TLTR(B) series

Multi-Range, Remote Mounted, Test Loop Translators

Test Loop Translator Products;

TLT Unit	Translation Plan	Input (GHz)	Output (GHz)
TLTR1002	Super extended Ku (Tx) to L-Band, 2-range	12.75-13.75, 13.75-14.50	0.95-1.95 max.
TLTR1003	Extended Ku (Tx) to 3-range Ku (Rx)	13.75-14.50	10.95-11.70, 11.70-12.25, 12.25-12.75
TLTR1004	Extended C & extended Ku (Tx) to C & 3-range Ku (Rx)	5.85-6.65 13.75-14.50	3.4-4.2 10.95-11.70, 11.70-12.25, 12.25-12.75
TLTR2001a	Extended C & Ku (Tx) to L-Band	5.85-6.65, 14.00-14.50	0.95-1.75 max.
TLTR2001b	Extended C & extended Ku (Tx) to L-Band	5.85-6.65, 13.75-14.50	0.95-1.75 max.

For other non-standard frequency requirements, please contact the factory.
For equivalent rack mount units, please see TLT(B) & TLTH(B) series datasheets.

The **TLTR(B) series** of multi-range/ multi-band test loop translators are designed to take a sample of the transmit signal and convert it to a frequency at which it can be monitored or analysed. Often monitoring of the transmit signal is required at L-Band, or alternatively a translation of the transmit signal to the receive band which is then applied to the Receive equipment in a test mode.

TLT units are supplied without filtering and the output of the unit therefore contains all mixing products. Units with filtering are also available, please consult the factory.

For control, the unit incorporates a serial communications interface and an Ethernet interface that supports control from a web-page or SNMP network management system, as standard. Units are available with optional electronically variable attenuation.

The unit is housed in a rugged weatherproof chassis, suitable for either internal or external/remote locations. For supply, the unit accepts a wide range of DC voltages, or can be offered with the **OPS27c** outdoor AC/DC PSU's.

Peak Features

- High stability and excellent phase noise
- Full alarm monitoring
- Rugged weatherproof housing
- Outdoor weatherproof OPS series AC/DC PSU's available
- Optional electronically variable 0 to 30dB attenuator
- Full remote control including Ethernet with embedded web server and SNMP NMS

TLTR(B) series – Typical Specification

Input

Connector	N-type (f), 50Ω
Return loss	>18dB
P1dB GCP	+10dBm
Max input power	+15dBm

Output

Connector	N-Type (f), 50Ω
Return loss	15dB

Transfer characteristics

Conversion loss	20dB ±2dB at 0dB attenuation
Gain stability	±0.25dB from 0 to 40°C

RF Performance

LO phase noise (typical)	-75dBc/Hz @ 100Hz
	-92dBc/Hz @ 1kHz
	-100dBc/Hz @ 10kHz
	-105dBc/Hz @ 100kHz
	-120dBc/Hz @ 1MHz

Internal Back-up Reference

Allan deviation	1 x 10^{-11} over 1s
Ageing	<5 x 10^{-9} per day, <5 x 10^{-7} per year
Temp stability	<5 x 10^{-8} over 0 to 60^0C

External Reference Input (Option 4)

Frequency	10MHz (5MHz factory settable)
Connection	Separate TNC (f), 50Ω
Required phase noise	to be better than 50dBc/Hz of output phase noise
Level	0dBm ±5dB

Variable Attenuation (Option 3)

Attenuation range	30dB nominal
Step size	0.1dB
Control	remote

RF Mute (Option 13)

Activation	remote control
Option 13a;	discrete control input
Isolation	60dB min

Input Source Selection Switching (Option 18, 18b)

Inputs supported	2, 4
Activation	Remote control

Note; local (push button) & discrete (connector pin) control options available.

Mechanical

Dimensions	290 x 230 x 95mm (11.4 x 9.1 x 3.7inch)
Construction	Die-cast Aluminium, weatherproof, IP66 rated
Weight	Approx. 4kgs (9lbs)

Environmental

Operating temp	-10^0C to +50^0C (less solar gain)
Option 12;	-40^0C to +50^0C (less solar gain), with extended warm-up for cold start operation & higher current
Humidity	0-100% condensing
EMC	EN55022 part B & EN50082-1
Safety	EN60950

Power supply

Voltage	+27 to +36VDC
Power	35 Watts max.
Connection	Fed via control system interface connection

Control System Interface

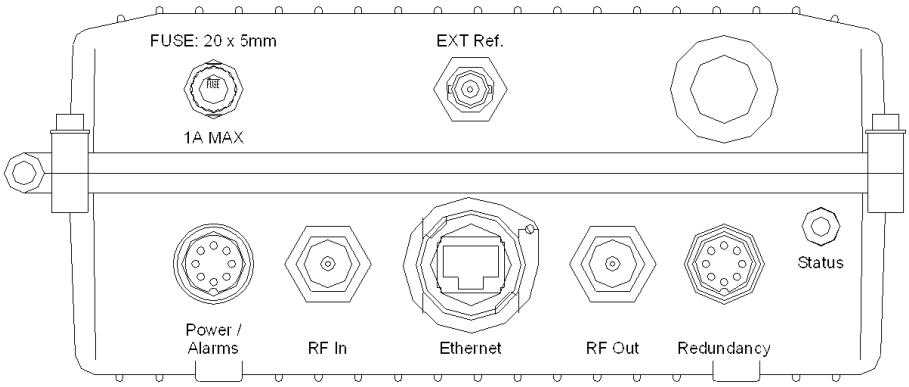
M&C	Summary failure relay (form C)
	Discrete range selection input
Option 13a;	discrete mute input
Option 7;	range selection switch mounted on chassis with LED range indication
Remote control	RS232/ 485 port
	Ethernet ; embedded web server & SNMP network management support.
Connection	Multi-pin, circular, weatherproof (mating part supplied)

Options

3c)	30dB Ku-Band electronic variable attenuator, 0.1dB step
3d)	30dB C/ X-Band electronic variable attenuator, 0.1dB step
4)	External 10MHz reference input.
7)	Range switch on chassis with LED range indication.
12)	Low temperature operation to -40^0C
13)	RF mute option with remote control
13a)	Mute discrete control input
16)	Factory pre-set IP address
18)	Remote controlled source selection switching, dual input.
18b)	Remote controlled source selection switching, quad input.

Note; some of the above options have an impact on the performance specification, for details please contact the factory

Connector panel view (sample)



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