

OTS 4-way outdoor taps



- Compatible with standard Scientific Atlanta taps
- Ingress Safe™ - unique passive ingress reduction technology
- AC-RF bypass switch, allowing faceplates to be changed without loss of power or RF
- Designed for extreme environmental conditions
- Option to incorporate plug-in conditioning modules
- Faceplate only option available



Overview

OTS outdoor passives are compatible with standard Scientific Atlanta taps. The series includes 8-, 4- and 2-way taps with a variety of tap losses. Providing integrated Ingress Safe™ noise reduction technology, 6 kV surge protection and excellent RF performance, the taps feature sealed female F-ports for drop cable connection on the faceplate and 5/8"-24 NEF-female ports for in and output cable connection on the housing. The housing has an AC-RF bypass switch as standard, allowing faceplates to be changed without loss of power or RF through the tap housing.

The taps may be strand mounted through the clamp at the back of the housing or surface mounted with an optional bracket. Tested under extreme environmental conditions, the taps are designed to operate near salt water, along busy highways and in very hot conditions.

As an option these taps can accept field configurable plug-in modules which provide increased flexibility in system design. It is possible to use cable equalizers, return path attenuators, and cable simulators in order to fine-tune return path performance.

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.

CPD Safe

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

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

Specifications

		MHz	8dB		11dB		14dB		17dB		20dB		23dB		26dB		29dB															
Insertion loss (dB) ¹	In to Out	5-65 65-300 300-550 550-750 750-862 862-1006	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max														
			N/A																													
3.1 3.5 1.3 1.7 0.7 1.1 0.7 1.1 0.3 0.7 0.3 0.7 0.4 0.8																																
3.5 3.9 1.4 1.8 0.8 1.2 0.8 1.2 0.5 0.9 0.5 0.9 0.6 1.0																																
4.4 4.8 2.0 2.4 1.3 1.7 1.2 1.6 0.9 1.3 0.9 1.3 1.1 1.5																																
4.5 4.9 2.2 2.6 1.6 2.0 1.4 1.8 1.1 1.5 1.0 1.4 1.2 1.6																																
4.6 5.0 2.5 2.9 1.8 2.2 1.6 2.0 1.2 1.6 1.2 1.6 1.5 1.9																																
4.6 5.1 2.5 3.0 1.9 2.4 1.6 2.1 1.3 1.8 1.3 1.8 1.5 2.0																																
Return loss (dB, typ)	All ports	5-15	30.4		31.3		21.8		26.9		27.7		35.9		36.3		36.0															
		15-550	25.8		30.0		24.4		29.6		31.0		32.4		33.7		30.8															
		550-1006	26.6		23.2		26.2		29.3		29.7		26.2		27.1		24.5															
Isolation (dB)	In to Tap	5-65	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ	Min														
		65-550	28.5	25.0	33.5	25.0	39.0	25.0	37.5	25.0	37.9	25.0	40.2	25.0	29.3	25.0	41.5	25.0														
		550-1006	34.1	25.0	36.3	25.0	37.1	25.0	35.8	25.0	38.2	25.0	37.9	25.0	32.5	25.0	38.7	25.0														
Directivity	Out to Tap	5-65	36.8		25.0		29.2		27.0		34.8		29.0		41.1		31.0		49.3		33.0		41.9		35.0		47.5		37.0			
		65-550	N/A		32.6		25.0		32.8		27.0		40.1		29.0		43.3		31.0		44.1		33.0		43.5		35.0		47.6		37.0	
		550-1006	28.5		22.0		37.7		24.0		32.3		26.0		39.1		28.0		35.8		30.0		45.7		32.0		45.6		34.0			
Screening efficiency (dB) ²	5-300		>95																													
	300-470		>90																													
	470-950		>85																													
	950-1000		>85																													
Shielding effectiveness (dBi) ³	5-300		Avg 120																													
	300-1000		Avg 110																													
Ingress Safe	Ports 2 & 4																															
Power passing (Amps AC/DC) ⁴	12																															
Hum modulation (dB, min) ⁵	All ports		-70																													
Surge Class conformance ⁶	All ports		6KV combination wave 2 Ω 1.2/50µs (Combination wave C3)																													
Impedance (Ohm, typ)	75																															
Dimensions (mm)	L x H x D		95.7x94.8x72.2																													
Equipment Approval	CE																															

Remarks

1	Ports 2 & 4 has an additional 0.4 dB loss due to Ingress Safe circuitry
2	According to EN 50083-2 2006
3	Tested according to SCTE IPS-TP-403
4	Range between 60-90 VAC/ VDC
5	At 10 Amp power passing
6	Tested according to IEC 61000-4-5 2005
	Measurements taken at room temperature
	32 dB also available

Ordering information

Item Name	Article nb.	Item Name	Article nb.	Item Name	Article nb.	Item Name	Article nb.
OTS-4-8/I-T	10480951	OTS-4-8/IC-T	19003765	OTS-4-8/I-T-F	19001785	OTSF-4-8/IC-T	19003814
OTS-4-11/I	10480952	OTS-4-11/IC	19003766	OTS-4-11/I-FP	19001824	OTSF-4-11/IC	19003815
OTS-4-14/I	10480953	OTS-4-14/IC	19003767	OTS-4-14/I-FP	19001825	OTSF-4-14/IC	19003816
OTS-4-17/I	10480954	OTS-4-17/IC	19003768	OTS-4-17/I-FP	19001826	OTSF-4-17/IC	19003817
OTS-4-20/I	10480955	OTS-4-20/IC	19003769	OTS-4-20/I-FP	19001827	OTSF-4-20/IC	19003818
OTS-4-23/I	10480956	OTS-4-23/IC	19003770	OTS-4-23/I-FP	19001828	OTSF-4-23/IC	19003819
OTS-4-26/I	10480957	OTS-4-26/IC	19003771	OTS-4-26/I-FP	19001829	OTSF-4-26/IC	19003820
OTS-4-29/I	10480958	OTS-4-29/IC	19003772			OTSF-4-29/IC	19003821
		OTS-4-32/IC	19003773				

Mechanical & environmental specifications

Performance parameter		Details
Port Sealing	Environmental (epoxy) seal	All F-ports
Connectors	Input & Output Tap ports ANSI/SCTE 01 (Outdoor) comply F-connector Torque F-connector Brass with NiSn (60/40) plating F connector Inserts F-inner spring with Ag plating	KS-female (5/8"-24NEF) TAP ports - F Female All F-ports 10Nm (88.51 In-Lb) >1.5µm >0.6µm
Water Immersion (IP08)	Tighten torque on connectors Water Head Duration Observation: No Water leak	2.26Nm (< 20 In-Lb) 2m (6.56 ft) 500 hrs No electrical degradation after dry
Temperature cycling with humidity	Temperature Extreme temp duration Transient Humidity Number of cycles Observation: (no water leakage)	+4°C to +60°C (+39.2°F to +140°F) 3 hrs 3 hrs 95% RH 20 No electrical degradation after dry
High Temperature cycling (EN 60068-2-2:2007)	Temperature Duration Observation: No crack or damage	+60°C (+140°F) 48 hrs No electrical degradation after dry
Drop Test (EN 60068-2-32:1993 , IEC 68-2-32:1975)	75cm (29.5 in) high onto concrete floor or metal plate surface Number of drop for each impact points Observation: No crack on metal	Corner, Edge & Port 1 No electrical performance degradation
Salt Fog (MSTM-B-117)	Tighten torque on connectors Temperature Salt percentage & Acidity Duration Number of cycles Observation: (No electrical performance degradation)	2.26Nm (< 20 In-Lb) +35°C (+95°F) 5% & pH7 1000 hrs Continues No metal corrosion or salt incursion
WEEE (2002/96/EC)	Complete product	Marked with wheelie bin logo
RoHS (2002/95/EC)	Complete product	Complies to RoHS
Temperature	Operating temperature	-40°C to +60°C (-40°F to +140°F)

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