

The **ModCon** Mode Controller



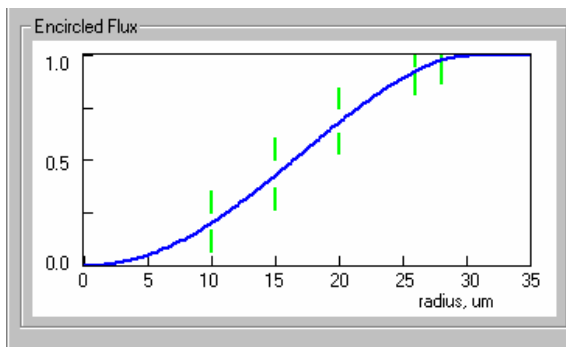
For source independent mode control fit the **ModCon** to your light source and

- Improve your measurement accuracy
- Ensure stable launch conditions for multimode fiber measurements
- Meet EF requirements of IEC 61280-4-1

The **ModCon** Mode Controller is designed to ensure that whatever source you use to test the loss and bandwidth of your multimode optical fiber network, LED, Laser, OTDR or white light, you launch the same distribution of modes into the fiber. As a result you can eliminate the variations due to the widely different modal characteristics of the sources commonly used in fiber optic measurements and networks.

Measurements of loss and bandwidth in multimode fibers are known to be highly dependent on the modal condition of the light source used for the measurement. For example, OTDR and LS/PM loss measurements can differ significantly simply because an OTDR uses a laser source and not an LED.

Now there is a way to dramatically improve agreement AND ensure you meet international standards at the same time - the **ModCon**. The **ModCon** is a passive device which ensures that the correct launch conditions are achieved independent of the light source used. This results in more accurate measurements, better agreement between different test sets, and compliance with international standards. Every **ModCon** is rigorously tested using Arden's **MPX Modal Explorer** to ensure that its output meets the standard regardless of the modal distribution of the input.



- Conforms to IEC 61280-4-1
- Operates at 850nm and 1300nm
- Reference grade connector on output

Typical Encircled Flux plot measured using the Modal Explorer showing IEC 61280-4-1 template

Technical Specification

	Standard	OEM	OEM - Dual	MultiWay
Dims (mm)	100 x 50 x 25 (plus leads)	87 x 42 x 12 (plus leads)	87 x 75 x 12 (plus leads)	19 inch rack x 1U high x 280
Weight (gm)	185	80	120	1000
Insertion loss @ 850 & 1300nm	50µm < 3dB ; 62.5µm < 3dB	50µm < 3dB ; 62.5µm < 3dB	50µm < 3dB ; 62.5µm < 3dB	50µm < 3dB ; 62.5µm < 3dB
Max power throughput	10mW	10mW	10mW	10mW

Ordering Information - ModCon – Standard

Standard ModCons come with a 1.2m input tail and a 1.5m output tail. The input and output cables have a 3mm diameter PVC sheath, and contain an Aramid yarn strength member.	
MC-FC-50-S	Mode controller in 50/125µm fiber with FC connectors
MC-FC-62-S	Mode controller in 62.5/125µm fiber with FC connectors
MC-SC-50-S	Mode controller in 50/125µm fiber with SC connectors
MC-SC-62-S	Mode controller in 62.5/125µm fiber with SC connectors
MC-ST-50-S	Mode controller in 50/125µm fiber with ST connectors
MC-ST-62-S	Mode controller in 62.5/125µm fiber with ST connectors
MC-LC-50-S	Mode controller in 50/125µm fiber with LC connectors
MC-LC-62-S	Mode controller in 62.5/125µm fiber with LC connectors

ModCon – OEM

OEM ModCons have a smaller package (credit card sized), with bare fiber tails or connectors. They are intended to be used inside other instrumentation or packaging.	
MC-OEM-BF/BF-50-500	Mode controller in OEM style housing; 50/125µm fiber; tails 500mm long in 900µm buffer tubing; no connector on input; no connector on output
MC-OEM-BF/BF-62-500	Mode controller in OEM style housing; 62.5/125µm fiber; tails 500mm long in 900µm buffer tubing; no connector on input; no connector on output
MC-OEM-BF/FC-50-500	Mode controller in OEM style housing; 50/125µm fiber; tails 500mm long in 900µm buffer tubing; no connector on input; FC/PC connector on output
MC-OEM-BF/FC-62-500	Mode controller in OEM style housing; 62.5/125µm fiber; tails 500mm long in 900µm buffer tubing; no connector on input; FC/PC connector on output

ModCon – OEM Dual fiber

OEM Dual fiber incorporates 50/125 and 62.5/125µm fiber mode controllers in the same housing. They are intended to be used inside other instrumentation or packaging.	
MC-OEM-BF/BF-5062-500	Mode controller in OEM style housing, dual fiber (50/125µm 62.5/125µm fibers); tails 500mm long in 900µm buffer tubing; no connector on input; no connector on output
MC-OEM-BF/BF-5062-1000	Mode controller in OEM style housing, dual fiber (50/125µm 62.5/125µm fibers) tails 1000mm long in 900µm buffer tubing; fiber in 900µm tubing; no connector on input; no connector on output
MC-OEM-BF/FC-5062-500	Mode controller in OEM style housing, dual fiber (50/125µm 62.5/125µm fibers); tails 500mm long in 900µm buffer tubing; no connector on input; FC/PC connector on output
MC-OEM-BF/FC-5062-1000	Mode controller in OEM style housing, dual fiber (50/125µm 62.5/125µm fibers); tails 1000mm long in 900µm buffer tubing; no connector on input; FC/PC connector on output

ModCon – MultiWay

Multiway ModCons are ideal for conditioning 12 way switches or for efficient testing of ribbon structures. Standard configurations are in a 19 inch rack, 1U high with either a single MPO style receptacle for the input and output, or with individual FC or SC connectors.	
MC-MW-12-FC-50	Mode controller, 12 way in 50/125µm fiber with FC connectors on input and output; 19 inch rack mountable enclosure
MC-MW-12-FC-62	Mode controller, 12 way in 62.5/125µm fiber with FC connectors on input and output; 19 inch rack mountable enclosure
MC-MW-12-MTP-50	Mode controller, 12 way in 50/125µm fiber with MTP connectors on input and output; 19 inch rack mountable enclosure
MC-MW-12-MTP-62	Mode controller, 12 way in 62.5/125µm fiber with MTP connectors on input and output; 19 inch rack mountable enclosure
MC-MW-12-SC-50	Mode controller, 12 way in 50/125µm fiber with SC connectors on input and output; 19 inch rack mountable enclosure
MC-MW-12-SC-62	Mode controller, 12 way in 62.5/125µm fiber with SC connectors on input and output; 19 inch rack mountable enclosure



MC-MW-08-FC-50	Mode controller, 8 way in 50/125µm fiber with FC connectors on input and output; 19 inch rack mountable enclosure
MC-MW-08-FC-62	Mode controller, 8 way in 62.5/125µm fiber with FC connectors on input and output; 19 inch rack mountable enclosure
MC-MW-04-FC-50	Mode controller, 4 way in 50/125µm fiber with FC connectors on input and output; 19 inch rack mountable enclosure
MC-MW-04-FC-62	Mode controller, 4 way in 62.5/125µm with FC connectors on input and output; 19 inch rack mountable enclosure

The Modal Launch Conditions for our Telecomm modal controllers is specified in terms of the Encircled Flux (EF). A Certificate of Conformance or a Test Certificate(850nm only) giving details of how it was measured are available as options.

We have also produced many special configurations e.g.

ModCons with different connector styles such as specialist military and aerospace connectors

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