ReactIR™ DS-Series Quick Reference

Connecting a DS Optical Interface Module

This sheet provides instructions on how to install an Optical Interface Module on your ReactIR system for use with DS-Series sampling technologies. The table on the reverse side shows the components involved in an Optical Interface Module installation and identifies the applicable ReactIR systems for each type of interface module.

For details about all ReactIR sampling technologies, please refer to the *Sampling Technology Guide* provided with iC IR software release 4.1 and later.

The DS-Series Optical Interface Module enables you to connect ReactIR DS-Series sampling technologies to the factory-standard Sample Interface Module (SIM) on any ReactIR base unit. There are three models of the Optical Interface Module—one for single probe connections, one for a single probe with a Resistive Thermal Device (RTD), and one for multiple probes (MultiplexIR or "MUX").

I. Before You Begin

- Some existing ReactIR systems have an older style retaining ring on the SIM that must be replaced with the newer model that includes a pin-hole guide.
- Verify that the SIM on your system has a mechanical dvider (**Figure 1**) and order one, if necessary (see table on reverse side of this sheet).

II. Connecting DS Optical Interface Module to SIM

The following instructions demonstrate how to connect an Optical Interface Module to a SIM. The same instructions apply to the ReactIR 4000, 45m, iC10, and MonARC base units.

1. If applicable, use the 0.050" Allen key to remove the four screws that hold the retaining ring on the factory-standard SIM and remove the ring.

Figure 1: Old retaining ring on SIM (no pin-hole)

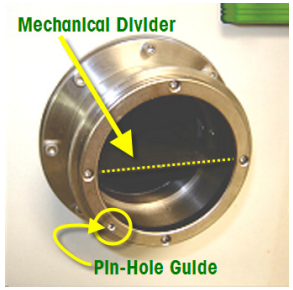


Figure 2: New retaining ring (with pin-hole)

NOTE: Removal of the retaining ring from the factory-standard SIM only applies to existing ReactIR base units with the old style ring. New instruments ship with the retaining ring that includes the pin-hole guide shown in **Figure 2**.

2. Replace the old retaining ring with the DS-Series retaining ring that includes a pin-hole guide. Pin hole must be in the seven o'clock (7:00) position.
3. Replace and tighten the four screws.
4. Remove the protective cap on the back of the DS Optical Interface Module and install the module on the SIM.
   - Take special care to insert the pin into the pin-hole guide—not one of the four screw holes.
   - The figure below shows the SINGLE and MultiplexIR Optical Interface Modules installed. Notice that the front of an Optical Interface Module has one or two **D**-shaped labels that indicate the orientation for the sampling technology connection.

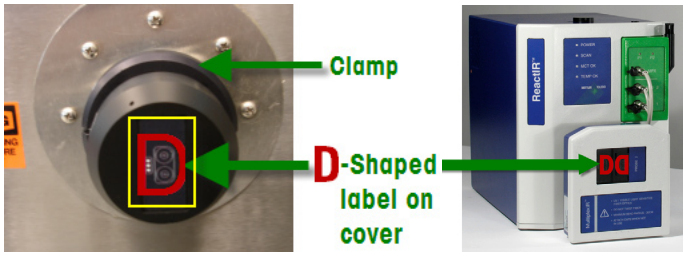


Figure 3: Optical Interface Modules—installed (SINGLE on left, MUX on right)

5. Position and tighten the clamp around the SIM.

III. Connecting Sampling Technology to Interface Module

1. At the connector end of the FiberConduit on the DS-Series sampling technology, use your thumb to slide the protective cap back to expose the optics.

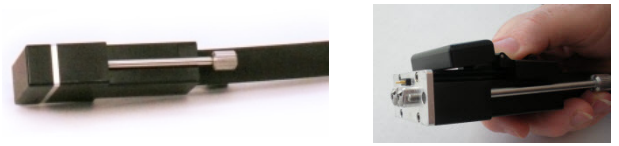


Figure 4: DS-Series connector on sampling technology FiberConduit

2. Insert the connector end of the FiberConduit into the Optical Interface Module, taking care to orient the connector according to the D-shaped label on the cover (**Figure 3**). NOTE: The cover on the interface module flips in as you guide the FiberConduit connector into position.
3. Secure the DS-Series FiberConduit with the two captive screws in the vertical plane.

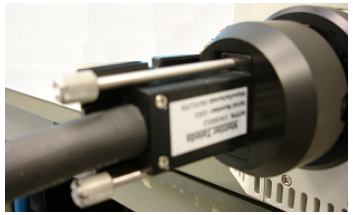


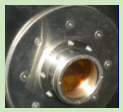
Figure 5: Sampling technology connector captive screws

4. If applicable, connect the purge utility at the bell-style connector and/or at the back of the MUX.
5. If you are using a DS-Series Fiber-to-Sentinel configuration, align the sentinel.

   NOTE: No alignment is needed for integrated DS-Series probes because they are pre-aligned. However, a DS-Series Fiber-to-Sentinel configuration does require alignment.

IV. Optical Interface Module Options and Parts per ReactIR Base Unit

The following table shows the type of Optical Interface Module for each ReactIR base unit and lists the parts with tools used to install a module.

Image	Component	Part Number	ReactIR Base Units 45m	iC10	4000	MonARC
						
	Factory SIM					
	SIM Divider		included	14170071 *	14170072 *	14400070 *
	**MultiplexIR (MUX)** Optical Interface Module	14440000	✓			
	**Single** Optical Interface Module with RTD	14440001	✓			
	**Single** Optical Interface Module wihout RTD	14440002		✓	✓	✓
Optical Interface Modules include the following mounting parts and tools:						
	**Retaining ring** with locating hole (pin-hole guide)	14170354	✓	✓	✓	✓
	Tool, Allen key (.050)	14202931	✓	✓	✓	✓
	**Clamp assembly**, output flange	14460827	✓	✓	✓	✓
	Tool, Hex driver 9/16" hex, 6-7/8" long	14124028	✓	✓	✓	✓

* If you do not have the mechanical divider in your base unit, please contact your local Account Manager, TAC, or our CustomerCare department to order the necessary component.

Cables for ReactIR 45m Interface Modules

The SINGLE Optical Interface Module for the ReactIR 45m includes an RTD cable, as shown in the table to the left, that plugs into RTD 1. The MUX Optical Interface Module (**Figure 6**) for the ReactIR 45m has three cables for RTD 1, RTD 2, and Accessory (ACC).

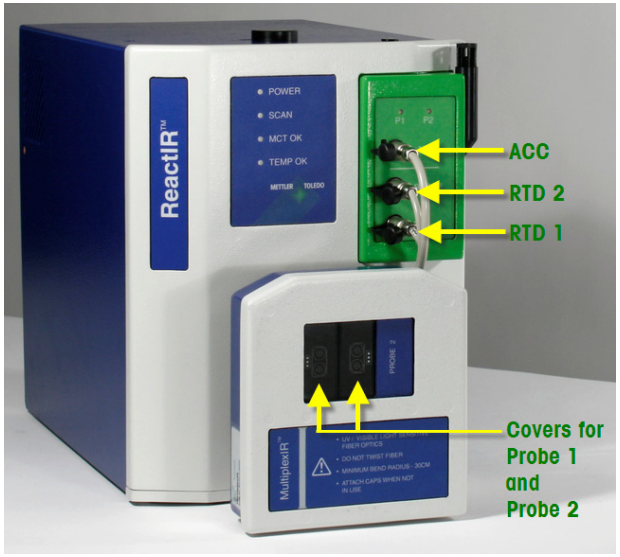
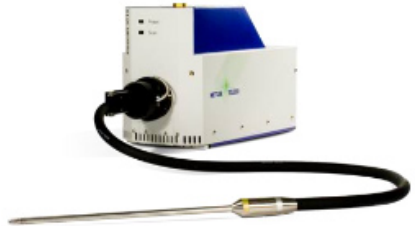


Figure 6: MultiplexIR ("MUX") Optical Interface Module—installed

Below are examples of a SINGLE and MUX Optical Interface Module installed with DS-Series sampling technology.



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