

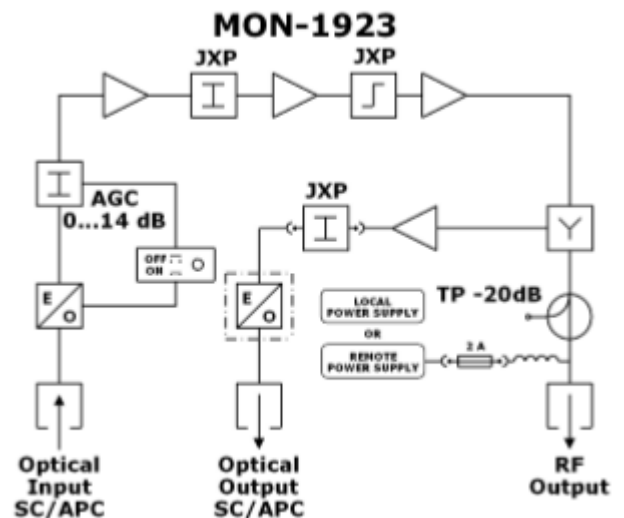
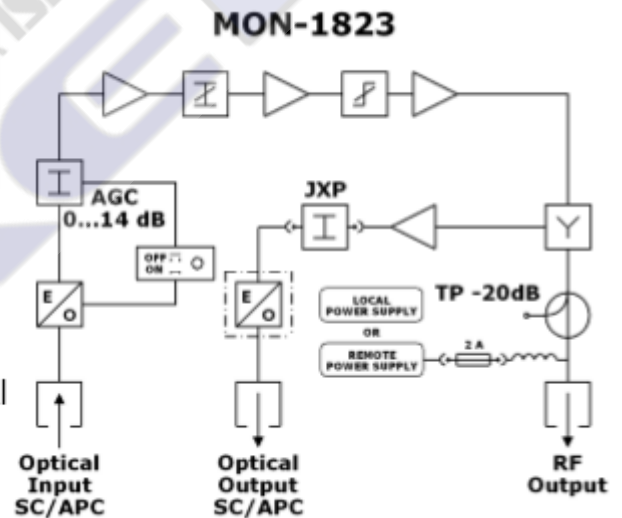
**MON - 1x23** is a modern two-way optical node designed to operate in HFC networks, which use DOCSIS technology. The node is equipped with an automatic gain control system – AGC. This system reacts to the value of the optical power at the input of the receiver and corrects it in order to provide a constant, previously set output signal.

**MON-1x23** may be equipped with one of the available return path optical transmitters. Depending on individual needs, it can either be the module with FP, DFB or CWDM laser.



**Block diagram – MON-1x23**

- Designed to operate in HFC and FTTB networks
- 1 GHz frequency range
- Easy configuration – adjustable and universal plug-in modules.
- Built-in AGC (Automatic Gain Control)
- 3-stage LED indication of input optical power level
- Optical transmitter realized as a plug-in module
- Local or remote powering
- Metal, die-cast housing



TYPE		MON-1823	MON-1923	
<b>OPTICAL PARAMETERS</b>				
Input optical power range	dBm	-9...+1		
AGC range	dBm	-6...0		
Optical return-loss	dB	≥40		
Optical input wave length	nm	1100-1650		
Max. input level (without damaging of photodetector)	dBm	+3		
Indicator of optical power	/	Three color LED diode: - orange: $P_{IN} < -6$ dBm - green: $-6 < P_{IN} < 0$ dBm - red: $P_{IN} > 0$ dBm		
Noise current density	pA/(Hz) <sup>1/2</sup>	< 7		
Optical connector	/	SC/APC		
Return path transmitter	/	plug-in module		
<b>FORWARD PATH</b>				
Frequency range	MHz	ver1: 47...1006 ver2: 87...1006 ver3: 110...1006		
Gain characteristic flatness	dB	± 0,75		
Max. output level – DIN 45004B	dBμV	123		
Maximum output level (CENELEC 42) 6 dB slope, 3,5% OMI - CTB ≤ 60dBc - CSO ≤ 60dBc	dBμV dBμV	109 109		
RF Output Stability in AGC range	dB	± 1,0		
Interstage attenuator	dB	Variable 0...20	Fixed JXP 0...20	
Interstage slope	dB	Variable 0...20	Fixed JXP 0...20	
Output Test Point	dB	-20		
Return loss at RF output	dB	≥ 18 (40 MHz) -1,5 dB / oct		
<b>RETURN PATH</b>				
Frequency range	MHz	ver1: 5...30 ver2: 5...65 ver2: 5...85		
Return gain	dB	20		
Gain characteristic flatness	dB	± 1,0		
Level adjustment	dB	Variable 0...20	Fixed JXP 0...20	
<b>OTHER</b>				
Power supply (depending on the type) Local Remote	V AC / Hz V AC / Hz	180...253 / 50-60 24...65 / 50-60		
Power consumption	W	9		
Output connector	/	F		
Protection class	/	IP54		
Work temperature range	°C	-20...+ 60		
Weight	kg	1,1		
Dimensions	mm	107x155x75		
<b>RETURN OPTICAL TRASMITTER TYPE</b>		<b>OTBM-1310FP</b>	<b>OTBM-1310DFB</b>	<b>OTBM-xxxxDFB</b>
Optical wave length	nm	1310	1310	1550 / CWDM *
Output optical power	dBm/mW	0/1	3/2	3/2
Laser type	/	FP	DFB	DFB
Optical connector	/	SC/APC		