

# 4690 series

## Turbidity sensors



Emitter and receiver modules replacement

Measurement made easy

4690 series  
turbidity sensors

## 1 Introduction

This publication details the emitter and receiver modules replacement procedure for 4690 series turbidity sensors. The procedure must be carried out by a trained technician.

### Tools required

- Flat-bladed screwdriver

## 2 For more information

Further information is available from:

[www.abb.com/analytical](http://www.abb.com/analytical)

or by scanning these codes:



Sales



Service

## 3 Contents

The contents of the emitter and receiver modules kits are shown in Tables 3.1 to 3.6.

Description	Part Number	Qty
Emitter module	7998 091	1
Information publication – Emitter and receiver modules replacement	INF11/065-EN	1

Table 3.1 ISO IR emitter module kit 7998 026

Description	Part Number	Qty
Receiver module – infrared LED, low range (0 to 40 NTU) for sensor assemblies 7998 011 and 7998 016	7998 107	1
Information publication – Emitter and receiver modules replacement	INF11/065-EN	1

Table 3.2 ISO low range receiver module kit 7998 029

Description	Part Number	Qty
Receiver module – infrared LED, high range (0 to 400 NTU) for sensor assemblies 7998 012 and 7998 017	7998 108	1
Information publication – Emitter and receiver modules replacement	INF11/065-EN	1

Table 3.3 ISO high range receiver module kit 7998 030

Description	Part Number	Qty
Emitter module	7998 100	1
Information publication – Emitter and receiver modules replacement	INF11/065-EN	1

Table 3.4 White light emitter module kit 7998 025

Description	Part Number	Qty
Receiver module – EPA white light, low range (0 to 40 NTU) for sensor assemblies 7998 001 and 7998 006	7998 105	1
Information publication – Emitter and receiver modules replacement	INF11/065-EN	1

Table 3.5 White light low range receiver module kit 7998 027

Description	Part Number	Qty
Receiver module – EPA white light, high range (0 to 400 NTU) for sensor assemblies 7998 002 and 7998 007	7998 106	1
Information publication – Emitter and receiver modules replacement	INF11/065-EN	1

Table 3.6 White light high range receiver module kit 7998 028

## 4 Replacing emitter or receiver module

1. Referring to Fig. 4.1, identify the module to be replaced.

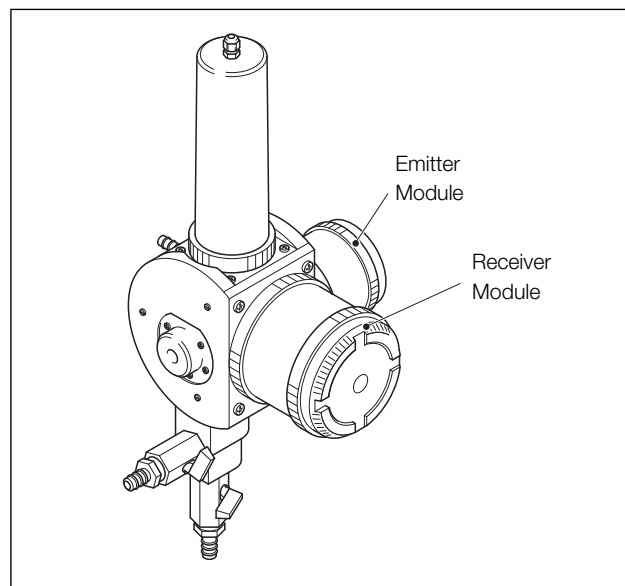


Fig. 4.1 Module identification

2. Isolate the sensor assembly from the power supply and sample supply.

**Note.** Fig. 4.2 shows the emitter module but the procedure for replacing either module is identical.

3. Referring to Fig. 4.2:
  - a. Release 4 captive screws (1) securing terminal box cover (2) and remove the cover.
  - b. Disconnect the emitter module cable (3) or receiver module cable (4) from the terminal box terminals.
  - c. Release module retaining collar (5) and remove module (6).
  - d. Carefully remove the replacement module from its packaging.
  - e. Ensure the module window (7) is clean and free of dust.
  - f. Ensure O-ring (8) is undamaged and located correctly in the module groove.
  - g. Carefully insert module into cell body, ensuring cut-out (9) engages correctly with locating lug (10) and that locating dowel (11) enters hole (12).
  - h. Secure module to cell body with retaining collar (5), tightening retaining collar hand-tight only.

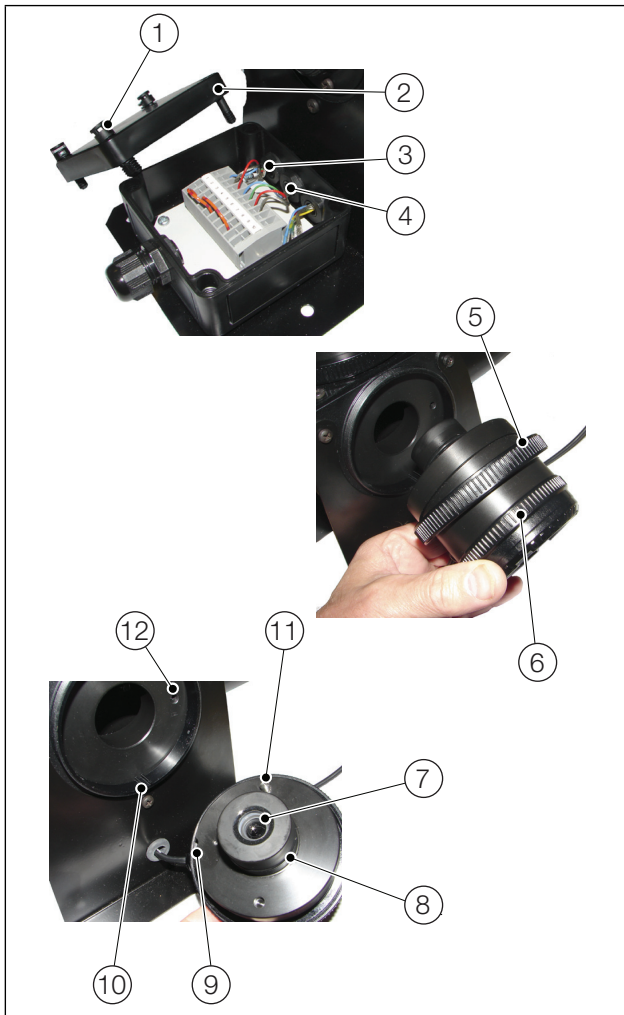


Fig. 4.2 Fitting emitter or receiver module

4. Referring to Fig. 4.3:
  - a. Route emitter module cable (13) or receiver module cable (14) through the terminal box cable gland.
  - b. Connect the cable to the terminal box terminals.

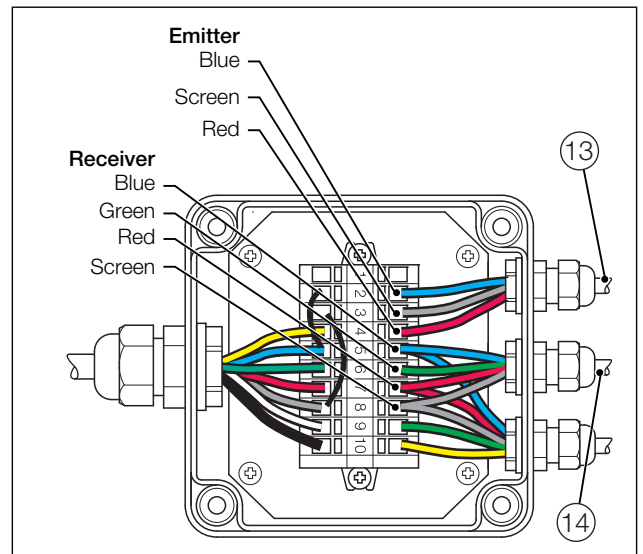


Fig. 4.3 Emitter and receiver module connections

5. Referring to Fig. 4.2, refit terminal box cover (2) and secure with 4 captive screws (1).
6. Restore the power supply to the turbidity sensor.
7. Calibrate the sensor – see Section 7 of the User Guide (IM/4690–EN),

---

**ABB Limited**  
**Measurement & Analytics**

Oldends Lane  
Stonehouse  
Gloucestershire  
GL10 3TA  
UK  
Tel: +44 (0)1453 826661  
Fax: +44 (0)1453 829671  
Email: [instrumentation@gb.abb.com](mailto:instrumentation@gb.abb.com)

**ABB Inc.**  
**Measurement & Analytics**

125 E. County Line Road  
Warminster  
PA 18974  
USA  
Tel: +1 215 674 6000  
Fax: +1 215 674 7183

**[abb.com/measurement](http://abb.com/measurement)**



---

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB.

© ABB 2018