

- **Compatible with Regal directional couplers**
- **Excellent RF and hum modulation performance**
- **Designed for extreme environmental conditions**



Overview

ODCRX outdoor directional couplers are compatible with Regal directional couplers. The ODCRX series offers a variety of tap losses and provides excellent RF performance. ODCRX couplers feature 5/8"-24 NEF-female ports for in and output cable connection on the housing.

The couplers 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 couplers are designed to operate near salt water, along busy highways and in very hot conditions.

Specifications

Characteristic	Port type	MHz	ODCRX-08			ODCRX-12			ODCRX-16			Units	Notes
			Min	Typ	Max	Min	Typ	Max	Min	Typ	Max		
Insertion loss (dB)	In to Out Out 1	10 – 65			2.5			1.3			1.3		
		65 – 300			2.5			1.7			1.3		
		300 – 550			2.5			1.9			1.3		
		550 – 750			2.9			2.1			1.6		
		750 – 862			2.9			2.3			1.8		
		862 – 1000			3.1			2.5			2.0		
	1000 – 1218			3.3			2.7			2.2			
	Out 2	10 – 1000		9.0			13.0			17.0			
		1000 – 1218		9.0			13.5			17.5			
Return loss (dB, typ)	All ports	10 – 950	18.0			18.0			18.0				
		950 – 1218	10.0			10.0			10.0				
Directivity	Out to tap	5 – 65			26.0			26.0			26.0		
		65 – 860			24.0			24.0			24.0		
		860 – 1218			22.0			22.0			22.0		
Screening efficiency (dB) Class A		5 – 300	>95										1
		300 – 470	>90										1
		470 – 950	>85										1
		950 – 1000	>85										1
Shielding effectiveness (dBi)		5 – 300	Avg 120										2
		300 – 1000	Avg 110										2
Power passing (Amps AC/DC)		15											
Hum modulation (dB, min)	All ports		Min			Min			Min				
		10 – 860	≥70			≥70			≥70				3
		860 – 1218	≥65			≥65			≥65				3
Surge Class conformance	All ports	2KV combination wave 2 Ω1.2/50µs (Combination wave C3)										4	
Material	Housing	Aluminium											
Impedance (Ohm, typ)		75											
Dimensions (mm)	L x H x D	144 x 114 x 76											
Equipment Approval		CE											

Notes

	Measurements taken at room temperature
1	Tested according to EN 50083-2 2012
2	Tested according to SCTE IPS-TP-403
3	At 10 Amp power passing
4	Tested according to IEC 61000-4-5 2006

Mechanical and environmental specifications

Performance parameter	Details	
Connectors	Input and output	KS-female (5/8"-24NEF)
Water Immersion (IP68)	Tighten torque on connectors	2.26Nm (< 20 In-Lb)
	Water head	2m (6.56 ft)
	Duration	500 hrs
	Observation: No water leak	No electrical degradation after dry
Temperature cycling with humidity	Temperature	+40°C to +600°C (+39.2°F to +140°F)
	Extreme temperature duration	3 hrs
	Transient	3 hrs
	Humidity	95% RH
	Number of cycles 20	20
	Observation: (no water leakage)	No electrical degradation after dry
High Temperature cycling (EN 60068-2-2:2007)	Temperature	+60°C (+140°F)
	Duration	48 hrs
	Observation: No crack or damage	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	Corner, edge and port
	Number of drop for each impact point	1
	Observation: No crack on metal	No electrical performance degradation
Salt Fog (MSTM-B-117)	Tighten torque on connectors	2.26Nm (< 20 In-Lb)
	Temperature	+35°C (+95°F)
	Salt percentage and acidity	5% & pH7
	Duration	672 hrs (28 days)
	Number of cycles	Continues
	Observation: (No electrical performance degradation)	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)

Order information

Item number	Item code	Description
19009603	ODCRX-08	OUTDOOR DIRECTIONAL COUPLER REGAL 8 DB 1.2GHZ FULL UNIT
19009604	ODCRX-12	OUTDOOR DIRECTIONAL COUPLER REGAL 12 DB 1.2GHZ FULL UNIT
19009605	ODCRX-16	OUTDOOR DIRECTIONAL COUPLER REGAL 16 DB 1.2GHZ FULL UNIT
19009606	ODCRX-08/F	OUTDOOR DIRECTIONAL COUPLER REGAL 8 DB 1.2GHZ FACEPLATE
19009607	ODCRX-12/F	OUTDOOR DIRECTIONAL COUPLER REGAL 12 DB 1.2GHZ FACEPLATE
19009608	ODCRX-16/F	OUTDOOR DIRECTIONAL COUPLER REGAL 16 DB 1.2GHZ FACEPLATE