

## SQZ-1xx 1.8 GHz double galvanic isolated wall outlets

- Single output, fully isolated wall outlets
- 'Twist and Lock' data / TV diplexer option
- Modem Safe® surge protection
- Outstanding consistent screening efficiency through patented cable clamp design
- DOCSIS 4.0 compatible
- Terminated and loop-through available



### Overview

The Technetix SQZ range of wall outlets accommodates all DOCSIS 4.0 needs with excellent performance up to 1.8 GHz.

The design of this outlet facilitates a smooth future upgrade to a 1.8 GHz network. If different downstream/upstream divisions are required, the diplexer module can be simply replaced.

### Technetix Modem Safe®

Technetix Modem Safe® is a highly effective surge protection solution for sensitive network and in-home CPE. Based on passive circuits, the technology does not rely on discharge tubes, 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)
- Drives fewer reported faults
- Improves customer service
- Reduces truck rolls

### Technetix CPD Safe™

Common Path Distortion (CPD) is well known for producing signal interference on the networks. It is caused by electrolytic corrosion or the oxidation of dissimilar metals when in close contact. Technetix CPD Safe™ technology protects against CPD:

- Removes a primary cause of CPD
- Reduces signal interference on the network
- Drives fewer reported faults
- Reduces truck rolls
- Improves customer service

### Outstanding consistent EMC performance

Due to Technetix' patented cable clamp technology, these outlets provide a consistent high level of EMC screening over the products lifetime. Over time, the screening of other wall outlet cable terminations reduces because the dielectric material at the end of the coax gradually creeps under pressure from the cable clamp, thus the contact between the cable screen and the outlet clamp steadily reduces. Inbuilt springs within the Technetix clamp maintain a constant contact between the clamp and the cable screen, even when the cable gradually moves, ensuring consistent excellent EM screening from LTE and other unwanted signals.

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## RF and electrical specifications (wall outlet)

Characteristic	Ports	Frequency range (MHz)	Tap value						Units	Notes
			0(T)	4	8	10	12	16		
Return loss	All ports (Min.)	12 - 20	18	18	16	15	16	18	dB	1
		20-1800	18	18	16	16	16	18	dB	
Insertion loss	Input-Tap (Max.)	12 - 470	0.5	5	9	11	13.2	17.2	dB	
		470 - 862	0.9	5	9	11	13.2	17.2	dB	
		862 - 1006	1.2	5	9	11	13.2	17.2	dB	
		1006 - 1218	1.5	5	9	11	13.2	17.2	dB	
		1218 - 1600	1.7	5.6	10	11.5	13.2	17.2	dB	
		1600 - 1800	1.9	6.1	10	11.5	13.2	17.2	dB	
	Into loop-through (Max.)	12 - 20	-	4.0	2.1	1.6	1.5	1	dB	
		20 - 470	-	4.0	2.1	1.5	1.5	1	dB	
		470 - 862	-	4.2	2.5	2	1.5	1.1	dB	
		862 - 1006	-	4.4	2.7	2.2	1.7	1.2	dB	
		1006 - 1218	-	4.6	2.9	2.6	1.9	1.4	dB	
		1218 - 1600	-	5.3	3.5	3.2	2.6	2.5	dB	
		1600 - 1800	-	5.9	4	3.2	2.6	2.5	dB	
Isolation	Tap-Loop through (tap-out) (Max.)	12 - 15	-	22	20	20	30	30	dB	
		15 - 22	-	22	25	20	30	30	dB	
		22 - 204	-	22	25	25	30	30	dB	
		204	-	22	22	22	25	25	dB	2
		1800		18	18	18	18	18	dB	2
Screening efficiency (EN 50083-2)	Class A+ 10 dB	12 - 20	90						dB	3
		20 - 300	95						dB	
		300 - 470	90						dB	
		470 - 1218	85						dB	
		1218 - 1800	80						dB	
Intermodulation	After 1 kV	All ports	105						dBc	4, 5

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## Electrical performance (wall outlet)

Characteristic		Min	Typ	Max	Units	Notes
Frequency range	All ports	12		1800	MHz	
Connectors	I/P, O/P		Cable clamp			
	Tap		F-female			
Temperature range	Operating	5		45	°C	7
	Storage	-20		75	°C	
	Spec	20		25	°C	
Impedance	All ports		75		Ohm	
Galvanic isolation 2120 VDC	Inner conductor I/P to inner conductor isolated O/P			0.7	mA	6
	Outer conductor I/P to outer conductor isolated O/P			0.7	mA	6
Galvanic isolation 230 VAC	Inner conductor I/P to inner conductor isolated O/P			8	mA	
	Outer conductor I/P to outer conductor isolated O/P			8	mA	

### Notes

1	F>47 MHz -1.5 dB/Oct, Minimum 14 dB
2	Limit follows a linear progression
3	According EN 50083-2
4	Two carriers (60 & 65 MHz), out to TAP @ 120 dBuV, after 10 pulses (25 V), at all ports
5	Two carriers (60 & 65 MHz), out to TAP @ 120 dBuV, after 1 pulse (1k V), at Input from 42 Ohm source impedance
6	IEC-60728-11 §10 safety requirement: 2120 VDC T ≥1 minute
7	Maximum deviation over temperature: +/-0.5 dB insertion loss. +/-2 dB Isolation and return loss

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## RF and electrical specifications (push-on diplexer)

Characteristic	Ports	Frequency range (MHz)	Tap value		Units	Notes
			Min	Max		
Insertion loss	In-TV	12-204	30		dB	
		258		4.4	dB	2
		1218		4.8	dB	2
		1800		5.5	dB	2
	In-data	12-204		3.8	dB	
		258		4.4	dB	2
		1218		4.8	dB	2
		1800		5.5	dB	2
Return loss	In	12-47	18		dB	
		47-204	18		dB	1
		258-1218	14		dB	
		1218-1800	14		dB	
	TV	12-47				
		47-204				
		258-1218	14		dB	5
		1218-1800	12		dB	5
	Data	12-47	18		dB	
		47-204	18		dB	1
		258-1218	14		dB	
		1218-1800	14		dB	
Isolation	Data-TV	12-204	50		dB	
		258-470	22		dB	
		470-1006	22		dB	
		1006-1218	20		dB	
		1218-1800	18		dB	
Screening efficiency (EN 50083-2)	Class A+	12-20	90		dB	
		20 - 300	95		dB	
		300 - 470	90		dB	4
		470 - 1218	85		dB	
		1218 - 1800	80		dB	
Intermodulation			105		dBc	3

### Notes

1	F>47 MHz -1.5 dB/Oct, always <12 dB
2	Limit follows a linear progression
3	Two carriers (60 & 65 MHz), out to in and out to out @120 dBuV, after 10 pulses (25 V), at all ports
4	EMC testing to EN-50083 (5-30 MHz transfer impedance method, 30-1800 MHz absorbing clamp)
5	Return loss of IEC port (TV) only guaranteed when mated with a Technetix manufactured or approved IEC female connector

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## Electrical performance (push-on diplexer)

Characteristic	Min	Typ	Max	Units	Notes	
Frequency range	All ports	12		1800	MHz	
Connectors	I/P		F-Male Push on			
	TV		IEC-Male			
	Data		F-Female			
Impedance	All ports		75		Ohm	

## Ordering information

Item name	Article number	Description
SQZ-100	19012912	1.8 GHz fully isolated terminated wall outlet 0 dB
SQZ-104	19012913	1.8 GHz fully isolated loop through wall outlet 4 dB
SQZ-108	19012914	1.8 GHz fully isolated loop through wall outlet 8 dB
SQZ-110	19012915	1.8 GHz fully isolated loop through wall outlet 10 dB
SQZ-112	19012916	1.8 GHz fully isolated loop through wall outlet 12 dB
SQZ-116	19012917	1.8 GHz fully isolated loop through wall outlet 16 dB
SQZ-100-NCL	19012906	WO 1.8 GHz iso/terminated/diplex-258/ 0 dB / no customer logo
SQZ-104-NCL	19012907	WO 1.8 GHz iso/loop thru/diplex-258/ 4 dB / no customer logo
SQZ-108-NCL	19012908	WO 1.8 GHz iso/loop thru/diplex-258/ 8 dB / no customer logo
SQZ-110-NCL	19012909	WO 1.8 GHz iso/loop thru/diplex-258/ 10 dB / no customer logo
SQZ-112-NCL	19012910	WO 1.8 GHz iso/loop thru/diplex-258/ 12 dB / no customer logo
SQZ-116-NCL	19012911	WO 1.8 GHz iso/loop thru/diplex-258/ 16 dB / no customer logo
SQZ-2-258	19012921	1.8 GHz TV/data 204 MHz - 258 MHz diplex filter / no customer logo