

TLT 4-way taps



- **Compact 4-way tap**
- **Ingress Safe™** - unique passive ingress reduction technology
- **Modem Safe™** - unique surge protection and intermodulation reduction solution
- **High port-to-port isolation performance**
- **CPD Safe™** - robust zinc die-cast housing with NiSn plating
- **F-connector inner spring accepts 0.56 to 1.30 mm inner conductors**
- **Full 5 to 1006 MHz frequency range**
- **Exceeds EN Class A screening requirements**



Overview

Products within the TLT range excel both in electrical and mechanical performance. Though designed for use within indoor environments, they are also specified for use within street-side plant. The taps are easy to install with a tough, compact housing and some models are stackable. All F-connector contacts meet the SCTE standards (ANSI SCTE 02 2006). The material of the inner spring has been designed for connecting coax cables with an inner core of 0.56 to 1.30 mm. It retains this elasticity and provides effective clamping force even when varying thicknesses of inner conductor are connected in succession.

The intermodulation performance, which is an important factor in high level return path signals, has been greatly improved through a newly developed ferrite and specially designed circuits. The high frequency shielding exceeds Class A requirements (EN-50083-2:2006) over the whole frequency range from 5 MHz to 1000 MHz. The taps have an epoxy sealed tongue and groove back cover.

Ingress Safe

Our patented Ingress Safe technology uses a phase cancellation technique to considerably reduce ingress created within the home. It has no adverse effect on the CATV spectrum and is transparent to the forward and reverse path signals.

- Significantly reduces noise on CATV networks, improving network performance
- Field tests show Ingress Safe units in the distribution network can deliver improvement in the carrier to noise ratio that averages from between 3 dB and 12 dB, depending on the network topology

- Prevents or delays the need to deploy technicians to rectify faults caused by the cumulative effects of ingress on network performance and customer service.

Modem Safe

Modem Safe is a highly effective surge protection solution for sensitive network and in-home CPE. Based on passive circuits, the technology does not rely on discharge tubes, extending the lifespan of the solution.

- Blocks high and low voltage pulses and unwanted DC voltages
- Prevents internal ferrites within the product from becoming magnetised (avoiding deterioration in the performance of CPE)
- Drives fewer reported faults
- Improves customer service
- Reduces truck rolls

CPD Safe

CPD (Common Path Distortion) is well known for producing signal interference on networks. It is caused by electrolytic corrosion or the oxidation of dissimilar metals when in close contact. CPD Safe technology protects against CPD.

- Removes a primary cause of CPD
- Reduces signal interference on the network
- Drives fewer reported faults
- Reduces truck rolls
- Improves customer service

Specifications

		MHz	4-8/I-T		4-11/I		4-14/I		4-17/I		4-20/I		4-23/I		4-26/I	
			Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max
Insertion loss (dB)	In to Out	5 - 15	n/a		3.5	3.9	2.0	2.4	1.1	1.7	0.7	1.1	1.0	1.2	0.9	1.2
		15 - 40			3.4	3.7	1.8	2.0	0.8	1.5	0.6	0.9	0.6	0.8	0.5	0.8
		40 - 550			3.6	3.9	2.0	2.5	0.8	1.5	0.6	1.0	0.6	1.0	0.5	0.9
		550 - 862			4.0	4.5	2.5	3.0	1.4	2.2	1.0	1.6	0.7	1.5	0.7	1.5
		862 - 1006			4.5	5.0	3.0	3.5	2.2	3.0	1.4	2.0	1.2	2.0	1.2	2.0
	In to Tap ^{1,6}	5 - 40	7.5	8.0	10.5	11.0	13.7	14.7	17.0	18.0	19.5	20.5	22.6	23.8	25.4	27.0
		40 - 550	7.5	8.0	10.5	11.0	13.7	14.7	17.0	17.5	19.5	20.5	22.5	23.2	25.0	26.4
		550 - 862	7.7	8.5	10.7	11.5	14.3	15.1	17.0	18.0	19.8	20.8	23.0	24.0	25.0	27.0
862 - 1006		8.7	9.5	11.7	12.5	15.2	16.0	17.2	18.5	20.8	21.8	23.5	24.5	25.5	27.5	
Return loss (dB, min) ²	In/Out/Tap	5 - 40	22.0		22.0		22.0		22.0		22.0		22.0		22.0	
		40-1006	22.0		22.0		22.0		22.0		22.0		22.0		22.0	
Isolation (dB, min)	Tap to Tap	5 - 470	30.0		30.0		30.0		30.0		30.0		30.0		30.0	
		470 - 862	25.0		25.0		25.0		25.0		25.0		25.0		25.0	
		862 - 1006	20.0		20.0		20.0		20.0		20.0		20.0		20.0	
	Out to Tap	5 - 15	n/a		25.0		27.0		31.0		31.0		39.0		41.0	
		15 - 40			25.0		27.0		31.0		31.0		36.0		38.0	
		40 - 550			20.0		22.0		26.0		30.0		33.0		35.0	
		550 - 862			20.0		20.0		21.0		24.0		27.0		29.0	
		862 - 1006			20.0		20.0		21.0		22.0		22.0		25.0	
Screening efficiency (dB) ³		5 – 300	95.0		95.0		95.0		95.0		95.0		95.0		95.0	
		300 – 470	90.0		90.0		90.0		90.0		90.0		90.0		90.0	
		470 - 950	85.0		85.0		85.0		85.0		85.0		85.0		85.0	
		950 - 1006	65.0		65.0		65.0		65.0		65.0		65.0		65.0	
Ingress Safe			Ports 2 and 3													
Intermodulation p+q (dBc, min) ⁴			-115.0													
Surge Class conformance ⁵	All ports		1 kV 1.2/50µs													
Impedance (Ohm, typ)			75													
Equipment Approval	CE															

Remarks

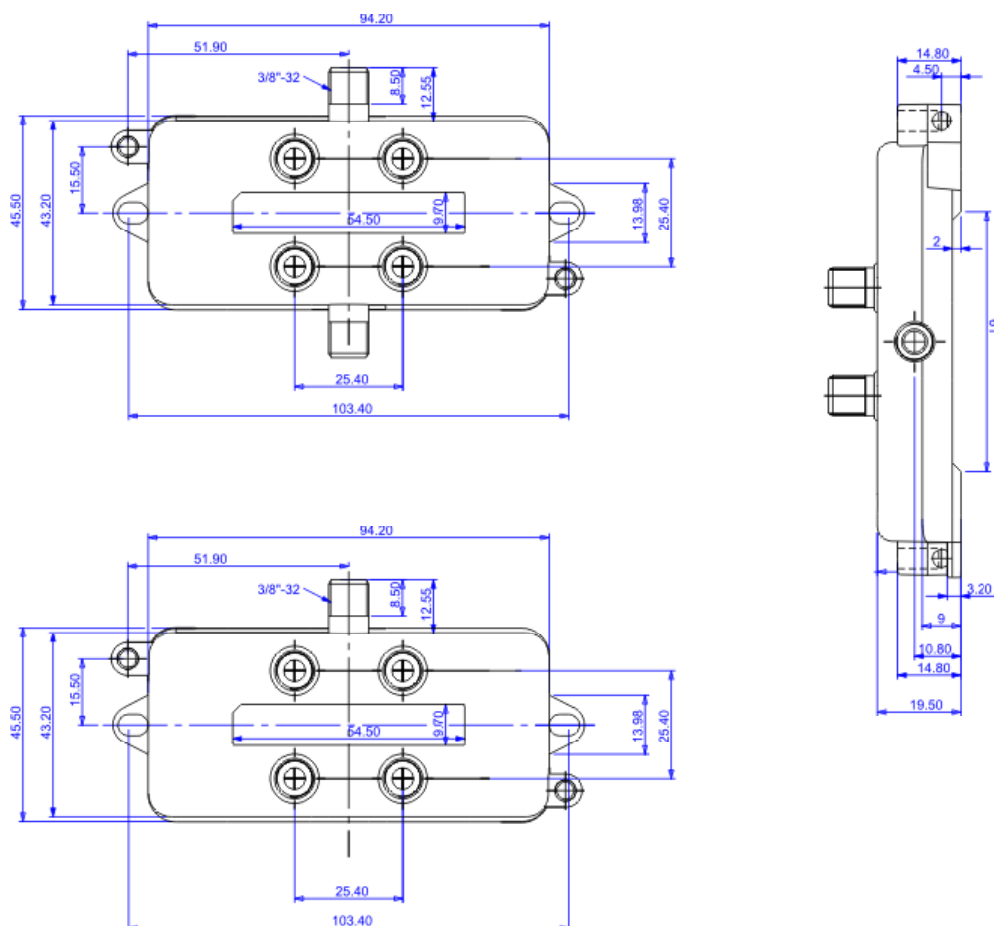
1	Where frequency is above 40 MHz, deduct 1.5 dB/Octave
2	Tested according to EN 50083-2 2006
3	Tested according to SCTE IPS-TP-403
4	Two carriers (50 & 55MHz), out to in, @ 120dBµV, after 10 pulses (25V/1,2µS rise time/500µS duration) at all ports Two carriers (50 & 55MHz), out to in, @ 120dBµV, after 1 pulse 1KV (1,2µS risetime/50µS fall time) at Input.
5	Tested according to IEC 61000-4-5 2005
6	Additional 0.5dB Ingress Safe ports 2 and 3 DC power blocking all ports

Ordering information

Item Name	Article number	Item Name	Article number
TLT-4-8/I-T	10930598	TLT-4-20/I	10930602
TLT-4-11/I	10930599	TLT-4-23/I	10930603
TLT-4-14/I	10930600	TLT-4-26/I	10930604
TLT-4-17/I	10930601		

Mechanical & environmental specifications

Performance parameter		Details
Port Sealing	Environmental (epoxy)seal	All F-ports
Connectors	Input, Output & Tap ports	F-female
	ANSI/SCTE 01 2006 (Outdoor) comply	All F-ports
	F-connector Torque (max)	3.95Nm (88.51 In-Lb)
Materials	Housing & Back Lid	NiSn plated zinc die-cast
	F-spring	Silver plated beryllium copper
WEEE (2002/96/EC)	Complete product	Marked with wheelie bin logo
RoHS (2002/95/EC)	Complete product	Complies to RoHS



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