

MDA1240 DISTRIBUTION AMPLIFIER



- Downstream frequency range up to 1218 MHz
- Upstream frequency range up to 204 MHz
- Optional connection to Monitoring System
- Automatic ingress management by the RSW module
- Cost-effective solution
- Replaceable diplex kilter
- Alignment by JXP modules

GENERAL DESCRIPTION

A member of our popular MDA compact product family suited to the DOCSIS 3.1 frequency band. Beyond its extended bandwidth the device provides all the advantages of the predecessor type, like the low power consumption, the high output RF level and the very easy alignment. Further the return path chain of the amplifier contains a universal expansion socket, which can take in an HMS transponder, an auxiliary filter or the switching module of our cost effective network management solution called RIB.

TECHNICAL SPECIFICATIONS

Forward path RF parameters

Amplifier type	GaAs PP hybrid
Gain [dB]	40±1
Frequency range [MHz]	105...1218, 258...1218
Equaliser breakpoint frequency [MHz]	1006, 1218 ⁽¹⁾
Input RF attenuator range [dB]	0...20 ⁽²⁾
Input RF equaliser range [dB]	0...18 ⁽³⁾
Interstage RF attenuator range [dB]	0...20 ^{(2) (4)}
Interstage RF equaliser range [dB]	0...18 ^{(3) (4)}
Flatness [dB]	±0.75
Return loss (40MHz -1.5dB/octave) [dB]	>18
RF testpoint attenuation [dB]	20±1
Output level at 112 SC-QAM channels with 12 dB tilt and PreBER<10 ⁻⁹ [dBµV]	108
CTB [dB]	-66 ⁽⁵⁾
CSO [dB]	-65 ⁽⁵⁾
CXM [dB]	-65 ⁽⁵⁾
Noise-to-power ratio (NPR) maximum / Dynamic range of NPR > 42 [dB]	54 / 20 ^{(6) (7)}

Specifications are subject to change without notice!

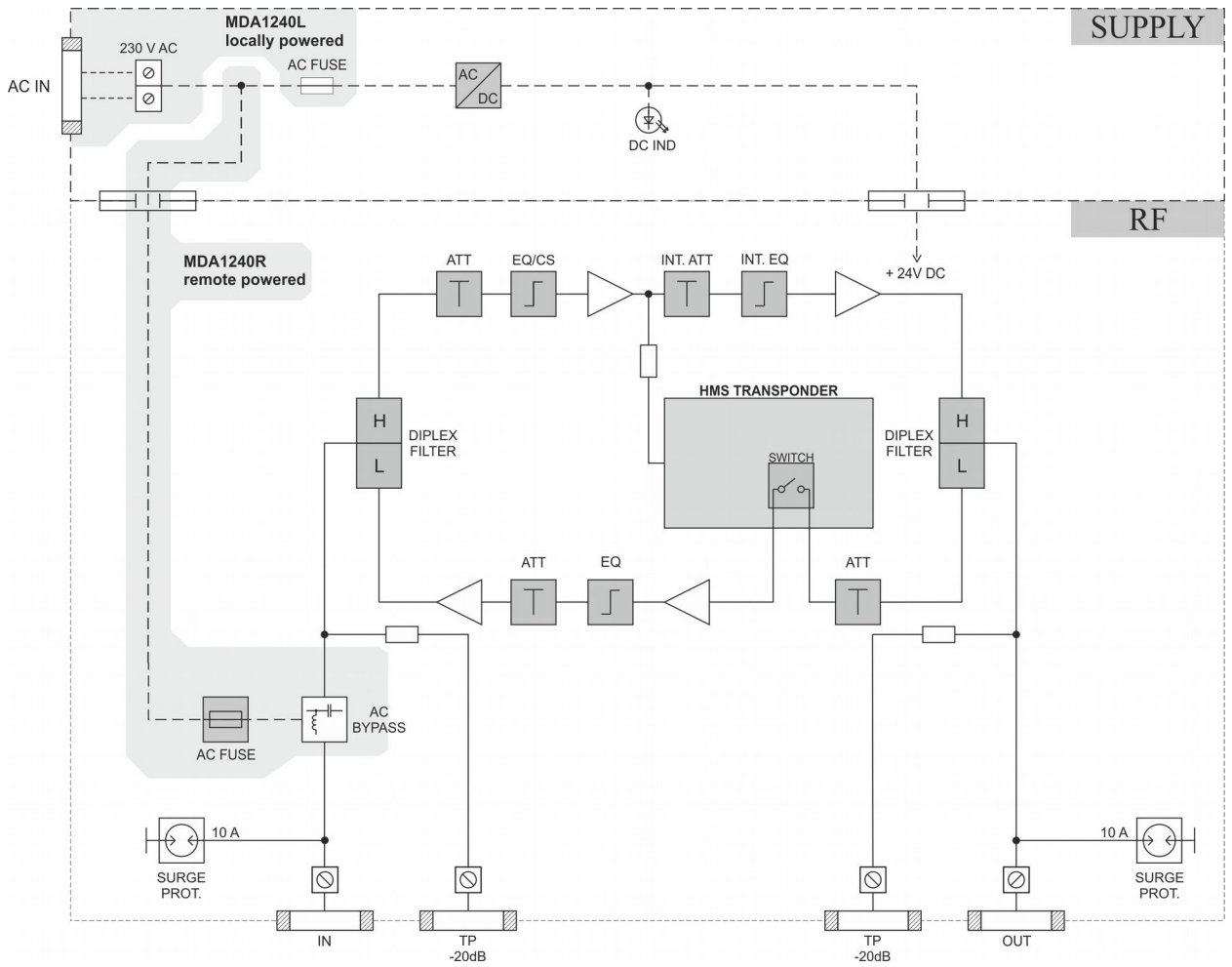
Reverse path parameters

Gain [dB]	27±1
Frequency range [MHz]	5...204
Diplex filter [MHz]	85/105, 204/258
Input RF attenuator range [dB]	0...20 ⁽²⁾
Interstage RF attenuator range [dB]	0...20 ⁽²⁾
Interstage RF equaliser range [dB]	0...12 ⁽²⁾
Flatness [dB]	±0.5
Input return loss (40MHz -1.5dB/octave) [dB]	>18
RF testpoint attenuation [dB]	20±1
Ingress control switch (RSW) states	0dB/-6dB/-50dB
Output level at 24 SC-QAM channels with flat tilt and PreBER<10 ⁻⁹ [dBµV]	106
Noise-to-power ratio (NPR) maximum / Dynamic range of NPR > 36 [dB]	60 / 34 ^{(8) (9)}

General parameters	MDA1240L	MO1240R
RF connector		„F“
Power supply voltage [VAC]	230±20%	~ 30..65, □ 35...90
Maximum power consumption [W]		12 ⁽¹⁰⁾
Hum modulation [dB]		70
Screening factor [dB]		80
Degree of protection		IP54
Temperature range [°C]		-20...+60
Dimensions [mm]		202x146x80
Weight [kg]		1.5

(1) Breakpoint is defined by the mounted JXP equaliser modules
 (2) Adjustable in 2 dB steps
 (3) Adjustable in 1.5 dB steps in case of breakpoint of 1218 MHz and in 1 dB steps in case of breakpoint of 1006 MHz. The maximal value is limited to 12 dB, when breakpoint of 1006 MHz is used
 (4) The sum of the interstage attenuator and equalizer value mustn't exceed 20 dB
 (5) 42 dBmV at 1218 MHz, flat tilt, 99 analog channels
 (6) Measured with flat full spectrum load between 85 and 1218 MHz
 (7) NPR max at TCP = 60 dBmV
 (8) Measured with flat full spectrum load between 5 and 204 MHz
 (9) NPR max at TCP = 53 dBmV
 (10) Without HMS transponder. In case of mounted transponder the maximal power consumption is 13 W.

BLOCK DIAGRAM



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ORDERING INFORMATION _____

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Power supply type	
L	Local powering
R	Remote powering

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Alignment mode	
A	Standard JXP plug-in modules

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Type of the diplex filter	
85	Pluggable 85/105MHz diplex filter
204	Pluggable 204/258MHz diplex filter

Option	Required modules	Ordering codes
Monitoring option	1pc NMT-COM5C	NMT-COM5C
Return path module option (HPF filter)	1pc HPF20	HPF20
Return path module option (RIB) - preliminary!	1pc RIB	RIB

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