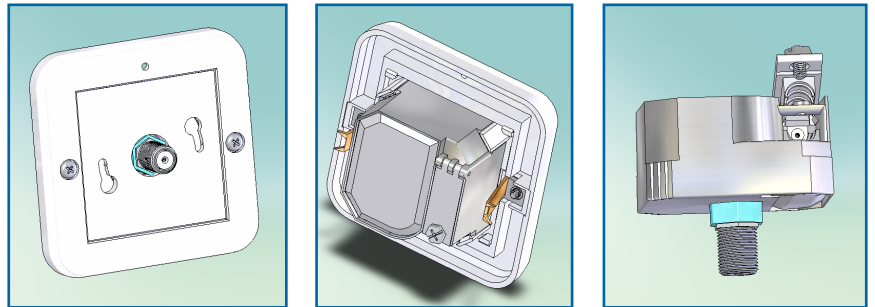


## SQ-401 double galvanic wall outlet, modular isolator with SQF push on unit

- Double galvanic isolation
- Class A screening efficiency
- Low insertion loss
- Suitable for trunk systems
- “Twist and Lock” cover plate
- Several T&L push-on units available



### Overview

The SQ-401 is a new innovative, high quality wall outlet that features not only exceptional high RF performance, but is also applicable in many different situations.

The SQ-401 has a double galvanic isolation, which means that it physically separates the in-home network from the distribution network completely. No dangerous high voltages can cause injury to people or damage to connected equipment. Besides the safety issue, the double galvanic isolation also prevents balancing currents to cause hum modulation, connector/ cable corrosion and defects to cable modems.

The sturdy metal housing of the SQ-401 guarantees a Class A RF screening, making sure that no ingress can enter the in-home network or distribution network. The cable inlet is located on the back of the wall outlet and allows for easy install and a solid mechanical connection between the coaxial cable and the wall outlet.

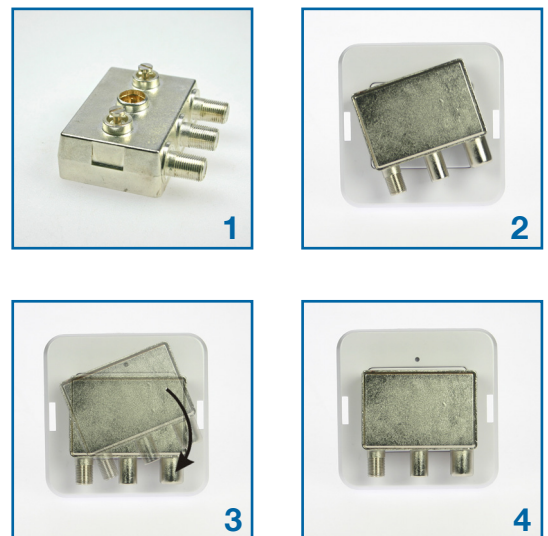
The broadband output on the front is constructed of a high quality machine threaded, brass connector with nickel plating.

One of the key features of the SQ-401 design is flexibility. The SQ-401 is applicable in regular back boxes for wall outlets, but also trunk systems. The “easy click and fit” plastic parts that come with the SQ-401, allow for easy install and use in a number of different locations and situations.

Besides the fact that the SQ-401 is suitable for many different types of installations, also the technical flexibility is a key feature of this innovative new wall outlet. The output of the SQ-401 has a full frequency range of 5 to 1000 MHz. In order to connect more than one device, a series of push-on units with 2 and 3 output ports was created.

These push-on units can be mounted on the SQ-401 with a so called “Twist and Lock” system. The twist and lock system guarantees a rock-solid mechanical connection and the most optimal electrical contact.

### SQF-307 push-on unit



“Twist and Lock” system

## Specifications SQ-401

	Port	Range	Min	Typical	Max	Units	Rem
<b>Frequency Range</b>			5		1000	MHz	
<b>Connectors</b>	Input			Cable clamp			
	Output			F-female			
<b>Equipment Approval</b>				CE			
	Port	Range	Min	Typical	Max	Units	Rem
<b>Insertion Loss</b>	Input -> Output	8 MHz < F < 15 MHz			1.0	dB	
		15 MHz < F < 470 MHz			0.5	dB	
		470 MHz < F < 1000 MHz			0.7	dB	
<b>Return Loss</b>	Input and Output	8 MHz < F < 1000 MHz	18			dB	
<b>Impedance</b>				75		Ohm	
<b>Galvanic Isolation 2120 V DC</b>	Inner conductor Input -> Inner conductor Output				0.7	mA	2
	Outer conductor Input - Outer conductor Output				0.7	mA	2
<b>Galvanic Isolation 230 V AC</b>	Inner conductor Input -> Inner conductor Output				2.0	mA RMS	2
	Outer conductor Input - Outer conductor Output				2.0	mA RMS	2
<b>Screening Effectiveness</b>		5 MHz < F < 10 MHz	75			dB	3
		10 MHz < F < 300 MHz	85	95		dB	3
		300 MHz < F < 470 MHz	80	90		dB	3
		470 MHz < F < 862 MHz	75	85		dB	3

2 IEC-60728-11§10 Safety Requirement: 2120 VDC T ≥ 1 minute, I ≤ 0,7 mA, 230 VAC I ≤ 8,0 mA RMS

3 Transfer impedance method according IEC 60728-2 (5-30 MHz)  
Absorbion clamp method according IEC-60728-2 § 4.4 (30-1000 MHz)

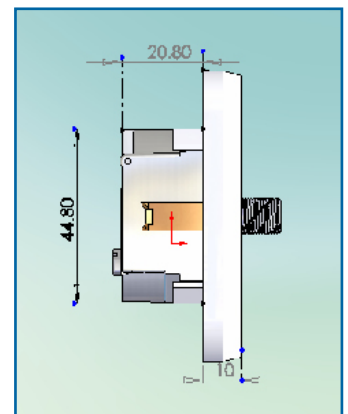
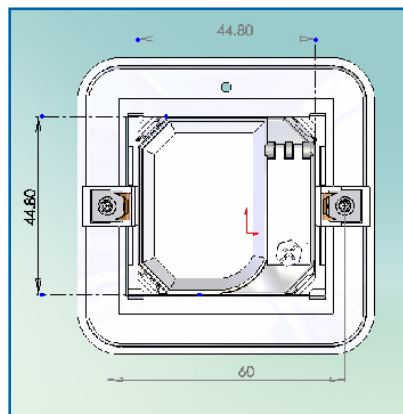
note: Specifications are measured at room temperature

## Technical specifications SQ-401

		Range	Min	Typical	Max	Units	Rem
<b>Cable inlet</b>	Outer conductor	Diameter	5		7.5	mm	
	Inner conductor	Diameter	0.6		1.1	mm	
<b>Plating</b>	Silver plating						

### Mounting

Standard faceplate will Surface mount over 60mm bore hole using integral wall clamps and on all standard 60mm centre screw fixing patress boxes >25mm depth



note: Specifications are measured at room temperature

## SQF-307 push-on unit for SQ401

- “Twist and Lock” for mechanical stability
- Class A screening efficiency
- Internal diplexers
- Modem Safe® surge protection
- F-connector outputs



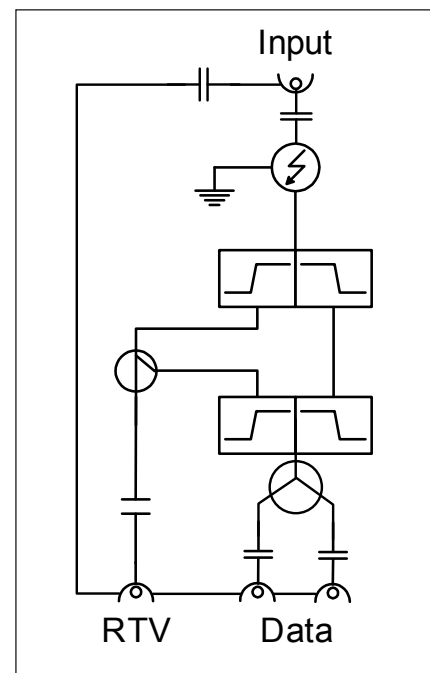
### General

The SQF-307 is a push-on unit for the modular wall outlet SQ401.

With the “Twist and lock” face plate that is enclosed in the SQ401 package, the SQF-307 can easily be mounted. The Twist and Lock system provides a very strong and reliable mechanical connection.

The heart of the push-on unit is a high quality directional coupler, splitter and diplex filters with excellent RF performance.

Besides an RTV / data connection the SQF-307 is also a highly effective surge protector. The patented internal Modem Safe® technology prevents high voltage surges from the CATV network to enter the in-house network. These surges are generally caused by local lightning strikes and can cause extensive damage to the connected in-home equipment like the cable modem. Besides surge protection, The Modem Safe® circuitry also protects the internal ferrites from magnetizing causing passive intermodulation.



### Modem Safe®



Modem Safe® is a highly effective surge protection solution. It blocks high level surge pulses and unwanted DC voltages, thus protecting sensitive equipment. In addition to the protection against these surges and voltages, ModemSafe technology® also prevents the internal ferrites becoming magnetized. When ferrite material is magnetized, the intermodulation behaviour deteriorates resulting in an increase of passive intermodulation products. Thanks to the ModemSafe® circuitry, the intermodulation behaviour of the models is excellent and will not deteriorate over time.

### Specifications SQF-307

	Port	Range	Min	Typical	Max	Units
Frequency Range				5-65 / 87.5-1000		MHz
Connectors				F-female		
Equipment Approval				CE		
Impedance				75		Ohm

## Provisional specifications SQF-307

	Port	Range	Min	Typical	Max	Units	Remark
<b>Insertion Loss</b>	In -> Data	5 MHz < F < 65 MHz	3.5	4.5	5.5	dB	
		87.5 MHz < F < 862 MHz	7.2	8.2	9.2	dB	
		862 MHz < F < 1000 MHz	7.5	8.5	9.5	dB	
	In -> R/TV	5 MHz < F < 65 MHz	30			dB	
		87.5 MHz < F < 862 MHz	3.2	4.2	5.0	dB	
		862 MHz < F < 1000 MHz	3.8	4.6	5.4	dB	
<b>Return Loss</b>	In	5 MHz < F < 65 MHz	18			dB	
		87.5 MHz < F < 862 MHz	18			dB	
		862 MHz < F < 1000 MHz	18			dB	
	Data	5 MHz < F < 65 MHz	18			dB	
		87.5 MHz < F < 862 MHz	18			dB	
		862 MHz < F < 1000 MHz	18			dB	
	R/TV	5 MHz < F < 65 MHz	18			dB	
		87.5 MHz < F < 862 MHz	18			dB	
		862 MHz < F < 1000 MHz	18			dB	
<b>Isolation</b>	R/TV -> Data	5 MHz < F < 65 MHz	30			dB	
		87.5 MHz < F < 862 MHz	20			dB	
		862 MHz < F < 1000 MHz	20			dB	
<b>Screening Effectiveness</b>	-	5 MHz < F < 300 MHz	85			dB	1
		300 MHz < F < 470 MHz	80			dB	1
		470 MHz < F < 1000 MHz	75			dB	1
<b>Intermodulation p+q (min)</b>	-	No surge			-105	dB	4
		1 KV surge			-105	dB	5
		25 V surge			-105	dB	6
<b>Surge Protection</b>		1 KV 1.2/50 $\mu$ S			35	V pk	7

### Remarks

- 1 Transfer impedance method according IEC 60728-2 (5-30 MHz)  
Absorbion clamp method according IEC-60728-2 § 4.4 (30-1000 MHz)
- 4 Two carriers (60 & 65MHz), out to in, @ 120dB $\mu$ V, before surge
- 5 Two carriers (60 & 65MHz), out to in, @ 120dB $\mu$ V, after 10 pulses (25V/1,2 $\mu$ S risetime/500 $\mu$ S duration) at all ports.
- 6 Two carriers (60 & 65MHz), out to in, @ 120dB $\mu$ V, after 1 pulse 1KV (IEC 1000-4-5 level 2) at all ports.
- 7 IEC 61000-4-5: 1995 (Surge 1KV, 1,2/ 50 $\mu$ S, Level 2)

ALL SPECIFICATIONS ARE SUBJECT TO MODIFICATION WITHOUT NOTICE

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