



### OT9 8-way outdoor taps

- **Compatible with Philips 9000 PBT 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**
- **All connections front accessible**



### Overview

OT9 outdoor taps are compatible with Philips 9000 PBT taps. The OT9 series includes 8-, 4- and 2-way taps with a variety of tap losses. Providing integrated Ingress Safe™ noise reduction technology, 1 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.

#### 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.

# Outdoor taps

## OT9 8-way outdoor taps

### Specifications

		MHz	8-11/I-T		8-14/I		8-17/I		8-20/I		8-23/I		8-26/I	
Insertion loss (switch) (dB, max) <sup>1</sup>	In to Out	5 - 1000	0.4		0.4		0.4		0.4		0.4		0.4	
Return loss (switch) (dB, min) <sup>1</sup>	In / Out	5 - 750	26.0		26.0		26.0		26.0		26.0		26.0	
		750 - 1000	20.0		20.0		20.0		20.0		20.0		20.0	
			Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max
Insertion loss (dB)	In to Out <sup>2</sup>	5 - 30	n/a		3.7		2.2		1.3		1.0		0.8	
		30 - 200			3.5		1.9		1.1		1.2		0.8	
		200 - 400			3.5		2.3		1.3		1.2		1.0	
		400 - 600			3.7		2.8		1.5		1.4		1.1	
		600 - 750			4.7		3.2		2.1		1.6		1.4	
		750 - 870			5.1		3.5		2.3		1.8		1.6	
		870 - 1000			5.3		3.8		2.5		2.1		1.9	
	In to Tap <sup>2,3</sup>	5 - 870	11.0	13.0	14.0	16.5	17.0	18.5	20.0	21.5	23.0	24.5	26.0	27.5
870 - 1000	11.0	13.0	14.0	17.0	17.0	19.0	20.0	21.5	23.0	24.5	26.0	27.5		
Isolation (dB, min)	Tap to Tap	5 - 30	20		20		20		20		20		20	
		30 - 750	23		23		23		23		23		23	
		750 - 1000	20		20		20		20		20		20	
Isolation (Directivity) (dB, min)	Out to Tap	5 - 30	n/a		20		20		20		20		20	
		30 - 200			24		25		26		27		28	
		200 - 600			22		25		26		27		28	
		600 - 750			22		24		25		26		27	
		750 - 870			22		23		24		25		26	
		870 - 1000			20		22		22		25		26	
Return loss (dB, min)	In/Out/Tap	5 - 30	16		16		16		16		16		16	
		30 - 750	18		18		18		18		18		18	
		750 - 1000	16		16		16		16		16		16	
Screening efficiency (dB, typ). Minimum exceeds Class A. <sup>4</sup>		5 - 300	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	
		470 - 950	85.0		85.0		85.0		85.0		85.0		85.0	
		950 - 1000	65.0		65.0		65.0		65.0		65.0		65.0	
		(GTEM) <sup>5</sup>	5 - 300	110.0		110.0		110.0		110.0		110.0		110.0
300 - 1200	100.0		100.0		100.0		100.0		100.0		100.0			
Power passing (Amps AC/DC) <sup>6</sup>			12											
Hum modulation (dB, typ) <sup>7</sup>	All ports	5 - 1000	-70											
Ingress Safe port			Ports 1, 2, 5 and 6											
Surge Class conformance <sup>8</sup>	All ports		6KV combination wave 2 Ω Impedance (C1)											
Dimensions (mm)	L x H x D		120.5x80.5x60											
Equipment Approval	CE													

#### Remarks

1	Faceplate removed
2	+0.5dB insertion loss tolerance above +30°C
3	Additional 0.5 dB loss for Ingress Safe circuit on ports 1, 2, 5, and 6
4	Tested according to EN 50083-2:2006
5	Tested according to SCTE IPS-TP403
6	Range between 60-90 VAC/VDC
7	At 12 Amp power passing
8	Tested according to IEC 61000-4-5 2005

#### Ordering information

Item Name	Article number	Item Name	Article number
OT9-8-11/I-T	10480812	OT9-8-20/I	10480821
OT9-8-14/I	10480815	OT9-8-23/I	10480824
OT9-8-17/I	10480818	OT9-8-26/I	10480827

## Mechanical & environmental specifications

		Details
<b>Port Sealing</b>	Environmental (epoxy) seal	All F-ports
<b>Connectors</b>	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
<b>Water Immersion</b> (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
<b>Temperature cycling with humidity</b> (EN 60068-2-30:2005)	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
<b>High Temperature cycling</b> (EN 60068-2-2:2007)	Temperature Duration Observation: No crack or damage	+60°C (+140°F) 48 hrs No electrical degradation after dry
<b>Drop Test</b> (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
<b>Salt Fog</b> (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
<b>WEEE</b> (2002/96/EC)	Complete product	Marked with wheelie bin logo
<b>RoHS</b> (2002/95/EC)	Complete product	Complies to RoHS
<b>Temperature</b>	Operating temperature	-40°C to +60°C (-40°F to +140°F)