

## FEATURES

- Support DOCSIS® 3.1 expanded bandwidth up to 1218 MHz
- Maintain existing Regal 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

The CommScope Regal RL12 1.2 GHz System Passives are available in several configurations, including directional couplers, balanced and unbalanced splitters, and power inserters that maintain backward compatibility with a previously installed Regal base. In addition to mechanical backward compatibility with existing Regal passive housings, CommScope offers faceplate only options for cost-effective upgrades.

RL12 Passives are AC power-passing, two-way devices that operate within an RF passband of 1.2 GHz and are enclosed in die-cast 360 aluminum alloy housings. The housings are equipped for strand and pedestal mounting. These features provide end users with 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.



## SPECIFICATIONS INSERTION LOSS

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		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

## 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	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

## 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	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	Specification
<b>Physical</b>	
Dimensions (Wide Body)	5.5 in W x 4.6 in H x 3.0 in D (13.97 cm x 11.68 cm x 7.62 cm) (Includes port plugs and strand clamp/bolt assembly)
Weight (Wide Body)	1.5 lb (0.45 kg)
<b>Environmental</b>	
Operating Temperature Range	-40° to +60°C (-40° to +140°F)
RoHS Certification	6/6
<b>Powering</b>	
Current Handling (Splitters and Directional Couplers)	15 A, all ports (max)
Current Handling (Power Inserter)	
AC Ports	20 A (max)
RF Ports	15 A (max)
SP Surge Protection	
Over Voltage Threshold (Trigger Voltage) (with SP)	180 V (min), 260 V (max)
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 (min)
11–750 MHz	60 dB (min)
751–1000 MHz	60 dB (min)
1001–1218 MHz	53 dB (min)
RFI	100 dB (min)

**NOTE:**

1. Typical

Regal Passives configuration options are described in the table below. Ordering information is provided in the table on Page 4.

## RL\*/RPI\* CONFIGURATION OPTIONS

Model Name	Description	Port Configurations
RLS12-2-15A RLS12-2SP-15A	This is a symmetrical splitter that divides the RF signal into two branches of equal amplitude. The SP model provides additional Surge Protection.	Input (RF/AC) Output (RF/AC) Output (RF/AC)
RLDC12-*-15A RLDC12-*SP-15A	These directional couplers are available with tap losses of 8 dB, 12 dB, or 16 dB and are used when signal amplitudes of unequal outputs are preferred. The SP model provides additional Surge Protection.	Input (RF/AC) Output (RF/AC) Tap Output (RF/AC)
RLS12-3-15A RLS12-3SP-15A	This splitter provides three unbalanced RF outputs and <i>is not</i> backward compatible with legacy 1 GHz configurations. The SP model provides additional Surge Protection.	Input (RF/AC) Output (RF/AC) Output (RF/AC) Output (RF/AC)
RLS12-3R-15A RLS12-3RSP-15A	This splitter provides three unbalanced RF outputs and <i>is</i> backward compatible with legacy 1 GHz configurations. The SP model provides additional Surge Protection.	Input/Output (RF/AC) Output (RF/AC) Output (RF/AC) Output (RF/AC)
RLS12-3B-15A RLS12-3BSP-15A	This splitter provides three balanced RF outputs. The SP model provides additional Surge Protection.	Input/Output (RF/AC) Output (RF/AC) 8 dB Output (RF/AC) 8 dB Output (RF/AC) 8 dB
RPI-120-20A RPI-120SP-20A	This Power Inserter has a single AC output leg. The SP model provides additional Surge Protection.	Input (AC) Output (RF) Output (RF)

## RL\*/RPI\* ORDERING INFORMATION

Complete Passive Part Number	Model Name	Faceplate Only Part Number	Model Name
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	1509892-008	RLS12-2SP-15A/U
1509891-009	RLS12-3SP-15A	1509892-009	RLS12-3SP-15A/U
1509891-010	RLS12-3BSP-15A	1509892-010	RLS12-3BSP-15A/U
1509891-011	RLDC12-8SP-15A	1509892-011	RLDC12-8SP-15A/U
1509891-012	RLDC12-12SP-15A	1509892-012	RLDC12-12SP-15A/U
1509891-013	RLDC12-16SP-15A	1509892-013	RLDC12-16SP-15A/U
1509891-014	RPI-120SP-20A	1509892-014	RPI-120SP-20A/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
Fiber Service Cable	Installation Services

Contact Customer Care for product information and sales:

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

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