

Modelo: M-SLE100K	ESPECIFICACIONES TECNICAS	
Fecha: 2013		
Hojas 1 de 1		
Asunto	Line Extender 1GHz	

Starline Line Extender

SLE87*-*



Motorola's STARLINE® series line extender, model SLE87*-* , is a high performing and reliable bi-directional amplifier solution for today's advanced HFC networks. The SLE87*-* has been designed to optimally balance performance, functionality, and cost effectiveness. This two-way capable single active output amplifier offers high gain, high output levels, ergonomic plug-in accessories, leading distortion performance, multiple diplex filter options, and an optional second output via a modular splitter or directional coupler.

The SLE87*-* also allows future optional features such as automatic gain control via the SLE-ADU* and SLE-BODE plug-ins, ingress control switching, and status monitoring.

The SLE87-* is a cost-effective addition to Motorola's line of high performing RF amplifier products for use in today's advanced HFC networks.*

The SLE87*-* has a forward bandwidth of 870 MHz and provides minimum full gains of either 35 dB or 40 dB, depending on the model selected. If the optional automatic gain control is selected, the SLE87*-* provides operational gains of 28 dB or 32 dB. The amplifier deploys enhanced Gallium Arsenide hybrid technology that provides improved distortion performance in CTB and CSO performance over traditional Gallium Arsenide technology. The amplifier is easily set-up via ergonomically designed modular gain and equalization controls. It uses common Motorola STARLINE amplifier accessories such as the SFE Forward Equalizer, SRE Return Equalizer, and the JXP-*B Breakaway Attenuators. The SLE87*-* provides an interstage slope of 8 dB and can be configured for multiple frequency splits. The amplifier comes standard with an active return path that provides 19 dB of station gain. To add to its reliability and performance, the SLE87*-* is housed within a chromated aluminum die-cast housing.

BENEFITS INCLUDE:

- 870 MHz E-GaAs power doubling technology – the same as featured throughout Motorola's STARLINE amplifier products
- 35 dB and 40 dB forward gain models without SLE-BODE control
- 28 dB and 32 dB forward operational gain with optional SLE-BODE control
- Ergonomic modular plug-ins for gain and equalization control
- Reverse path gain of 19 dB
- 65/85 MHz and 42/54 MHz frequency splits can be supported via modular diplex filters – additional frequency splits may be supported
- Supports Automatic Gain Control via separate modular plug-in
- Internal modular splitter (SP) is available for a second output
- Modular Power Supply design for rapid field service
- 10 Ampere continuous AC bypass
- All directional coupler -20 dB test points
- Robust die cast aluminum housing for efficient thermal and environmental performance
- Supports optional ingress control and HMS compliant status monitoring



SLE87⁺-* SPECIFICATIONS

RF PERFORMANCE - Forward

Passband Frequency.....	47 to 870 MHz (Dependent upon Split)
Gain (w/o SLE-BODE) ¹	35 dB or 40 dB (Dependent upon Model)
Operational Gain (w/ SLE-BODE) ¹	28 dB or 32 dB
Noise Figure.....	9 dB (at 870 MHz)
Interstage Slope.....	8 dB (52 to 870 MHz)

Reference Frequency.....	870/550/52 MHz
Output Level(s).....	44 dBmV (at 550 MHz) with 12 dB total slope
Channel Loading.....	79 NTSC Analog
	320 MHz QAM Digital (-6 dB Analog)
CTB.....	75 dBc
CSO.....	75 dBc

Flatness.....	± 1.0 dB $F_{\text{minforward}}$ to $F_{\text{maxforward}}$
Return Loss.....	15 dB

RF PERFORMANCE - Reverse

Passband Frequency.....	5 to 65 MHz (Dependent upon split)
Gain.....	19 dB
Noise Figure.....	6.0 dB

Reference Frequency.....	40 MHz
Output Level.....	41 dBmV
Channel Loading.....	4 NTSC Analog
XM.....	74 dBc
STB.....	82 dBc
SSO.....	77 dBc
Flatness.....	± 0.5 dB $F_{\text{minreverse}}$ to $F_{\text{maxreverse}}$
Return Loss.....	15 dB

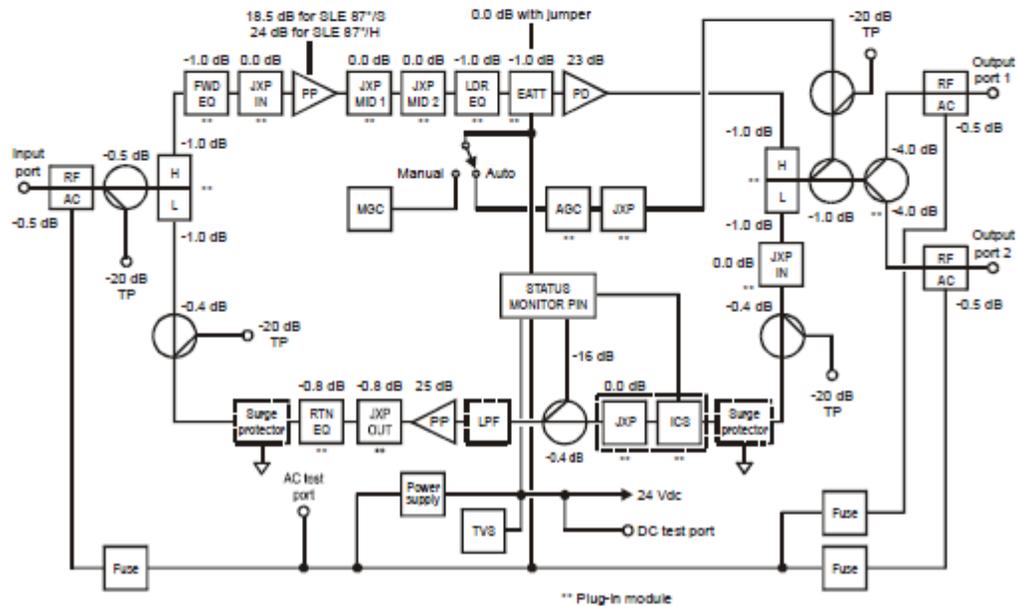
GENERAL

AC Input Voltage.....	38-90 VAC
AC Bypass Current.....	10 A
AC Current Draw ²	
Ⓢ 90 VAC.....	0.59 A
Ⓢ 75 VAC.....	0.65 A
Ⓢ 60 VAC.....	0.70 A
Ⓢ 53 VAC.....	0.74 A
Ⓢ 45 VAC.....	0.80 A
Ⓢ 38 VAC.....	0.92 A
Connector Type.....	5/8-24 UNEF
Operating Temperature.....	-40 to +60 °C (-40 to +140 °F)
Dimensions.....	10.75 in x 8.0 in x 4.5 in (LxWxD)
	273 mm x 203 mm x 114 mm
Weight.....	7.0 lb (3.2 kg)

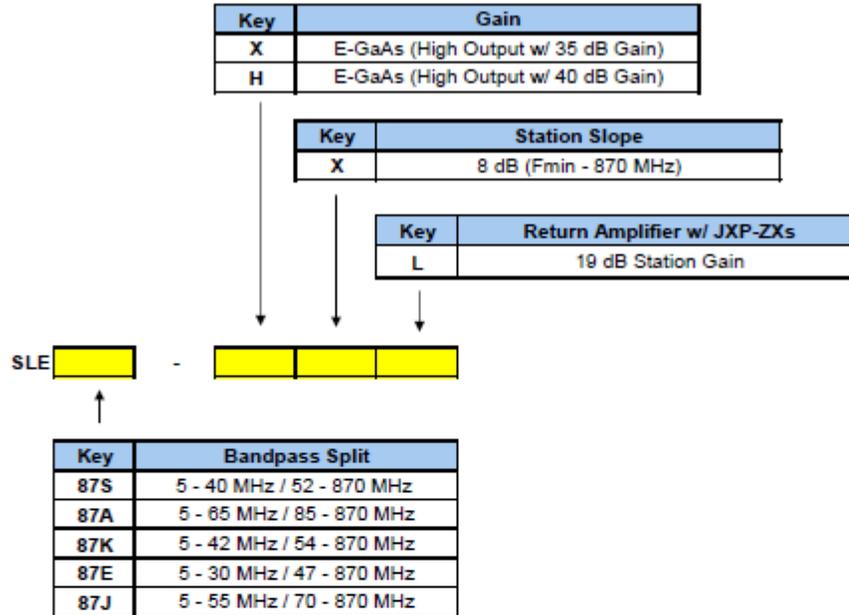
NOTE:

- 1) For future use of the SLE-BODE, in conjunction with the SLE-ADU-* or SLE-TDU, allow for an additional 7 dB of interstage insertion loss for the SLE. This may be accomplished via a JXP-7B (7 dB attenuator).
- 2) Typical performance. Optional AGC, Status Monitoring, and/or Ingress Control Switching will increase stated current draw.

SLE87⁺-* BLOCK DIAGRAM



SLE87⁺-* ORDERING INFORMATION



SLE87⁺-* OPTIONAL ACCESSORIES

Model	Description	Comment
JXP- ⁺ B	Break-Away JXP Attenuator	Available in 1 dB Increments
SFE- ⁺ .*	STARLINE Forward Equalizer	Available in 1 dB Increments
SCS- ⁺ .*	STARLINE Cable Simulator	
SRE- ⁺ .*	STARLINE Return Equalizer	Available in 2 dB Increments
SP	STARLINE Splitter	
DC/ ⁺	STARLINE Directional Coupler	DC/ ⁺ available in 8, 10, or 12 dB Models
SLE-BODE	SLE Bode Equalizer	Required for use with SLE-ADU- ⁺ or SLE-TDU
SLE-ADU- ⁺	SLE Automatic Drive Unit	For Automatic Gain Control of SLE-BODE
SLE-TDU	SLE Thermal Drive Unit	For Temperature Control of SLE-BODE
LL-SLE-HMS- ⁺ / ⁺	LIFELINE HMS Compliant Status Monitor	Requires use of SLE-LID/SM for mounting
SLE-LID/SM	SLE Deep Housing Cover	For use with LL-SLE-HMS- ⁺ / ⁺ Transponder
ICS-II	Ingress Control Switch	Requires use of LL-SLE-HMS- ⁺ / ⁺ for Operation

