

ARRIS Line Passives

12-TFC***/17A – Series Splitters

12-TFC***/17A – Directional Couplers

12-LPI/22 – Power Inserters

1.2 GHz System RF Passives

FEATURES

- Support DOCSIS® 3.1 expanded bandwidth up to 1218 MHz
- Support existing install base with backward compatible faceplates with 8-TFC and 9-TFC housings
- Easily configured to enable or block AC power as needed in the network
- Flexible design supports aerial or pedestal installation
- Protect valuable network equipment investment with optional heavy surge suppression in Power Inserter



PRODUCT OVERVIEW

The ARRIS 12-TFC/LPI series of line passives are available in a variety of configurations, including directional couplers, balanced and unbalanced splitters and power inserters. 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. The 12-TFC/LPI series employs a swivel center conductor seizure mechanism and a rotatable faceplate to ensure that users can configure the units in a variety of input/output and RF/AC combinations. These features provide users flexible installation options and reduce the need for cable loops. The 12-TFC/LPI series is also equipped with shorting bars which can be removed for power blocking or replaced with fuses as needed.

12-TFC/17A Series Line Passives 5-1218 MHz

SPECIFICATIONS INSERTION LOSS (dB Typical/Maximum)

Insertion Loss (dB)	5–10 MHz	11–85 MHz	86–550 MHz	551–870 MHz	871–1000 MHz	1001–1218 MHz	
12-LPI/22A and	0.2/1.0	0.3/0.6	0.6/0.9	0.8/1.2	1.2/1.6	1.4/2.0	
12-LPI/22A-ACM-3	0.2/1.0	0.3/0.6	0.6/0.9	0.8/1.2	1.2/1.6	1.5/2.0	
12-TFC-4/17A	3.3/3.9	3.5/4.1	4.1/4.5	4.5/5.2	5.0/5.7	6.0/6.6	
12-TFC-8/17A	Output	1.4/1.9	1.4/1.9	2.0/2.3	2.5/3.1	2.8/3.5	3.9/4.3
	Tap Loss	7.9/9.5	8.4/9.3	8.5/9.3	8.6/9.3	8.8/9.3	9.4/10.0
12-TFC-12/17A	Output	0.9/1.1	0.8/1.1	1.3/1.6	1.7/2.4	1.9/2.7	2.8/3.2
	Tap Loss	11.6/13.2	11.8/13.0	11.9/13.0	12.0/13.0	12.2/13.0	12.7/13.5
12-TFC-16/17A	Output	0.6/0.9	0.7/1.0	1.1/1.3	1.5/2.0	1.7/2.3	2.7/3.0
	Tap Loss	15.7/17.2	15.9/17.0	16.0/17.0	16.0/17.0	16.4/17.0	16.2/17.5
12-TFC-488/17A	High	3.5/4.1	3.5/4.1	4.1/4.6	4.7/5.3	5.1/5.8	6.0/6.9
	Low	6.6/7.5	6.7/7.5	7.1/7.9	7.6/8.9	8.0/9.2	9.9/10.3
12-TFC-777/17-A	5.4/6.1	5.3/6.1	6.3/6.7	7.0/7.8	7.5/8.4	8.8/9.5	

SPECIFICATIONS ISOLATION (dB Minimum)

Isolation (dB)	5–10 MHz	11–600 MHz	601–750 MHz	751–850 MHz	851–1000 MHz	1001–1218 MHz
12-LPI/22A	60	70	65	60	60	57
12-LPI/22A-ACM-3	60	60	60	60	60	58
12-TFC-4/17A	20	28	28	28	28	20
12-TFC-8/17A	20	25	23	23	23	20
12-TFC-12/17A	20	25	25	25	25	25
12-TFC-16/17A	20	25	25	25	25	25
12-TFC-488/17A	20	28	28	28	28	20
12-TFC-777/17A	18	28	28	28	28	20

SPECIFICATIONS RETURN LOSS (dB Minimum)

Return Loss (dB)	5–10 MHz	11–150 MHz	151–450 MHz	451–750 MHz	751–900 MHz	901–1218 MHz
12-LPI/22A	15	17	17	17	17	16
12-LPI/22A-ACM-3	15	17	17	17	17	16
12-TFC-4/17A	15	17	17	17	17	16
12-TFC-8/17A	15	17	17	17	17	16
12-TFC-12/17A	15	17	17	17	17	16
12-TFC-16/17A	15	17	17	17	17	16
12-TFC-488/17A	15	17	17	17	17	16
12-TFC-777/17A	15	17	17	17	17	16

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GENERAL SPECIFICATIONS

Current Handling (Splitters and Directional Couplers)	17 amperes maximum all ports
Current Handling (Power Inserter)	
AC Ports	22 amperes maximum
RF Ports	17 amperes maximum
12-LPI/22A-3ACM-3 Surge Protection	
Surge Current Rating	3000 A, 8x20 μ S
Minimum Firing Voltage	180 V
Hum Modulation	5–10 MHz: 55 dB minimum 11–1000 MHz: 60 dB minimum 1001–1218 MHz: 55 dB minimum
RFI	100 dB minimum
Flatness	\pm 0.4 dB maximum on THRU port (versus cable) except SSP-3Q and SSP-3-636Q \pm 0.5 dB maximum SSP-3Q and SSP-3-636Q thru ports (versus cable) \pm 0.8 dB maximum on COUPLED port (versus cable)
Dimensions	4.8 x 5.7 x 3.4 inches (12.2 x 14.5 x 8.6 cm)
Weight	1.4 lbs. (0.64 kg)

12-TFC/17A SERIES ORDERING INFORMATION

Model Number	Part Number	Description
12-TFC-4/17A	1510425-001	2-way splitter, 5–1218 MHz, 17 Ampere
12-TFC-488/17A	1510425-002	3-way splitter, 5–1218 MHz, 17 Ampere
12-TFC-777/17A	1510425-003	3-way balanced splitter, 5–1218 MHz, 17 Ampere
12-TFC-8/17A	1510425-004	8 dB directional coupler, 5–1218 MHz, 17 Ampere
12-TFC-12/17A	1510425-005	12 dB directional coupler, 5–1218 MHz, 17 Ampere
12-TFC-16/17A	1510425-006	16 dB directional coupler, 5–1218 MHz, 17 Ampere
12-LPI/22A	1510425-007	Power inserter, 5–1218 MHz, 22 Ampere
12-LPI/22A-ACM-3	1510425-008	Power inserter, 5–1218 MHz, 22 Ampere w/surge protection

RELATED PRODUCTS

12000-L-PBT Full Feature Taps	RF Amplifiers
FFE Feederline Equalizers	Headend Optics
Optical Nodes	Optical Passives

Note: Specifications are subject to change without notice.

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Passives-12TFC/17A