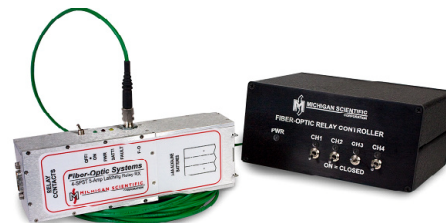


# Fiber-Optic Systems - Relay Control Link

## Model FO-RCT/RR

- Integrated Satellite Module with 1-30Amp or 4-5Amp SPST Latching Relays
- RFI/EMI Validated for EMC at 200V/m (46dBV/m) from 500 kHz to 18 GHz and 600V/m (pulsed 5% duty-cycle & 5 $\mu$ s rise-time) 1GHz to 2.5 GHz
- Low-Power Circuitry for Operating up to 8-Day Continuous with 3 Alkaline 'AA' Batteries
- Relay Control with Wide Logic Level Range by Front-Panel Toggle Switches
- Other Relay Configurations Available: SPST 60A, DPDT & Signal Relays



## Description

The *FO-RCT/FO-RCR* Satellite Relay Receiver module and the desktop Relay Control Transmitter form a Fiber-Optic Integrated Relay Link for remote control of Potential-Free Contacts (PFC).

The Receiver (*FO-RCR-1-30A*) with one 30-Amp SPST latching relay or the Receiver (*FO-RCR-4-5A*) with four independent 5-Amp SPST latching relays is used for remote ON/OFF power control or for switching up to four functions as required by equipment under test (EUT). The Relay Controller has a logic level range of up to  $\pm 20$  VDC or simple shunted input up to 4 channels. Alternately, four front-panel toggle switches provide control.

The Receiver filtering and shielding provide good immunity from electromagnetic interference (EMI), electromagnetic pulse (EMP) or high voltages associated with plasma research. This allows for uncompromising electromagnetic compatibility (EMC) for engineering and testing. The satellite relay module is validated for RFI/EMI validated for EMC at 200 V/m (46 dB V/m) at 500 kHz to 18 GHz and 600 V/m (pulsed 5% duty-cycle & 5 $\mu$ s rise-time) 1 GHz to 2.5 GHz.

Three integral 'AA' batteries provide power to the satellite module for up to 8-days. Other relay contacts and configurations are available at special request i.e. SPST 60-Amp, DPDT or signal relays.

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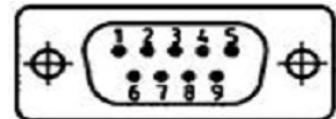
## SPECIFICATIONS

PARAMETER	SPECIFICATION	
<b>SYSTEM CHARACTERISTICS AND PERFORMANCE</b>		
<b>GENERAL</b>	<b>1-SPST CONTACT</b>	<b>4-SPST CONTACTS</b>
Power		
Power Source	3-AA Alkaline Batteries	
Battery Life	up to 8 days continuous	
Stimulus on Transmitter		
High Level Input Voltage	Min: 2.4 VDC, Max: 20 VDC	
Low Level Input Voltage	Min: -20 VDC, Max: 0.6 VDC	
Switch Input Type	TTL/CMOS or Toggle Switch	
Stimulus Response Time	<200 ms <i>typical</i>	
Relays <sup>1</sup>		
Max Switching Voltage per Contact	30 VDC or 120 VAC	
Max Switching Power per Contact	3600 VA	150 W (600 VA)
Max Switching Current per Contact	30 Amps	5 Amps
Max Relay Operating Rate (@ Rated Load) <sup>2</sup>	10 cpm	2 cps
Minimum Permissible Load (@ 5 VDC)	100 mA	10 mA
<b>PHYSICAL</b>		
Channels	1 SPST Relay	4 SPST Relays
Dimensions (L x W x H)	6.5 x 2.3 x 1.35 in (165 x 58 x 34 mm)	
Volume	<20.2in <sup>3</sup> (<325.4cm <sup>3</sup> )	
Weight	13 oz (404g)	
Input Connectors	BNC x 4	
Output Connector	2-pin D-SUB (9-pin Shell)	9-pin D-SUB
Optical Connectors	ST	
Optical Cables	multimode graded-index 62.5/125 μm or 100/140 μm	
Optical Cable Length	1640 ft (500m) max.	
<b>ENVIRONMENTAL</b>		
Operating Temperature	-4° F to +150° F (-20° to +65° C)	
Operating Humidity	85% R.H. max. non-condensing	
EMC	300 V/m at 500 kHz to 1 GHz, 200 V/m at 1 GHz to 18 GHz and 600 V/m (pulsed 5% duty-cycle & 5μs rise-time) 1 GHz to 2.5GHz	

<sup>1</sup> Other configurations available upon special request (ie. DPDT, 60A SPST, signal relays)

<sup>2</sup> System internally limited to approximately 2 cps

Pin Number	Pin Action	Pin Number	Pin Action
1	Ch1 COM	6	Ch1 NO
2	Ch2 COM	7	Ch2 NO
3	Ch3 COM	8	Ch3 NO
4	Ch4 COM	9	Ch4 NO
5	NoConnection		
NO= normally open		COM=common	



8500 Ance Road  
Charlevoix, MI 49720  
Tel: 231-547-5511  
Fax: 231-547-7070  
Rev: 8/27/09

**MICHIGAN SCIENTIFIC**  
<http://www.michsci.com>  
Email: [mscinfo@michsci.com](mailto:mscinfo@michsci.com)  
corporation

321 East Huron Street  
Milford, MI 48381  
Tel: 248-685-3939  
Fax: 248-684-5406