

Power Distribution Unit

Description

A key requirement for today's Hybrid Fiber Coax distribution networks is reliability. The New Scientific-Atlanta Power Distribution Unit (PDU) not only provides improved RF specifications and packaging, but also has increased survivability against power surges as compared to its predecessor.

The PDU upgrades any standard Scientific-Atlanta® Multimedia tap to provide power distribution capability. Operators only need to install PDUs at tap locations where revenue-generating telephony subscribers are located. This cost-efficient approach matches incremental expenses with new revenue opportunities.

Our patent-pending PDU is available in 2/4 way and 8-way sizes, and is designed to provide safe power distribution to individual subscriber drops. Both versions of the PDU, the coaxial drop powering and the twisted-pair powering, are compatible with all Scientific-Atlanta standard Multimedia taps. After initial installation, the PDU allows power activation and current limiting on a per-port basis without interruption to any subscribers. These features provide for minimum subscriber interruption plus ensure that individual subscribers and the overall network are isolated from potential ground faults and other AC powering concerns.



Features

- 1 kV Combination Wave survivable with no performance degradation
- Fully compatible with all Scientific-Atlanta standard Multimedia taps
- Available in 2/4 way and 8-way housing sizes
- Coaxial and twisted-pair powering versions available
- Universal design works with all faceplate values to minimize inventory management concerns
- AC/RF bypass switch activation feature provides uninterrupted downstream subscriber service during tap faceplate removal
- Power activation and current limiting on a per-port basis for maximum network reliability
- Advanced gasket technology ensures maximum protection against moisture intrusion and RF interference in aerial, pedestal, and vault deployments
- AL 360T housing with powder coating for superior environmental protection
- Twisted-Pair Connection: 22 to 24 AWG conductor capable



Power Distribution Unit

Specifications

RF Specifications	Units	Specification	Notes
Pass band	MHz	5 to 1000	
Insertion Loss	dB	See Insertion Loss Table	
AC to RF Isolation (twisted pair to tap port)	dB	65 (minimum)	
Return Loss	dB	See Note 1	1

Electrical Specifications	Units	Specification	Notes
Through Current Rating	Amps	12	
Current Limiting	mA	350 @ 60°C per drop	
Surge Resistance	kV	1 kV combination wave-Main Port 1 kV ring wave-Tap Port	

Mechanical Specifications				
Coax Version PDU	Units	2-Way/4-Way	8-Way	Notes
Height	in. (mm)	3.6 (91)	4.5 (114)	2
Width	in. (mm)	3.8 (97)	5.6 (142)	
Depth	in. (mm)	1.7 (43)	0.9 (23)	
Twisted-Pair Version PDU	Units	2-Way/4-Way	8-Way	Notes
Height	in. (mm)	5.0 (127)	6.1 (155)	2
Width	in. (mm)	3.8 (97)	5.6 (142)	
Depth	in. (mm)	0.7 (18)	0.7 (18)	
Combined PDU & Tap	Units	2-Way/4-Way	8-Way	Notes
Height	in. (mm)	5.0 (127)	6.1 (155)	3
Width	in. (mm)	3.8 (97)	5.6 (142)	
Depth	in. (mm)	4.1 (104)	4.1 (104)	

Incremental Insertion Loss (dB)									Notes
Freq (MHz)	2/4-W Coax		8-W Coax		2/4-W Twisted Pair		8-W Twisted Pair		4 6
	Avg	Max	Avg	Max	Avg	Max	Avg	Max	
5-50	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	
51-550	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	
551-650	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	
651-750	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	
751-870	0.2	0.3	0.3	0.4	0.2	0.3	0.2	0.3	
871-1000	0.4	0.5	0.6	0.7	0.3	0.4	0.5	0.6	

Incremental Tap Loss (dB)									Notes
Freq (MHz)	2/4-W Coax		8-W Coax		2/4-W Twisted Pair		8-W Twisted Pair		5 6
	Avg	Max	Avg	Max	Avg	Max	Avg	Max	
5-50	0.3	0.4	0.1	0.2	0.1	0.2	0.1	0.2	
51-550	0.6	0.7	0.4	0.5	0.3	0.4	0.4	0.5	
551-650	0.7	0.8	0.4	0.5	0.4	0.5	0.4	0.5	
651-750	0.8	0.9	0.6	0.7	0.5	0.6	0.4	0.5	
751-870	0.9	1.0	0.7	0.8	0.6	0.7	0.5	0.6	
871-1000	0.9	1.2	1.1	1.3	0.6	0.7	0.6	0.7	

Notes:

1. Subtract 1 dB from the "tap only" return loss specification to determine the typical return loss performance for the tap/PDU combination.
2. Approximate external PDU dimensions when installed in tap housing.
3. Overall dimensions with PDU installed, not including strand clamp.
4. Incremental Insertion Loss is the additional insertion loss (through loss) that the tap/PDU combination will exhibit. It is added to the "tap only" insertion loss to determine total tap/PDU loss.
5. Incremental Tap Loss is the additional tap loss (input to tap port) that the tap/PDU combination will exhibit. It is added to the "tap only" tap loss to determine total tap/PDU loss.
6. The "Max" specification for incremental loss applies to ≥95% of tap/PDU combinations.

Please see the data sheets of individual Scientific-Atlanta Multimedia Taps for the "tap only" specifications referred to on this page.

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Specifications, Cont'd

Standards Compliance
<i>Scientific-Atlanta PDUs meet or exceed the following industry standards:</i>
FCC
<ul style="list-style-type: none"> • Part 76 Emissions
European
<ul style="list-style-type: none"> • EU EN60065 Safety • EU 50083-2 Emission
Underwriters Laboratories
<ul style="list-style-type: none"> • Standard 1697
National Electrical Code
<ul style="list-style-type: none"> • Class 2 circuits • Twisted-Pair Connection: 22 to 24 AWG conductor capable

Ordering Information

Description	Part Number
2/4-Way Coaxial-Drop Powering PDU	738447
8-Way Coaxial-Drop Powering PDU	738448
2/4-Way Twisted-Pair Powering PDU*	738445
8-Way Twisted-Pair Powering PDU*	738446
PTC Assembly, 1 bag of 100	592049
*Note: Twisted-Pair drop powering PDUs require PTCs that are sold separately.	*



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