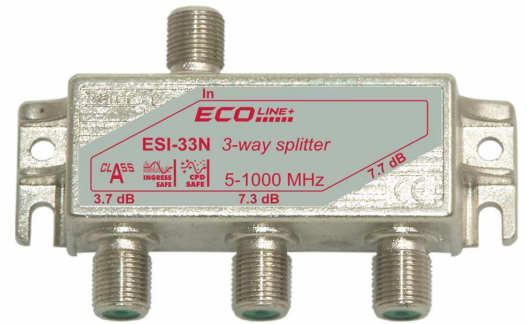


3-way splitter

ESI-33N

Features:

- Cenelec Class A screening effectiveness
- ModemSafe® secured
- High return loss
- Excellent intermodulation distance
- SCTE compliant F-connectors
- Easy to install: compact and stackable in-line model
- 7 mm ground space to fit cable underneath
- IngressSafe® circuit
- NiSn plated housing for CPD reduction



Description

The Ecoline+ series of Splitters & Taps have been especially developed to meet the needs of the European market and distinguishes itself from any other range in the business. With the Ecoline+ a new standard of splitters and taps has been set fully equipped with a number of innovative technologies. The products within the Ecoline range excel both in electrical and mechanical performance. It is a really complete series, containing all housing types that could be found in the previous Ecoline and Ruby-line series. It has an easy to install design with a compact housing of which some models are stackable. All F-connector contacts meet the SCTE standards (ANSI SCTE 02 2006) and are of unequalled quality. The material of the inner spring has been designed specially for connecting coax cables with an inner core of 0.56 to 1.20 mm, even when varying thicknesses are connected after each other. The intermodulation performance, which is an important factor in high level return path signals, has been greatly improved through a newly developed ferrite and specially designed circuits. The high frequency shielding exceeds Class A requirements (CENELEC EN-50083-2:2001) over the whole frequency range from 5 MHz to 1000 MHz.

Next to that there are additional options as Solder back or T/G back cover, round F-pin, epoxy sealed F connectors, Ingress Safe, NiSn plating etc. Extensive research in a number of labs worldwide has shown that NiSn plating is the best plating material for products used in the CATV networks. The most important feature is the prevention against Common Path Distortion (CPD), the nightmare of every Cable operator.

Specifications

V3 aug 22, 2007

	Port	Range	Min	Typical	Max	Units	Remark	Margin
Frequency Range	In/Out		5		1000	MHz		
Connectors				F-female				
Equipment Approval				CE				
Ingress Safe	Out			3				
Material	Housing			NiSn plating				
	F-spring			Silver plated				

Ordering Information

ESI-33N	3-way splitter	Article number:	10430091
EGB-01	Accessory	Article number:	10430109
TESI-33N	3-way splitter/unb.	Article number:	10430097

Modem Safe



All Ecoline+ products are equipped with Modem Safe® technology. Modem Safe® is a highly effective surge protection solution. It blocks high level surge pulses and unwanted DC voltage, thus protecting sensitive equipment. Besides the blockage of these surges and voltages, it also prevents the internal ferrites becoming magnetized. When ferrite material is magnetized, the intermodulation behaviour becomes worse resulting in an increase of passive intermodulation products. Thanks to the Modem Safe® circuitry, the intermodulation behaviour of the Ecoline-splitters is excellent and will not deteriorate over time like common splitters.

Ingress Safe



Another exiting new technology is called Ingress Safe®. Due to a phenomenon called: phase cancellation, the ingress levels in the CATV network can be drastically reduced. Our Ingress Safe® is an unique and patented Technetix technology to reduce subscriber ingress significantly. As there is correlation between the frequency and phase of ingress signals with common origin from two adjacent subscribers we can use this phenomenon to reduce ingress near to the source. In a common splitter phase related ingress will add up with approximately $13\text{Log}(n)$ to $17\text{Log}(n)$ where n is the number of ports. This means the addition of ingress reduces the C/N between 3.9 dB to 5.1 dB in a 2-way splitter. Each Ingress Safe® model is fitted with integrated ingress reduction. A 180 degree phase shifting device is added to the output of the splitter. This means that the ingress from one subscriber is added in the splitter out-of-phase with the ingress from a second subscriber, thereby cancelling each other out. Measurements show that ingress safe units in the distribution network can improve the carrier to noise ratio up to 8 dB.

	Port	Range	Min	Typical	Max	Units	Remark	Margin
Insertion Loss	In -> Out 1	5 MHz < F < 10 MHz	3.2	3.6	4.0	dB		
		10 MHz < F < 470 MHz	3.0	3.4	3.8	dB		
		470 MHz < F < 862 MHz	3.3	3.7	4.1	dB		
		862 MHz < F < 1000 MHz	3.5	3.9	4.3	dB		
	In -> Out 2	5 MHz < F < 10 MHz	6.3	6.9	7.5	dB		
		10 MHz < F < 40 MHz	6.3	6.8	7.3	dB		
		40 MHz < F < 470 MHz	6.4	6.9	7.4	dB		
		470 MHz < F < 862 MHz	6.6	7.3	8.0	dB		
	In -> Out 3	862 MHz < F < 1000 MHz	7.1	7.8	8.5	dB		
		5 MHz < F < 10 MHz	6.7	7.3	7.9	dB		
		10 MHz < F < 40 MHz	6.7	7.2	7.7	dB		
		40 MHz < F < 470 MHz	6.8	7.3	7.8	dB		
Return Loss	In/Out	470 MHz < F < 862 MHz	7.0	7.7	8.4	dB		
		862 MHz < F < 1000 MHz	7.5	8.2	8.9	dB		
		5 MHz < F < 10 MHz	19			dB		
		10 MHz < F < 40 MHz	21			dB		
Isolation	Out -> Out	40 MHz < F < 1000 MHz	21			dB	1	
		5 MHz < F < 10 MHz	22			dB		
		10 MHz < F < 65 MHz	32			dB		
Screening Effectiveness	-	65 MHz < F < 1000 MHz	26			dB	1	
		5 MHz < F < 300 MHz	85	95		dB	3	
Intermodulation p+q (min)		300 MHz < F < 470 MHz	80	90		dB	3	
		470 MHz < F < 1000 MHz	75	85		dB	3	
		-	-			dB	2	
					115			

Remarks	
1	F > 40 MHz -1.5 dB/oct
2	Two carriers (50 & 55MHz), out to in, @ 120dBμV, after 10 pulses (25V/1,2μS rise time/500μS duration) at all ports Two carriers (50 & 55MHz), out to in, @ 120dBμV, after 1 pulse 1KV (1,2μS risetime/50μS fall time) at Input.
3	Transfer impedance method according IEC 60728-2 (5-30 MHz) Absorbion clamp method according IEC-60728-2 § 4.4 (30-1000 MHz)