

Sepam series 10

End-of-life recycling 2008

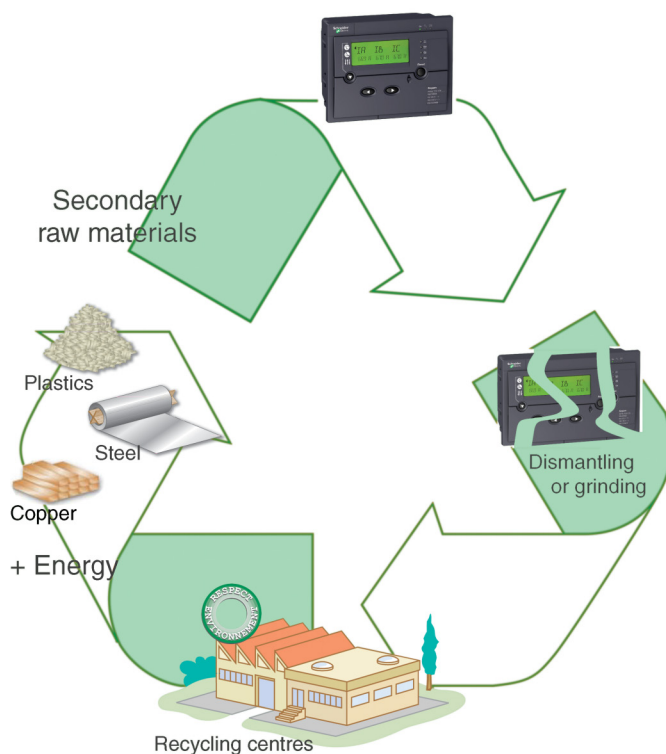
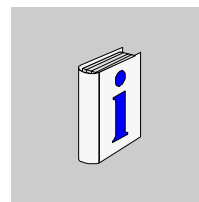


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About the Book



At a Glance

Document Scope This document provides advice and information on how to recycle Sepam series 10 protection relays at the end of their service life.

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Related Documents

Title of Documentation	Reference Number
Sepam Series 10 Reference Manual	SEPED307003

Product Related Warnings All relevant local safety regulations must be followed when dismantling this product.
Failure to comply with this warning can result in injury or equipment damage.

User Comments We welcome your comments about this document.
You can reach us by e-mail at techpub@schneider-electric.com

End-of-Life Recycling for the Sepam Series 10

Introduction

Schneider Electric and the Environment

Schneider Electric has undertaken a far-reaching environmental policy.

As part of this policy, the Sepam series 10 range of protection relays has been designed to comply with the environmental standards of today and tomorrow. At the end of their life cycle, Sepam series 10 protection relays can be processed and their components recovered and recycled under optimum conditions in compliance with future European regulations concerning electrical and electronic products.

Breakdown of Materials

The weight of a Sepam series 10 varies from 1.15 to 1.46 kg (2.52 to 3.21 lb) depending on the model.

For a Sepam relay weighing 1.46 kg (3.21 lb), the materials are broken down as follows:

- 0.45 kg or 0.99 lb (30.7 %) of metals, primarily copper
- 0.61 kg or 1.34 lb (41.7 %) of plastics: thermoplastics, primarily polycarbonate, and an elastomer (keypad)
- 0.40 kg or 0.88 lb (27.6 %) of electronic cards, display unit, battery, etc.

End of Product Life

At the end of its life cycle, a Sepam series 10 can be dismantled to recover the constituent parts.

The metals are recyclable. The plastic materials can be recycled or used for energy recovery purposes.

The heterogeneous sub-assemblies (metal and plastic) which cannot be dismantled must first be crushed.

After dismantling, the electronic cards, display unit and battery (if applicable) must be disposed of by certified recycling companies.

Safety Precautions

DANGER

ELECTRIC SHOCK, ELECTRIC ARC, BURN OR EXPLOSION HAZARD

Before dismantling a Sepam relay, disconnect all the wiring. The relay should be de-energized and disconnected from all other electrical equipment.

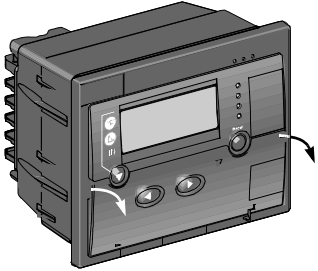
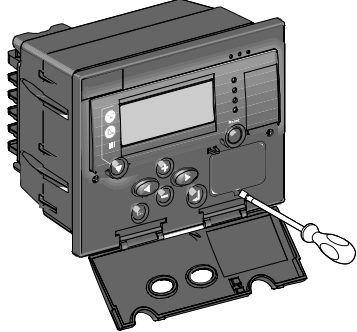
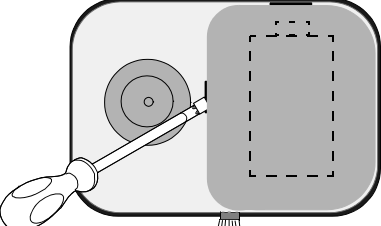
Failure to follow these instructions will result in death or serious injury.

Tools Required for Disassembly

- 1 flat blade screwdriver, 2.5 mm (0.09 in)
- 1 Torx® T10 screwdriver
- 1 Torx® T8 screwdriver
- Wire cutters

Removing the Battery From the Sepam Series 10 A

Procedure

Step	Action	Illustration
1	Pull down the settings protective flap.	
2	Lift the removable cover shielding the battery compartment using a flat blade screwdriver.	
3	Open the battery compartment using a flat blade screwdriver.	
4	Remove the battery.	—

Battery Recycling

WARNING

EXPLOSION HAZARD

- Do not recharge the battery.
- Do not short circuit the battery.
- Do not crush the battery.
- Do not disassemble the battery.
- Do not heat the battery above 100°C (212°F).
- Do not throw the battery into fire or water.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

The used battery should be disposed of by an approved certified recycling company in compliance with European Directive 91/157/EEC OJEU L78 dated 26.03.91 relative to batteries and cells containing certain hazardous materials, and modified by Directive 98/101/EEC OJEU L1 dated 05.01.1999.

Outside the EU, you must comply with regulations governing battery disposal applicable in the country of use.

Dismantling Instructions

Introduction

There are three models in the Sepam series 10 range:

- Sepam series 10 N
- Sepam series 10 B
- Sepam series 10 A, which also has a battery and a double card

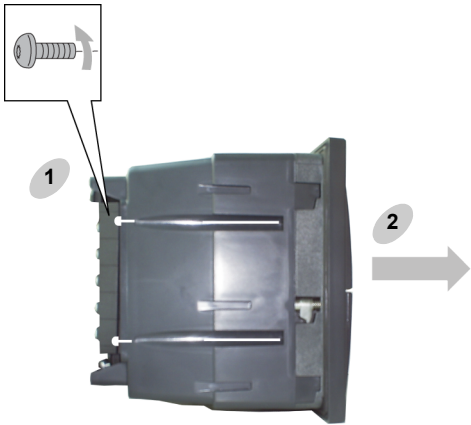
The dismantling instructions are the same for all three models and must be carried out in order.

Disconnecting the Connectors

If there are any connectors on the device, disconnect them and send them for crushing to separate the plastic from the captive screws.

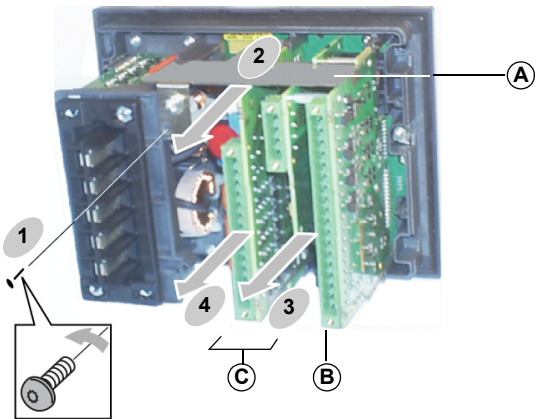
Removing the Cover

Step	Action
1	At the back of the unit, undo the cover's four mounting screws using a T10 screwdriver.
2	Separate the rear cover from the front panel.



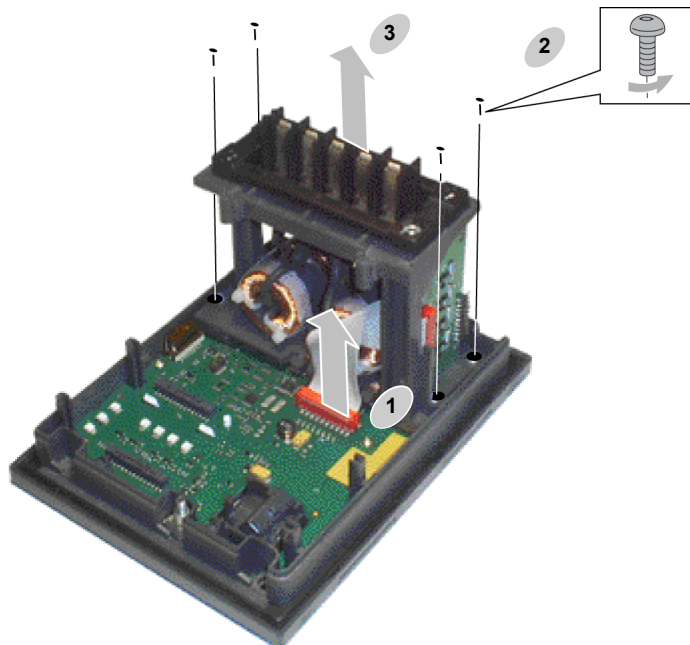
Removing the Mounting Plate and the Electronic Cards

Step	Action
1	Undo the mounting plate (A) retaining screw using a T10 screwdriver.
2	Remove the mounting plate.
3	Disconnect the auxiliary power supply card and outputs (B).
4	For a Sepam series 10 A, disconnect the double card (C).



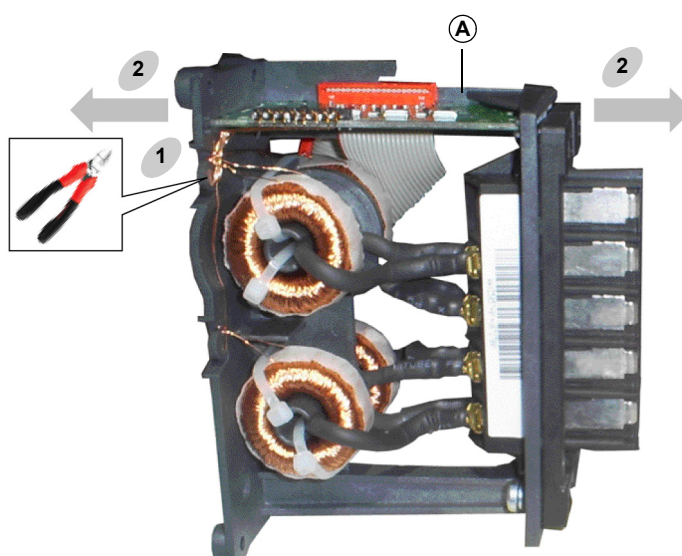
Removing the CT Matching Unit

Step	Action
1	Disconnect the flat cable which connects the CT matching unit to the CPU card.
2	Undo the four screws holding the CT matching unit in place using a T10 screwdriver.
3	Remove the CT matching unit.



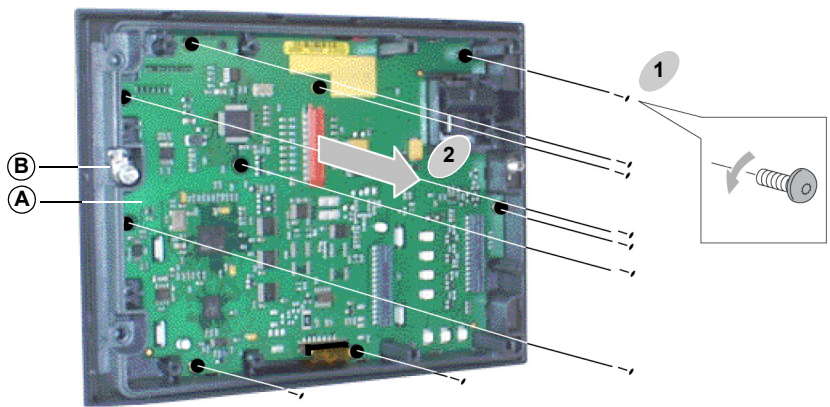
Removing the CT Matching Card

Step	Action
1	Using wire cutters, cut the wires connecting the CT matching card (A) to the rest of the unit.
2	Separate the two sides of the adapter unit to free the CT matching card.



Removing the CPU Card

Step	Action
1	Using a T8 screwdriver, undo the nine screws holding the CPU card (A) in place on the front panel.
2	Remove the CPU card.



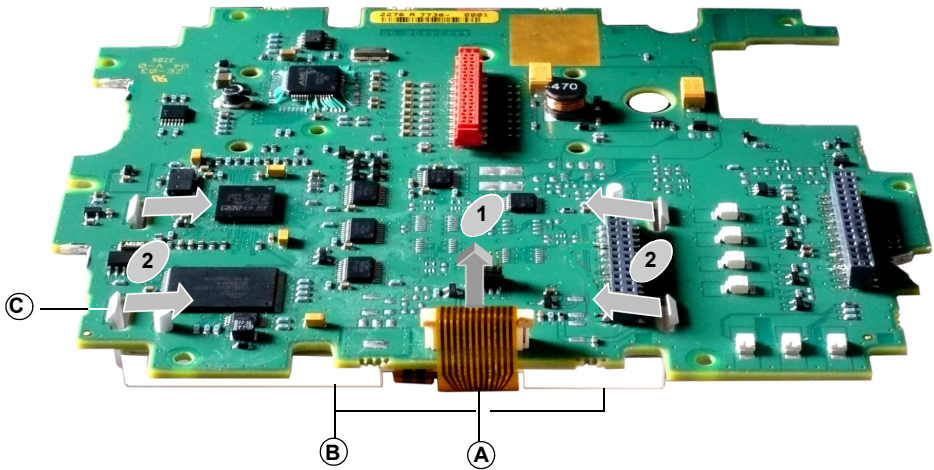
Remarks:

The captive metal locking catches (B) can only be separated from the plastic part by crushing.

The elastomer keypad is held in place on the front panel by its keys, which are inserted through the apertures on the front panel.

Removing the Display Unit

Step	Action
1	Disconnect the flat cable (A) which connects the CPU card to the display unit (B).
2	Squeeze the four clips (C) at the back of the display unit to free it.



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As standards, specifications and designs change from time to time, please ask for confirmation of the information given in this publication.

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