polychlorinated Biphenyls (PCB's)	Absent	N/A	
Batteries	Absent	N/A	
Printed circuit boards if larger than 10 cm ²	1	Main Enclosure	
Toner cartridges, liquid and pasty, as well as color toner	Absent	N/A	
Plastic containing regulated flame retardants	3	Main Enclosure	UL 94 approved
Parts containing asbestos	Absent	N/A	
Cathode ray tubes (CRTs)	Absent	N/A	
Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC) or Hydrofluorocarbons (HFC), Fluid hydrocarbons (HC)	Absent	N/A	
Gas discharge lamps	Absent	N/A	
Liquid crystal displays of a surface greater than 100 cm ² and all those back-lighted with gas discharge lamps	Absent	N/A	
External electric cables	Absent	N/A	
Components containing refractory ceramic fibres	Absent	N/A	
Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	Absent	N/A	

Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Tools Required for Disassembly:

1 x Small Flathead Screwdriver

Disassembly Instructions:

Step # 1: Remove external connectors from controller.



Step # 2: Using small flat head screw driver depress the two plastic tabs on side of controller and pull two sides apart gently.



Step # 3: To remove PCB from enclosure use small flat head screw driver to depress the plastic tabs holding PCB in place allowing PCB to be easily separated from plastic.



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Product Details:

Product Model Name	Mach ProZone
Description	BacNet Controller

Materials and Components List for Selective Treatment:

Material or Substance of Concern	Quantity Present in Product	Location	Notes
Polychlorinated Biphenyls (PCB's)	Absent	N/A	
Batteries	1	Circuit Board	3.6 V Lithium Coin Cell (applicable models only)
Printed circuit boards if larger than 10 cm ²	1	Main Enclosure	
Toner cartridges, liquid and pasty, as well as color toner	Absent	N/A	
Plastic containing regulated flame retardants	2	Main Enclosure	UL 94 approved
Parts containing asbestos	Absent	N/A	
Cathode ray tubes (CRTs)	Absent	N/A	
Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC) or Hydrofluorocarbons (HFC), Fluid hydrocarbons (HC)	Absent	N/A	
Gas discharge lamps	Absent	N/A	
Liquid crystal displays of a surface greater than 100 cm ² and all those back-lighted with gas discharge lamps	Absent	N/A	
External electric cables	Absent	N/A	
Components containing refractory ceramic fibres	Absent	N/A	
Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	Absent	N/A	

Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Tools Required for Disassembly:

1 x Small Flathead Screwdriver

Disassembly Instructions:

Step # 1: Remove external connectors from controller.



Step # 2: Remove top cover plate by lifting off with thumb.



Step # 3: Remove PCB by pulling on plastic tab of enclosure and pushing gently from other side (through top plate opening).



Step # 4 - RTC OPTION ONLY:

Remove 3-volt coin cell battery from PCB by sliding it out of battery clip.



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Product Details:

Product Model Name	Mach ProView
Description	BacNet Controller

Materials and Components List for Selective Treatment:

Material or Substance of Concern	Quantity Present in Product	Location	Notes
Polychlorinated Biphenyls (PCB's)	Absent	N/A	
Batteries	Absent	N/A	
Printed circuit boards if larger than 10 cm ²	1	Main Enclosure	
Toner cartridges, liquid and pasty, as well as color toner	Absent	N/A	
Plastic containing regulated flame retardants	2	Main Enclosure	UL 94 approved
Parts containing asbestos	Absent	N/A	
Cathode ray tubes (CRTs)	Absent	N/A	
Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC) or Hydrofluorocarbons (HFC), Fluid hydrocarbons (HC)	Absent	N/A	
Gas discharge lamps	Absent	N/A	
Liquid crystal displays of a surface greater than 100 cm ² and all those back-lighted with gas discharge lamps	Absent	N/A	
External electric cables	Absent	N/A	
Components containing refractory ceramic fibres	Absent	N/A	
Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	Absent	N/A	

Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Tools Required for Disassembly:

- 1 x Small Flathead Screwdriver
- 1 x Small Philips Screwdriver

Disassembly Instructions:

Step # 1: Lay the unit face down and lift back panel up from the bottom.



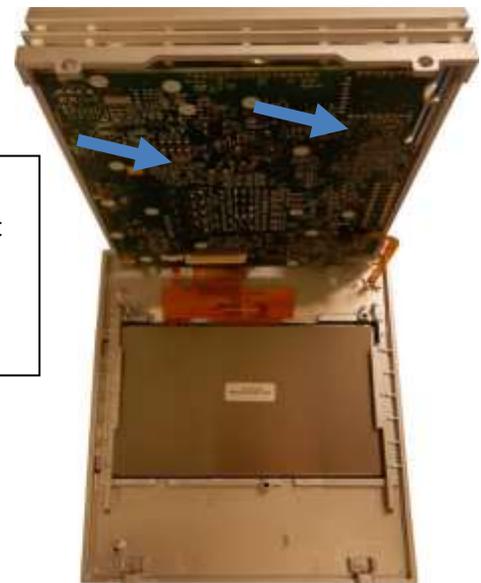
Step # 2: Remove 4 connectors, 4 jumpers and plastic label.



Step # 3: Remove screws holding PCB to plastic housing.

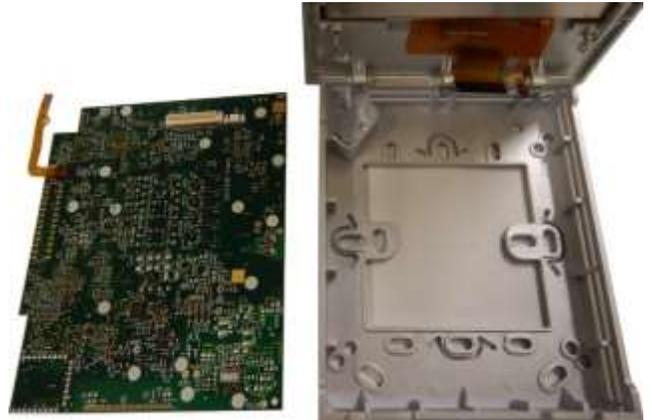


Step # 4: Lift PCB from bottom and disconnect ribbon cables from connectors.



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Step # 6: PCB may now be freely removed from plastic housing.



Step # 7: Remove LCD by inserting small flathead screwdriver between LCD and plastic and prying apart gently.



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Product Details:

Product Model Name	Mach Pro Air
Description	BacNet Controller

Materials and Components List for Selective Treatment:

Material or Substance of Concern	Quantity Present in Product	Location	Notes
Polychlorinated Biphenyls (PCB's)	Absent	N/A	
Batteries	Absent	N/A	
Printed circuit boards if larger than 10 cm ²	1	Main Enclosure	
Toner cartridges, liquid and pasty, as well as color toner	Absent	N/A	
Plastic containing regulated flame retardants	3	Main Enclosure	UL 94 approved
Parts containing asbestos	Absent	N/A	
Cathode ray tubes (CRTs)	Absent	N/A	
Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC) or Hydrofluorocarbons (HFC), Fluid hydrocarbons (HC)	Absent	N/A	
Gas discharge lamps	Absent	N/A	
Liquid crystal displays of a surface greater than 100 cm ² and all those back-lighted with gas discharge lamps	Absent	N/A	
External electric cables	Absent	N/A	
Components containing refractory ceramic fibres	Absent	N/A	
Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	Absent	N/A	

Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Tools Required for Disassembly:

- 1 x Small Flathead Screwdriver
- 1 x Small Philips Screwdriver

Disassembly Instructions:

Step # 1: Remove all connectors from controller



Step # 2: Remove 2 screws using Philips screwdriver (if applicable).



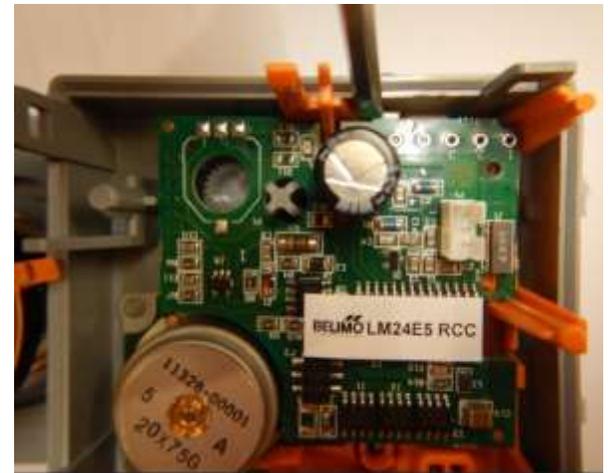
Step # 3: Depress plastic tab to release motor using flathead screwdriver (if applicable)



Step # 4: Disconnect white cable and remove motor from plastic housing (if applicable)



Step # 5: Remove PCB from motor using small flathead screwdriver to depress plastic tab as shown (if applicable).



Step # 6: Remove PCB main plastic housing using small flathead screwdriver to depress plastic tab from bottom of enclosure as shown.



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Product Details:

Product Model Name	MACH Pro Light
Description	BacNet Controller

Materials and Components List for Selective Treatment:

Material or Substance of Concern	Quantity Present in Product	Location	Notes
Polychlorinated Biphenyls (PCB's)	Absent	N/A	
Batteries	Absent	N/A	
Printed circuit boards if larger than 10 cm ²	1	Main Enclosure	
Toner cartridges, liquid and pasty, as well as color toner	Absent	N/A	
Plastic containing regulated flame retardants	2	Main Enclosure	UL 94 approved
Parts containing asbestos	Absent	N/A	
Cathode ray tubes (CRTs)	Absent	N/A	
Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC) or Hydrofluorocarbons (HFC), Fluid hydrocarbons (HC)	Absent	N/A	
Gas discharge lamps	Absent	N/A	
Liquid crystal displays of a surface greater than 100 cm ² and all those back-lighted with gas discharge lamps	Absent	N/A	
External electric cables	Absent	N/A	
Components containing refractory ceramic fibres	Absent	N/A	
Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	Absent	N/A	

Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Tools Required for Disassembly:

1 x Small Flathead Screwdriver

Disassembly Instructions:

Step # 1: Remove external connectors from controller.



Step # 2: Remove top cover plate by lifting off with thumb.



Step # 3: With a small screwdriver, place the slot between the plastic housing and circuit board and push out until the tab releases the circuit board.



Step # 4: Remove adhesive backed plastic connector label from the circuit board.



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Product Details:

Product Model Name	SMART Sensor EPD
Description	Programmable Sensor

Materials and Components List for Selective Treatment:

Material or Substance of Concern	Quantity Present in Product	Location	Notes
Polychlorinated Biphenyls (PCB's)	Absent	N/A	
Batteries	Absent	N/A	
Printed circuit boards if larger than 10 cm ²	1	Main Enclosure	
Toner cartridges, liquid and pasty, as well as color toner	Absent	N/A	
Plastic containing regulated flame retardants	1	Main Enclosure	UL 94 approved
Parts containing asbestos	Absent	N/A	
Cathode ray tubes (CRTs)	Absent	N/A	
Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC) or Hydrofluorocarbons (HFC), Fluid hydrocarbons (HC)	Absent	N/A	
Gas discharge lamps	Absent	N/A	
Liquid crystal displays of a surface greater than 100 cm ² and all those back-lighted with gas discharge lamps	Absent	N/A	
External electric cables	Absent	N/A	
Components containing refractory ceramic fibres	Absent	N/A	
Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	Absent	N/A	

Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Tools Required for Disassembly:

- 1 x Small Flathead Screwdriver
- 1 x Small Hex Screwdriver

Disassembly Instructions:

Step # 1: Remove plastic mounting plate by removing two hex screws from bottom of enclosure using small hex driver.



Step # 2: Remove glass by inserting small flathead screwdriver between plastic and glass and gently prying apart to lift up.



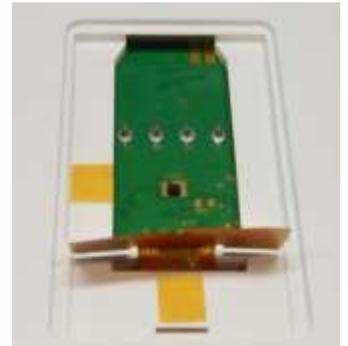
Step # 3: Disconnect flex strip by pulling black tab on connector to release flex strip.



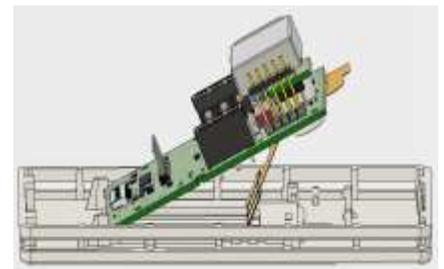
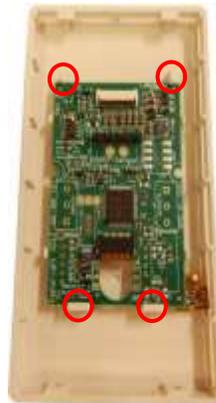
Step # 4: Remove LCD from top side of plastic housing.



Step # 4: Detach flex strip that was underneath LCD from plastic housing.



Step # 4: Flex or bend the plastic enclosure in order to release the PCB from the four clips shown.



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Product Details:

Product Model Name	SMART Sensor Temperature 3
Description	Programmable Sensor

Materials and Components List for Selective Treatment:

Material or Substance of Concern	Quantity Present in Product	Location	Notes
Polychlorinated Biphenyls (PCB's)	Absent	N/A	
Batteries	Absent	N/A	
Printed circuit boards if larger than 10 cm ²	1	Main Enclosure	
Toner cartridges, liquid and pasty, as well as color toner	Absent	N/A	
Plastic containing regulated flame retardants	1	Main Enclosure	UL 94 approved
Parts containing asbestos	Absent	N/A	
Cathode ray tubes (CRTs)	Absent	N/A	
Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC) or Hydrofluorocarbons (HFC), Fluid hydrocarbons (HC)	Absent	N/A	
Gas discharge lamps	Absent	N/A	
Liquid crystal displays of a surface greater than 100 cm ² and all those back-lighted with gas discharge lamps	Absent	N/A	
External electric cables	Absent	N/A	
Components containing refractory ceramic fibres	Absent	N/A	
Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	Absent	N/A	

Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Tools Required for Disassembly:

- 1 x Small Flathead Screwdriver
- 1 x Small Hex Screwdriver

Disassembly Instructions:

Step # 1: Remove plastic mounting plate by removing two hex screws from bottom of enclosure using small hex driver.



Step # 2: Remove input/output connectors from the back-side on the circuit board (on applicable options).



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Step # 3: Remove adhesive backed plastic connector label from the circuit board.



Step # 4: With a Phillips screwdriver, remove two screws from printed circuit board (on applicable options)



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Step # 5: Flex or bend the plastic enclosure in order to release the PCB from the four clips shown.



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Product Details:

Product Model Name	EnOcean Transceiver (868 MHz)
Description	Programmable Sensor

Materials and Components List for Selective Treatment:

Material or Substance of Concern	Quantity Present in Product	Location	Notes
Polychlorinated Biphenyls (PCB's)	Absent	N/A	
Batteries	1	Circuit Board	3.6 V Lithium Coin Cell (on applicable models)
Printed circuit boards if larger than 10 cm ²	1	Main Enclosure	
Toner cartridges, liquid and pasty, as well as color toner	Absent	N/A	
Plastic containing regulated flame retardants	1	Main Enclosure	UL 94 approved
Parts containing asbestos	Absent	N/A	
Cathode ray tubes (CRTs)	Absent	N/A	
Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC) or Hydrofluorocarbons (HFC), Fluid hydrocarbons (HC)	Absent	N/A	
Gas discharge lamps	Absent	N/A	
Liquid crystal displays of a surface greater than 100 cm ² and all those back-lighted with gas discharge lamps	Absent	N/A	
External electric cables	Absent	N/A	
Components containing refractory ceramic fibres	Absent	N/A	
Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	Absent	N/A	

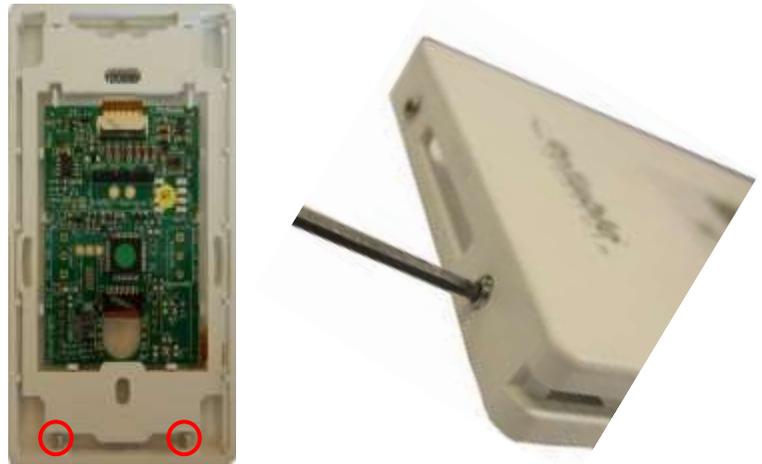
Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Tools Required for Disassembly:

- 1 x Small Flathead Screwdriver
- 1 x Small Hex Screwdriver

Disassembly Instructions:

Step # 1: Remove plastic mounting plate by removing two hex screws from bottom of enclosure using small hex driver.



Step # 2: Remove input/output connectors from the back-side on the circuit board (on applicable options).



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Step # 3: Remove adhesive backed plastic connector label from the circuit board.



Step # 5: Flex or bend the plastic enclosure in order to release the PCB from the four clips shown.



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Product Details:

Product Model Name	SMART Net Relay
Description	Expansion Module

Materials and Components List for Selective Treatment:

Material or Substance of Concern	Quantity Present in Product	Location	Notes
Polychlorinated Biphenyls (PCB's)	Absent	N/A	
Batteries	Absent	N/A	
Printed circuit boards if larger than 10 cm ²	1	Main Enclosure	
Toner cartridges, liquid and pasty, as well as color toner	Absent	N/A	
Plastic containing regulated flame retardants	Absent	N/A	
Parts containing asbestos	Absent	N/A	
Cathode ray tubes (CRTs)	Absent	N/A	
Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC) or Hydrofluorocarbons (HFC), Fluid hydrocarbons (HC)	Absent	N/A	
Gas discharge lamps	Absent	N/A	
Liquid crystal displays of a surface greater than 100 cm ² and all those back-lighted with gas discharge lamps	Absent	N/A	
External electric cables	9	Main Enclosure	
Components containing refractory ceramic fibres	Absent	N/A	
Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	Absent	N/A	

Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Step # 1: Remove external connectors from controller.



Step # 2: With a Phillips head driver, Remove all 5 Phillips head screws

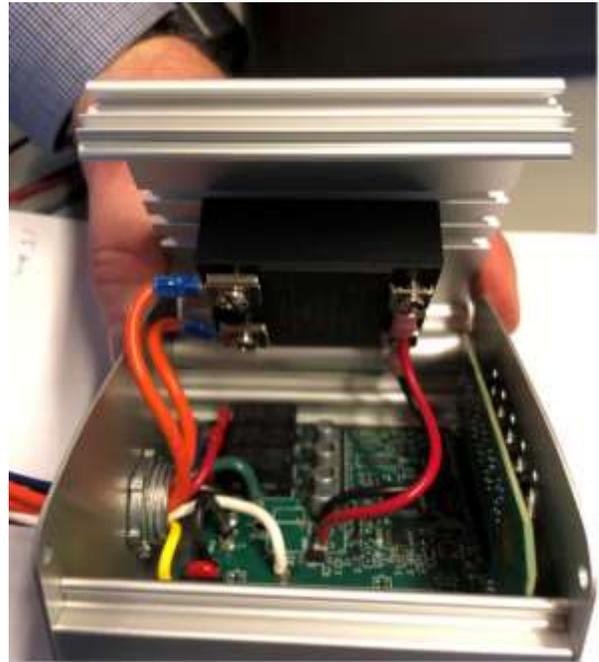


Step # 3: Turn the unit to the other flat side and with a Phillips head driver, Remove 2 Phillips head screws



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Step # 4: Lift the aluminum top off the enclosure and with a pair of wire cutters, clip all wires away from the circuit board (or the optional relay that is attached to the top of the enclosure). The wires can now be removed from inside the enclosure.



Step # 5: With a Phillips head driver, loosen the two screws on the top of the aluminum enclosure to slide the relay away and off the top. Remove any remaining fasteners.



Step # 6: Lift the small vertical circuit board out from the connector and away from the mother board



Step # 7: Slide the circuit board away from and out from the aluminum enclosure to discard.



Product End-Of-Life Disassembly Instructions for EU Directive 2012/19/EU (WEEE)

Changes

Revision Date	Description:	ISO Sections Revised	Approval
8/9/18	First Issue Treatment Instructions	-	BM
11/26/19	Updated list to include SST-3, MPL, ET, SNR	-	BD