

OTR 2-way outdoor taps



- **Compatible with Regal RMT2002 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

OTR 2-way outdoor taps are compatible with Regal RMT2002 series taps. Providing integrated Ingress Safe™ noise reduction technology, 6 kV surge protection and excellent RF performance, OTR 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 oxidation 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

Outdoor taps

OTR 2-way outdoor taps

Specifications

		MHz	4dB		8dB		11dB		14dB		17dB		20dB	
Insertion loss (dB) ¹	In to Out		Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max
		5-65	N/A		3.2	3.6	1.3	1.7	0.7	1.1	0.7	1.1	0.3	0.7
		65-300			3.6	4.0	1.4	1.8	0.8	1.2	0.8	1.2	0.5	0.9
		300-550			4.2	4.6	1.9	2.3	1.3	1.7	1.3	1.7	1.0	1.4
		550-750			4.4	4.8	2.1	2.5	1.5	1.9	1.4	1.8	1.1	1.5
		750-862			4.5	4.9	2.3	2.7	1.7	2.1	1.6	2.0	1.2	1.6
		862-1006			4.5	5.0	2.3	2.8	1.7	2.2	1.6	2.1	1.2	1.7
	In to Tap													
		5-65	3.6	4.0	8.0	9.0	11.5	12.0	14.2	15.0	16.9	18.0	20.0	21.0
		65-550	3.9	4.5	7.8	9.0	11.4	12.0	14.1	15.0	16.9	18.0	20.0	21.0
		550-1006	4.4	5.0	8.2	9.0	11.6	12.5	14.4	15.0	17.4	18.0	20.4	22.0
Return loss (dB, typ)	All ports													
		5-15	30.8		30.2		35.3		26.9		30.4		32.6	
		15-550	30.0		26.7		36.6		27.2		29.3		29.0	
		550-1006	25.6		22.6		32.7		23.7		24.2		23.4	
Isolation (dB)	In to Tap		Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ	Min
		5-65	40.1	25.0	29.3	25.0	27.3	25.0	32.9	25.0	31.6	25.0	38.5	25.0
		65-550	33.1	25.0	29.4	25.0	30.0	25.0	34.0	25.0	31.0	25.0	31.5	25.0
		550-1006	29.4	22.0	24.6	22.0	29.7	22.0	29.7	22.0	25.5	22.0	29.8	22.0
Directivity	Out to Tap													
		5-65	N/A		32.7	25.0	32.1	27.0	31.8	29.0	33.4	31.0	41.8	33.0
		65-550			33.9	25.0	35.8	27.0	33.4	29.0	35.4	31.0	42.9	33.0
		550-1006			31.7	22.0	27.5	24.0	27.5	26.0	41.9	28.0	40.6	30.0
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			Port 2											
Power passing (Amps AC/DC) ⁴			12											
Hum modulation (dB, min) ⁵	All ports		-70											
DC power blocking			All F ports											
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		94.1x100.3x75.8											
Equipment Approval	CE													

Remarks

- Port 2 has an additional 0.4 dB loss due to Ingress Safe circuitry
 - According to EN 50083-2 2006
 - Tested according to SCTE IPS-TP-403
 - Range between 60-90 VAC/ VDC
 - At 10 Amp power passing
 - Tested according to IEC 61000-4-5 2005
- Measurements taken at room temperature
23 dB, 26 dB, 29 dB, and 32 dB also available

Ordering information

Item Name	Article number	Item Name	Article number	Item Name	Article number
OTR-2-4/I-C-T	19003736	OTRF-2-4/I-T	19003785	OTR-2-4/I-T	10470180
OTR-2-8/I/C	19003737	OTRF-2-8/I	19003786	OTR-2-8/I	10470181
OTR-2-11/I/C	19003738	OTRF-2-11/I	19003787	OTR-2-11/I	10470182
OTR-2-14/I/C	19003739	OTRF-2-14/I	19003788	OTR-2-14/I	10470183
OTR-2-17/I/C	19003740	OTRF-2-17/I	19003789	OTR-2-17/I	10470184
OTR-2-20/I/C	19003741	OTRF-2-20/I	19003790	OTR-2-20/I	10470185
				OTR-2-23/I	10470186
				OTR-2-26/I	10470187

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 (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 60 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) +25°C 5% & pH7 8hrs on-16hrs off 20 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)