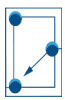# ETL Systems
Excelling in RF Engineering

2 x 1 IF/L-band
Redundancy Switch failsafe,
with RF Detection & modem alarm switchover

Typical applications:
- Automatic switching between main and standby dishes on signal failure
- Manual switching between 2 different antenna sources
- Automated remote switching by Network Management System (NMS)

Failsafe to main redundancy switching with non-latching coaxial relay switch
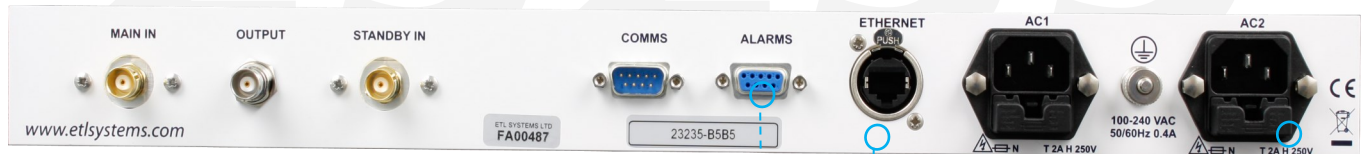
RF Detection to monitor input signals

Compact housed in a 1U high chassis

Local control & monitoring via front panel push buttons allowing selection of 3 modes of operation

50 - 2150 MHz operating frequency range

Dry contact alarm port & serial communications for power supply status

Remote control & monitoring via RS232/485 serial port & RJ45 Ethernet port with SNMP & web browser interface

Resilience from dual redundant power supplies

Technical specifications and operating parameters

RF Parameters					
Capacity	2 x 1				
Frequency Range	50-2150 MHz (IF/L-band)				
RF Connectors	50Ω SMA	50Ω N-type	50Ω BNC	75Ω BNC	75Ω F-type
Flatness — 50-2150MHz	±1.0 dB	±1.0 dB	±1.0 dB	±1.0 dB	±1.5 dB
Flatness — Any 36MHz	±0.5 dB	±0.5 dB	±0.5 dB	±0.5 dB	±0.75 dB
Input Return Loss — Typical	15 dB	15 dB	15 dB	10 dB	10 dB
Input Return Loss — Minimum	12 dB	12 dB	12 dB	7 dB	6 dB
Output Return Loss — Typical	15 dB	15 dB	15 dB	10 dB	10 dB
Output Return Loss — Minimum	12 dB	12 dB	12 dB	8 dB	6 dB
Insertion Loss Typical , mean across band	1.5 ± 1.0 dB	1.5 ± 1.0 dB	1.5 ± 1.0 dB	2.0 ± 1.0 dB	2.0 ± 1.0 dB
Isolation	65 dB		Minimum between any 2 ports		
RF Detection Operational Range	-40 dBm to +10 dBm		50 dB Dynamic range; user set threshold within this range		
Automatic Switching Time	200 ms typical total time in auto mode				
Switch type	Coaxial relay, 1 million cycles		Self-terminating		
MTBF	TBA				

Preliminary Specification

System Control	
Local Control & Monitoring	Via Front Panel push buttons & status LEDs
Remote Control & Monitoring	Via RS232 or RS422/485 serial port and RJ45 Ethernet port 10/100 Base T. TCP/IP, SNMP & Web browser interface.
Alarms	Via a dry contact (D-type) for PSU status & Ethernet (RJ45)

Environmental	
Operating temperature	0 to 45˚C
Location	Indoor use only
Storage temperature	-20˚C to +75˚C
Humidity	20 to 90% non-condensing
Altitude	10,000 feet AMSL

Power		
PSU Power	85-264Vac 50/60Hz	Fused 2A
AC Consumption	<50W	Max. consumption at steady state
PSU	Dual redundant	Diode OR. Not hot swap.

Physical	
Dimensions	1U high x 350mm deep x 19" wide
Weight	3 kg
Colour	RAL9003 - White (Semi-Matte)

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.
Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.