



- Two output customer premises amplifier
- Unity gain amplification of downstream and upstream signals
- Direct DC powered through dedicated port
- Input Modem Safe® surge protection
- Complies with EN Class A+ screening requirements
- Excellent RF specification



### Overview

The HDU-200 is a two-output high quality in-home amplifier with an active return path for systems with a 65/85 MHz band split.

Designed to handle high channel loading with excellent intermodulation specifications, this amplifier offers 'future proofing' for the transfer of digital TV channels.

Unity amplification gain in both the downstream and upstream ensures that signal levels are maintained and are consistent for the home installation.

Dual DC powering options ensures that the unit can be effectively installed in a variety of in-home configurations. Modem Safe technology protects the amplifier and all connected devices against surge pulses.

The high port to port isolation and excellent spurious suppression capabilities prevent high level modem signals interfering with radio or TV signals.

### Technetix Modem Safe

Technetix Modem Safe is a highly effective surge protection solution for sensitive network and in-home CPE. This technology is based on passive circuits and is not reliant on discharge tubes, therefore extending the lifespan of the solution.

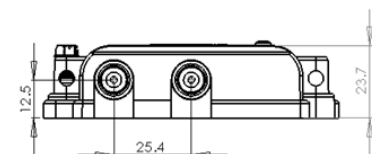
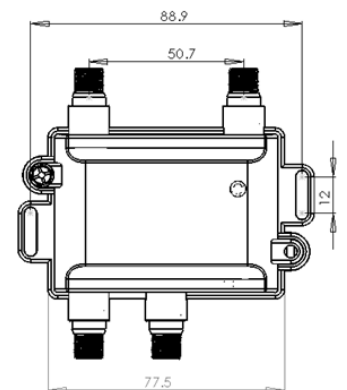
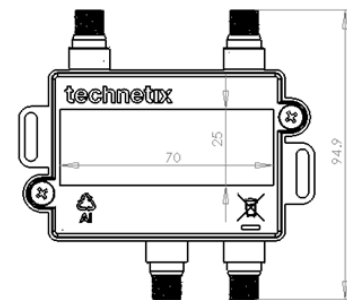
- Blocks high and low voltage pulses and unwanted DC voltages
- Prevents internal ferrites within the product from becoming magnetised (avoiding deterioration in the performance of CPE)
- Decreases reported faults, improving customer service and reducing truck rolls.

## Specifications

		MHz	Min	Max	Typ
Frequency range (MHz)	Forward path	85 - 1006			
	Return path	5 - 65			
Return loss (min) (dB)	Net	5 - 65	18.0		
		85 - 1006 <sup>1</sup>	18.0		
Isolation (min) (dB)	Port to port	5 - 15	20.0		
		15 - 65	34.0		
		85 - 1006	20.0		
Ripple (dB)	Forward path	85 - 105		+/-1.5	
		105 - 120		+/-0.75	
		120 - 1006		+/-1.0	
	Return path	5 - 60		+/-0.5	
		60 - 65		+/-0.75	
Gain (dB)	Forward path	85 - 120	-1.0	1.5	0.5
		120 - 1006	0	2.0	1.0
	Return path	5 - 60	-1.0	1.0	0
		60 - 65	-1.5	1.5	0
Noise figure (dB)	Forward path	85 - 120		9.0	8.5
		120 - 1006		9.0	8.0
	Return path	5 - 65		18.5	
Intermodulation (dBc)	Return path <sup>2</sup>	IM-2 (@ 115 dBμV input)	-75.0		
		IM-3 (@ 115 dBμV input)	-58.0		
(dBmV)	Signal to 2 <sup>nd</sup> & 3 <sup>rd</sup> order <sup>3</sup> distortion	Upstream level +58 dBmV			-45.0
Channel loading (dB)	CTB	85 - 1006	65.0		
	CSO	85 - 1006	65.0		
Spurious (dB) <sup>8</sup>		85 - 1006		-100.0	
Group delay (nS)	Forward path <sup>4</sup>	85 - 91.5		20.0	
	Return path <sup>5</sup>	91.5 - 1006		15.0	
Screening efficiency	Class A	5 - 30 <sup>9</sup>	-95.0		
		30 - 300 <sup>10</sup>	-95.0		
		300 - 470 <sup>10</sup>	-90.0		
		470 - 1006 <sup>10</sup>	-85.0		
Impedance (Ω, typ)			75		
Temperature range (°C)	Operating		+5°C to +30°C		
Power consumption (max) (W)			< 3.5		
Supply voltage DC (VDC)			6.5		
Galvanic isolation 2120 V DC (mA) <sup>7</sup>	Inner conductor		0.7		
Galvanic isolation 230 V AC (mA RMS) <sup>7</sup>	Inner conductor		8.0		
Input surge conformance <sup>6</sup>	Net		1 kv 1.2/50μs		
Connectors	Net		F-female		
	Port 1,2		F-female		
	Power		F-female		
Housing	Material		Aluminium		
	Plating		Alocrom 1000, white liquid paint		
Equipment approval			CE		

## Remarks

- F > 40 MHz -1.5 dB/oct
- IM-2 standard two tone test, IM-3 standard three tone test (DIN45004)@ 115 dBμV at input
- For 8 channels at 6.4 Mhz wide 64 QAM
- dF= 4,433 MHz
- dF=2 MHz
- Modem Safe circuit. IEC-1000-4-5 level 2: 1KV pulse (rise time 1.2 μS/ fall time 50 μS). No degradation allowed.
- IEC-60728-11§10 / EN 50083-1/A1 §9 Safety Requirement: 2120 VDC T≥ 1 minute, I ≤ 0,7 mA, 230 VAC I ≤ 8,0 mA RMS
- F1+F2 w.r.t. F1 and F2 @ 115 dBμV at input port, after 10 pulses 25Vdc (rise time 1,2μS /500μS duration) at RF all ports
- Coupling unit method according IEC 60728-2 § 4.4 (5-30 MHz)
- Absorption clamp method according IEC-60628-2 § 4.4 (30-1006 MHz). Unit complies with CE EN50083-2 class A



## Ordering information

Item Name	Article number
HDU-200	19013808