

# Regal<sup>®</sup> Passives

RLS12\* Splitters  
 RLDC12\* Directional Couplers  
 RPI\* Power Inserters  
 1.2 GHz System RF Passives

## FEATURES

- Support DOCSIS<sup>®</sup> 3.1 expanded bandwidth up to 1218 MHz
- Maintain existing Regal<sup>®</sup> installed base with compatible faceplate upgrades
- Easily configured to enable or block AC power as needed in the network
- Faceplate only options for cost effective upgrades to existing Regal deployments
- Support aerial or pedestal installation with flexible design
- Protect valuable network equipment investment with heavy surge suppression options available



## PRODUCT OVERVIEW

The ARRIS Regal<sup>®</sup> RL12 1.2 GHz System Passives are available in configurations including directional couplers, balanced and unbalanced splitters, and power inserters that maintain backward compatibility with previous Regal installed base. In addition to mechanical backward compatibility to existing Regal passive housings, we now offer faceplate only options for cost effective upgrades. These AC power-passing, two-way devices operate within an RF passband of 1.2 GHz and are enclosed in die-cast 360 aluminum alloy housings that are equipped for strand and pedestal mounting. These features provide users flexible installation options and reduce the need for cable loops. The RL12 series is also equipped with shorting bars which can be removed for power blocking or replaced with fuses as needed.

## Regal RL12 Series System Passives 5-1218 MHz

RL*/RPI* - SPECIFICATIONS INSERTION LOSS (dB Maximum)								
Insertion Loss (dB)		5–10 MHz Typ/Max	11–450 MHz Typ/Max	451–600 MHz Typ/Max	601–750 MHz Typ/Max	751–850 MHz Typ/Max	851–1000 MHz Typ/Max	1001–1218 MHz Typ/Max
RPI-120(SP)-20A-90		0.5/1.1	0.60/1.2	0.5/1.2	0.6/1.6	0.6/1.6	1.0/1.6	1.5/1.8
RLS12-2(SP)-15A		4.1/4.8	3.9/4.6	4.2/4.8	4.2/5.3	4.2/5.3	4.8/6.1	5.0/6.6
RLS12-3B(SP)-15A		6.0/6.4	6.0/7.1	6.1/7.3	6.3/7.8	6.4/7.8	7.0/7.8	8.1/8.4
RLS12-3(SP)-15A	Port 2	3.8/4.7	4.0/4.7	4.1/5.2	4.1/5.6	4.1/5.6	4.1/6.0	5.0/6.5
	Port 3, 4	7.8/8.2	7.2/8.3	7.3/8.5	7.5/9.0	7.7/9.0	7.9/9.5	9.0/10.0
RLDC12-8(SP)-15A	Output	2.1/2.5	2.3/2.9	2.4/3.2	2.5/3.5	2.8/3.5	2.9/4.1	3.5/4.4
	Tap Loss	7.8/8.0	7.8/8.0	7.8/8.2	7.9/8.5	8.1/8.7	8.6/9.0	9.4/9.7
RLDC12-12(SP)-15A	Output	1.7/2.0	1.4/2.0	1.5/2.3	1.6/2.9	1.9/2.9	2.3/3.7	3.2/4.3
	Tap Loss	12.2/12.8	11.7/12.5	11.7/12.5	11.7/12.8	11.8/13.2	12.7/13.6	14.1/14.5
RLDC12-16(SP)-15A	Output	1.1/1.7	1.1/1.8	1.2/2.2	1.3/2.3	1.4/2.9	1.6/3.7	2.1/4.3
	Tap Loss	16.3/16.8	15.8/16.5	15.7/16.5	15.6/16.8	15.7/17.2	16.4/17.6	17.5/18.2

RL*/RPI* - SPECIFICATIONS ISOLATION (dB Minimum)						
Isolation (dB)		5–10 MHz	11–300 MHz	301–850 MHz	851–1000 MHz	1001–1218 MHz
RPI-120(SP)-20A-90V		60	60	60	60	57
RLS12-2(SP)-15A		20	20	20	20	20
RLS12-3B(SP)-15A		20	20	20	20	20
RLS12-3(SP)-15A		20	20	20	20	20
RLDC12-8(SP)-15A		20	20	20	20	20
RLDC12-12(SP)-15A		20	20	20	20	20
RLDS12-16(SP)-15A		20	20	20	20	20

RL*/RPI* - SPECIFICATIONS RETURN LOSS (dB Minimum)							
Return Loss (dB)		5-50 MHz	51-150 MHz	151-450 MHz	451-750 MHz	751-850 MHz	851-1000 MHz
RPI-120(SP)-20A-90V		15	16	16	16	16	16
RLS12-2(SP)-15A		15	16	16	16	16	16
RLS12-3B(SP)-15A		15	16	16	16	16	16
RLS12-3(SP)-15A		15	16	16	16	16	16
RLDC12-8(SP)-15A		15	16	16	16	16	16
RLDC12-12(SP)-15A		15	16	16	16	16	16
RLDS12-16(SP)-15A		15	16	16	16	16	16

## GENERAL SPECIFICATIONS

Characteristics	Specifications
Current Handling (Splitters and Directional Couplers)	15 Amperes maximum all ports
Current Handling (Power Inserter)	
AC Ports	20 Amperes maximum
RF Ports	15 Amperes maximum
SP Surge Protection	
Over Voltage Threshold (Trigger Voltage) (with SP)	min/max: 180/260 Volts
Trigger Response (with SP)	< 200 ns (bi-directional voltage sensing)
Current Clamping Capacity (with SP)	40 A (steady state), 400 A (8.3 ms)
Hum Modulation (10 Amperes) <sup>1</sup>	
5 – 10 MHz	60 dB minimum
11 – 750 MHz	60 dB minimum
751 – 1000 MHz	60 dB minimum
1001 – 1218 MHz	53 dB minimum
RFI	100 dB minimum
Operating Temperature	-40° to +60°C
RoHS Certification	6/6
<b>Physical Attributes</b>	
Wide Body (W x H x D) in.	5.5 x 4.6 x 3.0 (Includes port plugs and strand clamp/bolt assembly)
Weight	Wide Body – 1.5 lb.

**NOTE:**

1. Typical

## Regal RL12 Series System Passives 5-1218 MHz

RL*/RPI* ORDERING INFORMATION			
Complete Passive Part Number	Model Number	Faceplate Only Part Number	Model Number
1509891-001	RLS12-2-15A	1509892-001	RLS12-2-15A/U
1509891-002	RLS12-3-15A	1509892-002	RLS12-3-15A/U
1509891-003	RLS12-3B-15A	1509892-003	RLS12-3B-15A/U
1509891-004	RLDC12-8-15A	1509892-004	RLDC12-8-15A/U
1509891-005	RLDC12-12-15A	1509892-005	RLDC12-12-15A/U
1509891-006	RLDC12-16-15A	1509892-006	RLDC12-16-15A/U
1509891-007	RPI-120-20A	1509892-007	RPI-120-20A/U
1509891-008	RLS12-2SP-15A-90V	1509892-008	RLS12-2SP-15A-90V/U
1509891-009	RLS12-3SP-15A-90V	1509892-009	RLS12-3SP-15A-90V/U
1509891-010	RLS12-3BSP-15A-90V	1509892-010	RLS12-3BSP-15A-90V/U
1509891-011	RLDC12-8SP-15A-90V	1509892-011	RLDC12-8SP-15A-90V/U
1509891-012	RLDC12-12SP-15A-90V	1509892-012	RLDC12-12SP-15A-90V/U
1509891-013	RLDC12-16SP-15A-90V	1509892-013	RLDC12-16SP-15A-90V/U
1509891-014	RPI-120SP-20A-90V	1509892-014	RPI-120SP-20A-90V/U
1509891-015	RLS12-3R-15A	1509892-015	RLS12-3R-15A/U
1509891-016	RLS12-3RSP-15A	1509892-016	RLS12-3RSP-15A/U

## RELATED PRODUCTS

RMT2120 Regal® Narrow Body Taps	RMT2120W Regal® Wide Body Taps
RF Amplifiers	Optical Nodes

## Customer Care

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
- International: +1-678-473-5656

**Note:** Specifications are subject to change without notice.

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Regal\_RL12\_DS\_10SEP18

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DOCSIS® 3.1

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