SM500F
Field mountable paperless recorder

Color display replacement
(instruments manufactured from July 2016)

Measurement made easy

1 Introduction

This publication details replacing an SM500F paperless recorder’s color display assembly. The procedure must be carried out by a trained technician. The contents of the replacement kit are shown in Table 1.

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color display</td>
<td>B13829</td>
<td>1</td>
</tr>
<tr>
<td>Slotted spring (Bissel) pin</td>
<td>B11344</td>
<td>2</td>
</tr>
<tr>
<td>Screw</td>
<td>B12452</td>
<td>2</td>
</tr>
<tr>
<td>Flexi-cable</td>
<td>B12403</td>
<td>1</td>
</tr>
<tr>
<td>This publication</td>
<td>IN/RandC/005-EN</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 1  Color display assembly replacement kit SM500/0735

Tools required
- PH0 screwdriver
- T8 Torx driver

2 For more information

Further information is available from: www.abb.com/recorders

or by scanning these codes:

3 Safety

IMPORTANT NOTE
This procedure is applicable only to recorders manufactured after June 2016.
4 Display assembly replacement

![Fig. 4.1 Removing the cable clamp]

**CAUTION – Minor injuries**
The recorder is vulnerable to electrostatic damage. Wear an anti-static strap or place the instrument on an anti-static workbench.

1. Disconnect the recorder from the power supply.

Referring to Fig. 4.1:
2. Unlock the door with the key A, press release catch B and open the door.
3. Remove the tamper evident seal if fitted, release captive screw C securing the inner cover plate and remove the inner cover plate.
4. Remove the 2 Torx screws D securing the cable clamp and remove the cable clamp.

![Fig. 4.2 Disconnecting the processor board flexi-cable]

Referring to Fig. 4.2:
5. Disconnect the processor board flexi-cable E from the motherboard.

![Fig. 4.3 Removing the door hinge pins]

Referring to Fig. 4.3:
6. Remove the slotted spring (Bissel) pins F, remove the door assembly and place it face down on the work surface.

![Fig. 4.4 Removing the rear cover]

Referring to Fig. 4.4:
7. Remove 6 Torx screws G securing the door assembly rear cover and remove the rear cover.

![Fig. 4.5 Disconnecting the processor board]

Referring to Fig. 4.5:
8. Disconnect the processor board flexi-cable H, display flexi-cable I and keypad membrane cable J from the processor board and lift out the processor board.

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2 INRandC/005-EN Rev. A | SM500F paperless recorder | Color display replacement (instruments manufactured from July 2016)
Referring to Fig. 4.6:
9. Remove 4 Torx screws \( \text{K} \) securing the display mounting plate and remove the plate complete with display.

Referring to Fig. 4.7:
10. Remove 2 display securing screws \( \text{L} \) and lift the display clear of the mounting plate, ensuring the flexi-cable and inverter cable clear slots \( \text{M} \) in the mounting plate.

Referring to Fig. 4.8:
11. Remove flexi-cable \( \text{N} \) from the display and attach the flexi-cable to the new display (if not already fitted).

Referring to Fig. 4.7:
12. Carefully route the flexi-cable through its respective slot \( \text{M} \) in the mounting plate and position the display on the mounting plate. Secure the display to the mounting plate with 2 display securing screws \( \text{L} \).

Referring to Fig. 4.9:
13. Remove the protective film from the front of the display and clean the display and the inside of the door window thoroughly.

Referring to Fig. 4.9:
14. Route the keypad membrane cable \( \text{O} \) through the slot in the display mounting plate and position the mounting plate in the door assembly.

Referring to Fig. 4.6:
15. Secure the display mounting plate to the door using 4 Torx screws \( \text{K} \).

Referring to Fig. 4.5, page 2:
16. Position the processor board into its housing and reconnect the keypad membrane cable \( \text{J} \), display flexi-cable \( \text{I} \) and processor board flexi-cable \( \text{H} \).

Referring to Fig. 4.4, page 2:
17. Refit the door assembly rear cover and secure it using the 6 Torx screws \( \text{G} \).

Referring to Fig. 4.3, page 2:
18. Align the hinges on the door assembly with the hinge lugs on the case and secure using the 2 slotted spring (Bissel) pins \( \text{F} \).

Referring to Fig. 4.2, page 2:
19. Reconnect the processor board flexi-cable \( \text{E} \) to the motherboard.

Referring to Fig. 4.1, page 2:
20. Refit the cable clamp and secure it with 2 Torx screws \( \text{D} \).

21. Refit the inner cover plate, ensuring lugs \( \text{P} \) are located correctly in the slots in the case and secure with a captive screw \( \text{C} \). Refit the tamper evident seal (if required).

22. Close and lock the door.

23. Restore the power supply to the recorder.
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