

## T1000HR and R1000HR

### 1+1 Redundancy Unit for the PBU/ PBD Series Remote Mounted Block Converters



The **T1000HR and R1000HR** 1+1 redundancy switch units are designed to take advantage of the 1+1 redundancy control interface which is built in as a standard feature of the **PBU(B)/ PBD(B)/ PBU(Ka)/ PBD(Ka)** series of remote mounted block frequency converters & the **PBU(A)/ PBD(A)** series when fitted with remote control options.

The system is designed to provide redundancy for a single-feed system, maintaining maximum availability whilst allowing routine maintenance and repair work to be carried out on the standby converter, without the normal associated down-time.




The system maintains one converter on-line whilst the other is held in hot standby, allowing the user to select and monitor the on-line converter, or the automatic mode chosen where the system monitors the converter alarm status and if a fault condition develops within the on-line converter, automatically switches traffic to the standby unit.

The redundancy unit can be controlled via the **PBU or PBD** which in turn is controlled by the user from either a PC based M&C system (RS232/ 485/ Ethernet) or a rack mounted control panel (**FPC100**).

The **T1000HR** redundancy interface unit has connections for the PBU block up converter (transmit chain) and the **R1000HR** for the PBD block down converter (receive chain).

The unit is housed in a rugged weatherproof chassis, suitable for either internal or external/remote locations.

### Peak Features

-  High quality, matched L-Band, SHF & control cable set for interfacing to the PBU/ PBD included as standard
-  Configuration options for separate high/ low-Band switching and SHF combining
-  Rugged weatherproof housing



## T1000HR & R1000HR – Typical Specification

### L-Band & RF Interfaces

Frequency	
L-Band	DC to 2GHz
SHF	to 18.4GHz
SHF (Ka)	to 31GHz
Connections	50Ω, N-type (f)
SHF (Ka)	50Ω, K-Type (f) or 2.92mm (f)

### Switch Element Parameters

Switching speed	<15ms
Type	Co-axial, latching
Main path	2 off
Standby path	2 off

Frequency Dependent Parameters		Single Switch Insertion Loss (maximum)	Switch Return Loss (typical)	Switch Isolation (typical)
L-Band Section	L-band	0.15dB	23dB	80dB
RF Section	S-Band	0.15dB	23dB	80dB
	C-band	0.2dB	21dB	70dB
	X-band	0.3dB	18dB	65dB
	Ku-band	0.35dB	16dB	60dB
	DBS-band	0.4dB	15dB	60dB
	Ka-Band	Please contact factory.		

### Typical System RF Performance

The following gives the typical performance that can be expected from a system comprising Peak single range converters & using the high quality matched L-Band & RF cable set;

Gain flatness	±1dB full band
Insertion loss	3dB (not including converter gain)
Option 11c;	Increases loss by 3dB nom
Switching speed (completion)	<800ms (from fault to switch completion)

### General Performance

#### Mechanical

Width	172mm (6.8"), plus connections & mounting flanges
Height	123mm (4.85"), plus connections
Depth	48mm (1.89")
Option 11;	290 x230 x95mm (11.4 x9.1 x3.7inch)
Construction	Die-cast Aluminium, IP66 rated
Weight	1.4kgs (3lbs) nom
Option 11;	3kg (6.5lbs) nom

#### Control System

Converter interface	multi-pin circular, weatherproof (mating part supplied)
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#### Environmental

Operating temp	-25°C to +55°C (less solar gain)
Option 12;	-40°C to +55°C (less solar gain)
Humidity	0-100% condensing
EMC	EN 55022, part B & EN 50082-1
Safety	EN 60950

#### Options

- 11) Additional switching for PBU(B)/ PBD(B)series fitted with separate high/ low band option for simultaneous range/ band operation.
- 11c) T1000HR combined high/ low band SHF output interface for PBU(B)series fitted with separate high/low band option for simultaneous range/ band operation.
- 12) Low temperature operation to -40°C.

#### Associated Products;

**FPC100** rack mounted control panel (1RU)

