

Fibre Optic 2x2 Changeover Protection Switch

FEATURES

- Automatic switching when optical level falls below a settable preset limit.
- External momentary Set/Reset control.
- No path change on power fail.
- Local or remote control.
- Front panel LED status indicators.
- Optional plug in SNMP monitoring and switching module.

GENERAL

The OFF-4010 is a magnetic latching 2x2 changeover optical switcher using a high performance optical relay and optical level detectors. It is suitable for switching optical signals being run over single mode optical cable.

The OFF-4010 is arranged as a changeover switch with two inputs and two outputs. The latching characteristic of the high performance optical relay allows momentary control and also provides for no change of path during power loss.

Changeover switching is done either automatically, locally or remotely.

Optical detectors measure the optical power level and automatically switch the optical relay when signal strength falls below a dip switch selectable power level threshold set from -30 dBm to -5 dBm in 5dBm steps.

Local switching is possible using front panel push button switches. Remote switching is possible using external normally open or normally closed alarms.

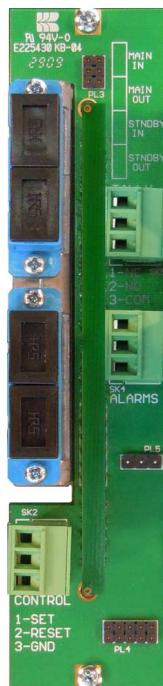
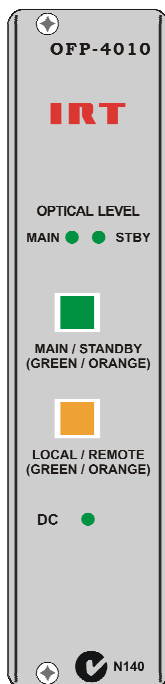
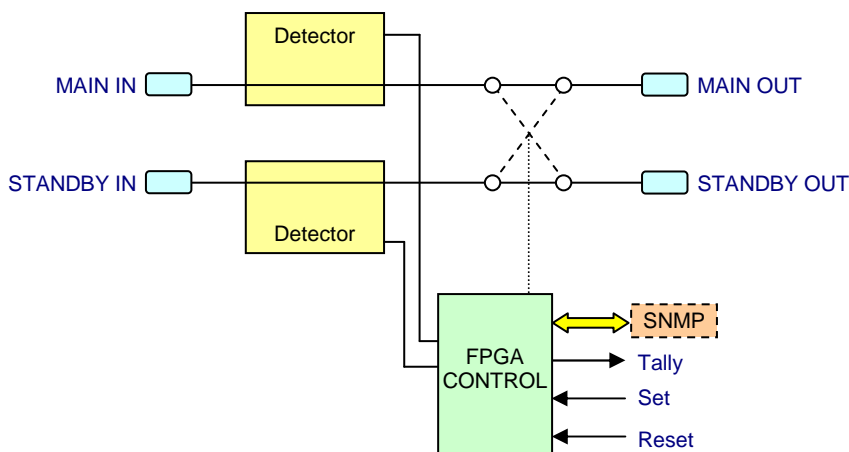
The OFF-4010 is ideally suited to applications where a simple choice between two inputs or outputs is required and may be easily driven by detector circuits for automatic path selection.

Remote indication of tally and alarms are provided for integration into central alarm and monitoring systems.

An optional SNMP (Simple Network Management Protocol) plug-in module is available for remote monitoring and control when used in conjunction with IRT's frame fitted with SNMP capability.

The OFF-4010 is designed to fit IRT's 1RU and 4000 series 3RU Eurocard frames¹ and may be used alongside any other of IRT's analogue or digital Eurocards.

BLOCK DIAGRAM OFF-4010 SIGNAL PATH



TECHNICAL SPECIFICATIONS

Signal Path:

Signal Type	Various, Single Mode Optical.
Switching Characteristic	Magnetic latching 4 port changeover optical relay.
Operating Wavelength	1260nm to 1610nm.
Insertion Loss	2.5 dB across full range; 1.5 dB for 1260nm to 1360nm and 1510nm to 1610nm.
Cross Talk	< -60 dB.
Switching Speed	< 10 ms.
Power Threshold	-30dBm to -5dBm in 5dB increments, selectable.

Auxiliary Data:

Tally		
	Main In to Main Out	Connection between pin 1 (NC) and pin 3 (COM).
	Standby In to Main Out	Connection between pin 2 (NO) and pin 3 (COM).

Alarm

	Main Optical fail	Pin 2 open circuit on Main fail.
	Standby Optical fail	Pin 1 open circuit on Stby fail.
	Ground	Pin 3.

Remote Control:

Set	Switch to open circuit or switch to ground, selectable. (Main I/P to Standby O/P, Standby I/P to Main O/P)
Reset	Switch to open circuit or switch to ground, selectable. (Main I/P to Main O/P, Standby I/P to Standby O/P)

Connectors:

Optical	SC/PC (standard).
Tally	3 pin Phoenix pluggable screw block.
Alarm	3 pin Phoenix pluggable screw block.
Control	3 pin Phoenix pluggable screw block.

Power Requirements:

Voltage	28 Vac CT (14-0-14) or ± 16 Vdc.
Power consumption	1 VA.

Other:

Temperature range	0 - 50°C ambient.
Mechanical	Suitable for mounting in IRT 19" rack chassis with input, output and power connections on the rear panel.
Finish	Grey, black lettering & red IRT logo.
Front panel	
Rear assembly	Detachable silk-screened PCB with direct mount connectors to Eurocard and external signals.
Dimensions	6 HP x 3 U x 220 mm IRT Eurocard.
Supplied accessories	Rear connector assembly with matching connectors for control, alarm and tally.
Optional accessories	SMU-4000 SNMP plug-in module for use with IRT frame fitted with SNMP "Agent".