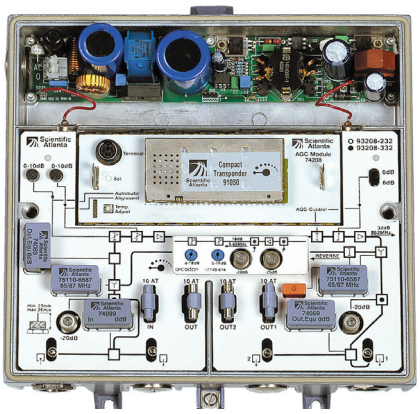
Scientific Atlanta

Compact AGC Amplifier 93208

Description

Scientific-Atlanta's AGC (Automatic Gain Control) Amplifier meets the needs of today's operators advanced networks and services, i.e. ease of installation, flexible operation and reliability. The AGC amplifier type 93208 is an 862 MHz amplifier optimised especially for AGC applications.



Intelligent Processor

The integrated intelligent processor controlled AGC module provides optimal adjustment under all circumstances. Compared to traditional AGC amplifiers' more complex set up and manual adjustment procedures, set up is done by pressing just one button!

The pilot frequencies are selectable and may be altered on site according to the actual channel load – no factory set pilot frequencies!

The AGC Amplifier can measure the output level as an absolute value - not only relative. This means that the AGC amplifier can be set up without using a measuring instrument. If desired, the amplifier may even be set to the desired operational level before it is installed! After that: install - push the button - finished!

Element Management

The AGC amplifier can be configured with a Compact Transponder to enable status monitoring and on-screen presentation of key parameters. Output level, temperature, input remote supply voltage and internal DC supply voltage as well as AGC status are such key parameters. An alarm generated by the element management system enables the operator to detect failures even before visible to the subscribers.

Besides serving as an AGC amplifier, the unit can accurately monitor the level of a carrier within the forward frequency band. The frequency of the carrier may be freely changed.

Features

- Push one button only for extremely fast and easy adjustment
- GaAs-FET technology for superior performance and improved longetivity
- Free selectable pilot tone frequencies. Pilot tone from generator or analogue TV carrier
- Accurate level measurement of the freely selectable carrier
- Optional status monitoring and control
- Element Management measuring of absolute levels on analogue carriers eliminates the need for measuring instruments for set up and allows individual channel monitoring
- Easy plug-in mounting of transponder (no change of lid nor use of test points for cable connection)
- Integrated 3-state reverse switch (on/-6 dB/off) allows each reverse input to be isolated for noise and ingress
- The Proactive Power Supply Monitor locates failures prior to network outages for improved reliability

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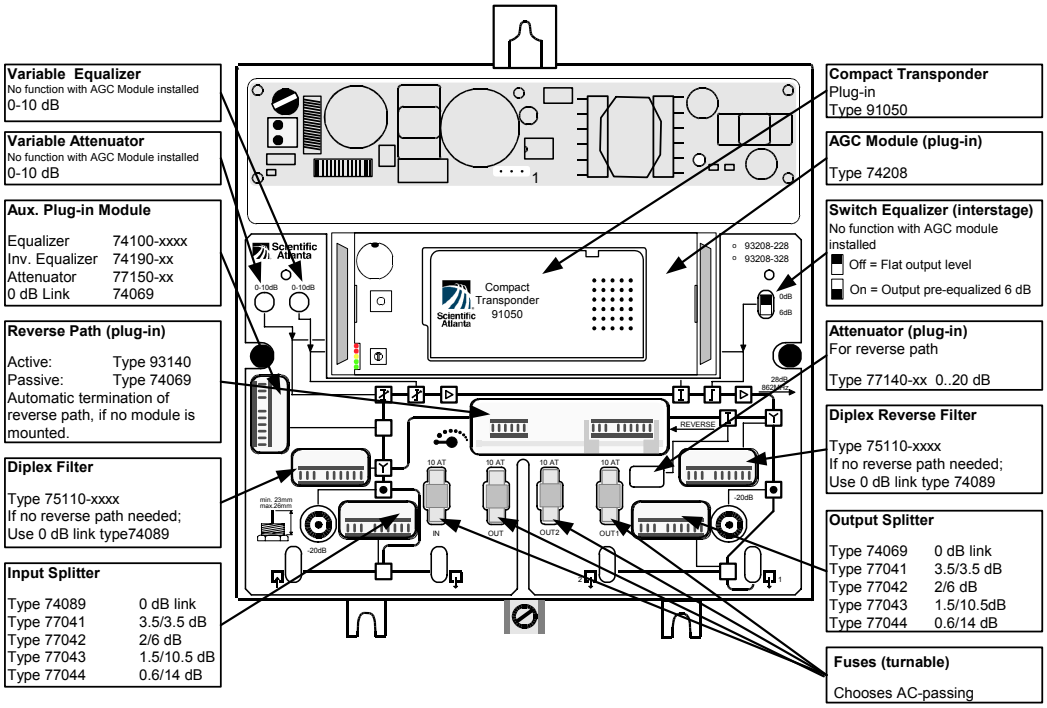
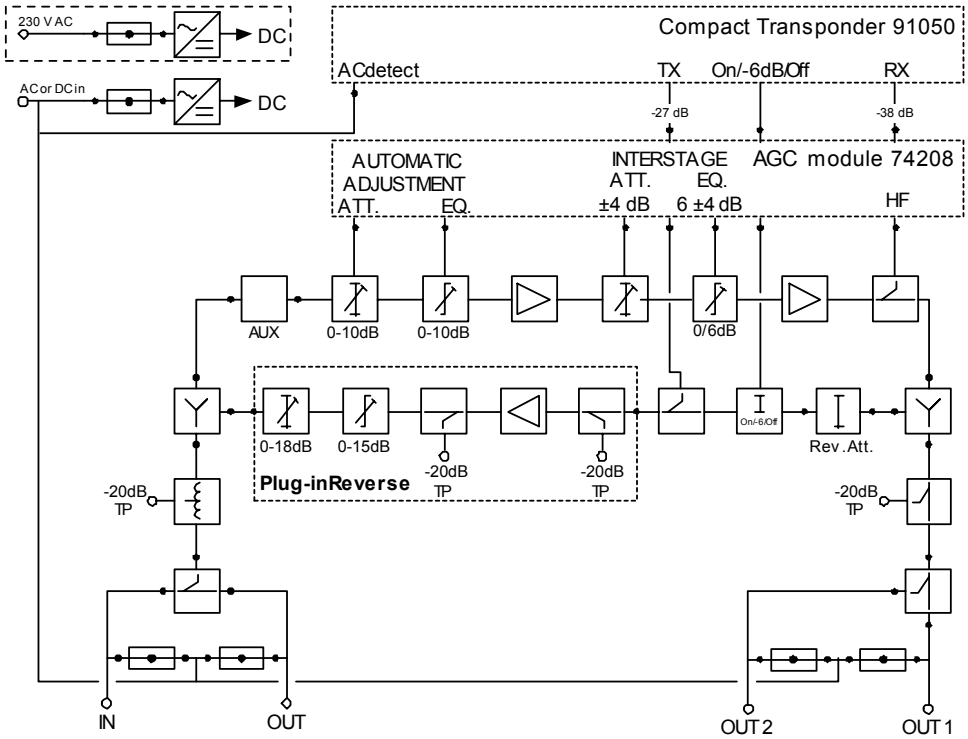
Overview 93208



Block Diagram 93208



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Specifications

General Performance	Units	93208-x28	93208-x32	Notes
Forward path	MHz	47 - 862		1
Reverse path		5 - 65		1
Gain	dB	28	32	
Frequency response	dB	± 0.5		
AGC control range	dB	± 4		
Output level stability at -20° to +55°, dev. from nom. level, typical	dB	± 0.4		
Pilot frequency range	MHz	47 – 862		
Pilot level, output	dBµV	85 – 110.0		
Pilot tone type		Pilot tone generator or analogue TV-carrier with sync.		
Attenuator, variable	dB	0 – 10		
Equalizer, variable	dB	0 - 10		
Pre-equalizer, interstage	dB	6		2
Attenuator, plug-in, in 1 dB steps, reverse input	dB	0 - 20		
Input aux. socket	dB	for extra plug-in		
Testpoint, input, bi-directional	dB	-20 ± 1.5		
Testpoint, output, directional	dB	-20 ± 1.5		3
Number of outputs		1 or 2		4
Input signal loop-through		plug-in		
Input loop-through attenuation	dB	< 1.0		
Return loss, 5 – 65 MHz	dB	20		
Return loss, 47 – 862 MHz		20 red. 1.5/octave		
3-state reverse switch, Element Management controlled	dB	on / -6 / off		
CTB ≥ 60 dB, EN 50083-3, 4.2.3	dBµV	112		5
CSO ≥ 60 dB, EN 50083-3, 4.2.4	dBµV	112		5
Noise figure	dB	8	7	
Measuring accuracy absolute output level, typically	dB	0.4		6
Electrical				
Supply voltage, mains powered, 230 V version	V AC	187 – 250		
Supply voltage, mains powered, 115 V version	V AC	90 - 146		
Remote (coax line), 65 V version	V AC	24 - 65		
Remote (coax line), 90 V version	V AC	35 - 90		
Power consumption mains powered	W	< 28		
Power consumption remote powered	W	< 29		
Max. current, local insertion	A AC	7		
Max. current, power insertion	A AC	10		
Hum modulation, at max. current	dB	< - 65		
Environmental				
Operating temperature range	°C	-20 to +55		
Mechanical				
Connectors, input, output		PG 11 (5/8”)		
Connectors, test points		F		
Housing dimensions, excl. mounting fittings	mm	230 W x 220 H x 95 D		
Emission, EN 50083-2	dBpW	< 20		
Screening efficiency	dB	> 85		
Enclosure category		IP 66		
Weight	kg	4.3		

All specifications are measured with 0 dB link 74089 at the filter connectors.

Notes:

1) Frequency range depends on the diplex filters
2) Switchable to 0 dB in manual mode without AGC module installed
3) Can be used as reverse signal injection point
4) Two outputs with optional plug-in splitter or directional coupler
5) CTB/CSO is measured with 6 dB pre-equalizer, EN 50083-3.2.
6) Deviation from nominal level independent of temperature

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Ordering Information

Compact AGC Amplifier*	Part Number
93208 Compact AGC Amplifier, 862 MHz (28 dB gain, 230 V)	A93208.10228
93208 Compact AGC Amplifier, 862 MHz (28 dB gain, 65 V)	A93208.10328
93208 Compact AGC Amplifier, 862 MHz (32 dB gain, 230 V)	A93208.10232
93208 Compact AGC Amplifier, 862 MHz (32 dB gain, 65 V)	A93208.10332

**115 V and 90 V versions are available on request*

Required and Optional Accessories for Compact AGC Amplifier 93208

Below tables contain ordering information for required and optional accessories that are not included in the delivery. Please consult your account representative or customer service for ordering assistance.

*The following **Required Accessories** must be ordered separately:*

Required Accessories	Part Number
Plug-in Pads (attenuators) - available in 1.0 dB steps from 0 to 20 dB • 1 required for reverse input	 A77140.00xx
Plug-in Diplex Filter • 2 required, xx/yy MHz split	 A75110.10xxyy
Plug-in at input - 1 required, chose from below • 1 link 0 dB at input • 1 splitter x/y dB at input	 A74089.10 A7704x.10
Plug-in at AUX - 1 required, chose from below: • 1 link 0 dB • 1 attenuator x dB • 1 equalizer 450/606/862 MHz x dB • 1 inverse equalizer x dB	 A74069.10 A77150.100x A74100.10xxx A74190.10xx
Plug-in AGC module • 1 required for AGC operation	 A74208.10
Plug-in Reverse Amplifier • 1 required (passive reverse)	 A93140.10xxx A74069.10
Plug-in at output - 1 required, chose from below: • 1 link 0 dB at output • 1 splitter x/y dB at output	 A74069.10 A7704x.10
For more information on the above, see the “Compact Amplifier and Node Accessories” (P/N: A541441) data sheet.	

*The following **Optional Accessories** may be ordered separately:*

Optional Accessories	Part Number
Plug-in Compact Transponder Voltage Lock-Out Module, 24 or 35 V *	A91050.11 A75018.00xx
For additional information on the Compact transponder, see the “Compact Transponder” (P/N: A541381) data Sheet. *The 35 V Lock-Out Module is standard with all 90 V Power Supplies.	

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