



4546.99.0030.003

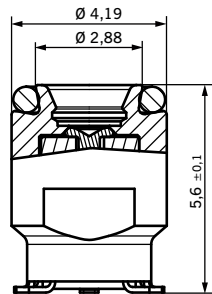
Due to its watertight design and axial seal according to IP 67 the external antenna switch 4546 ideally suits outdoor applications. It even protects from water penetration when cables are defective.

- Watertight according to IP 67
- 20.000 mating cycles
- Robust design
- Height and interface are easy to customise due to turned housing

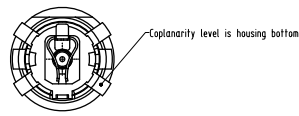
watertight

Modern manufacturing demands

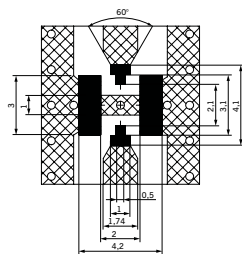
The switch is delivered on tape and reel packing which meets the requirements of pick and place machines (IEC 286-3: EIA 481).



Side view



Bottom view



Solder pad layout proposal

Soldering surface

Your global connection

IMS Connector Systems, with its head office in Germany, offers you qualified support through its subsidiaries and sales partners around the globe. We operate production plants in both Europe and Asia.



Head Office
Germany
IMS Connector Systems GmbH
Obere Hauptstraße 30
D-79843 Löffingen
PO Box 1141
D-79840 Löffingen
Tel (+49) 76 54 90 10
Fax (+49) 76 54 90 11 99
Net www.imscs.com
E-mail sales@imscs.com



Production plant Hungary
IMS Connector Systems Kft
H-9400 Sopron



Production plant China
IMS Connector Systems Ltd
SND Science & Technology Park
VCR-Suzhou 215011

All sales contacts at:

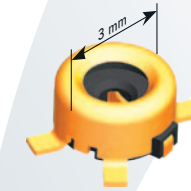
www.imscs.com/sales-contacts.html

Alterations reserved • design www.com-a-tec.de



Our miniature switch generation

Now with watertight version



3976.99.0030.001

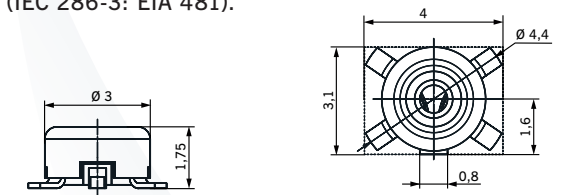
Due to its compact design, extremely robust construction and innovative locking mechanism the external antenna switch 3976 is suitable for a broad range of applications.

- 20.000 mating cycles
- Excellent guiding feature e.g. car cradle applications
- Robust design due to deep drawn housing
- Durable due to high surface layer thickness
- Ultra low height

miniature

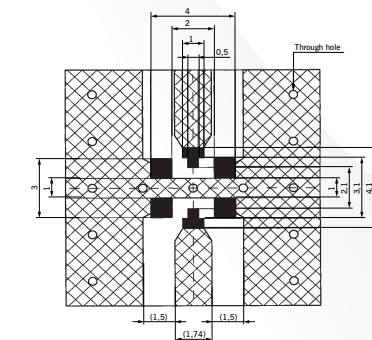
Modern manufacturing demands

The switch is delivered on tape and reel packing which meets the requirements of pick and place machines (IEC 286-3: EIA 481).



Side view

Top view



Solder pad layout proposal

Soldering surface

IMS CONNECTOR SYSTEMS

Technical specifications

Electrical characteristics		3976	
		Un-switched	Switched
Impedance		50 Ω	
Frequency range		DC...6 GHz	
Return loss	≤ 1,0 GHz	> 30,00 dB	> 30,00 dB
	≤ 2,0 GHz	> 28,00 dB	> 24,00 dB
	≤ 3,0 GHz	> 26,00 dB	> 21,00 dB
	≤ 6,0 GHz	> 16,00 dB	> 16,00 dB
	Isolation		
Isolation	≤ 1,0 GHz	-	> 36,00 dB
	≤ 2,0 GHz	-	> 30,00 dB
	≤ 3,0 GHz	-	> 26,00 dB
	≤ 6,0 GHz	-	> 19,00 dB
	Insertion loss	≤ 1,0 GHz	< 0,15 dB
≤ 2,0 GHz		< 0,20 dB	< 0,30 dB
≤ 3,0 GHz		< 0,25 dB	< 0,40 dB
≤ 6,0 GHz		< 0,50 dB	< 1,00 dB
Insulation resistance - initial > 0,50 GΩ		> 0,20 MΩ	
Contact resistance			
Center contact		< 80 mΩ	< 80 mΩ
Outer contact		< 50 mΩ	< 50 mΩ
Proof voltage		300 V	
Rated voltage		250 V	
Mechanical characteristics			
Engagement force		approx. 10 N	
Separating force		approx. 10 N	
Mating cycles		20.000 with 4021.93.8914.10	
Handling information			
Tape & reel		4.000 pcs. per reel	
Pick & place		✓	
Lead-free soldering		✓	

(All electrical and mechanical characteristics are valid for the combination 3976.99.0030.001 and 3989.91.1420.019)

Sample-kit AGK-4043

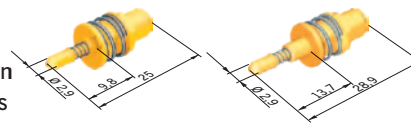
Ask for our sample kit with various switches, plugs, circuit board, test cable assembly and adapter for testing.



Adapters suitable for 3976

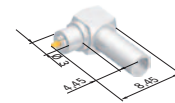
Straight test adapter with SMA interface	4021.93.8914.103	4163.93.8914.103
--	------------------	------------------

- Adapter for automatic testing
- Float mount installation
- 100.000 mating cycles



Right angle cable plug	3989.91.1420.019
------------------------	------------------

- Adapter for manual testing
- Snap-in function
- 10.000 mating cycles
- For cable Filotex RG 178*



Test cable assembly K-2227

Cable lengths:

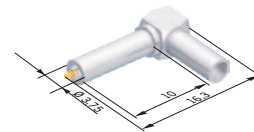
- 150, 300, 500, 750, 1000 mm
- Other lengths available on request

Counterpart: SMA plug



Right angle cable plug	4162.91.1420.019
------------------------	------------------

- Adapter for manual testing
- Snap-in function
- 10.000 mating cycles
- For cable Filotex RG 178*



Test cable assembly K-2283

Cable lengths:

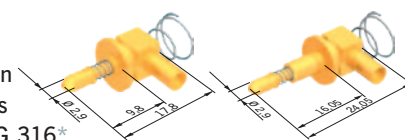
- 150, 300, 500, 750, 1000 mm
- Other lengths available on request

Counterpart: SMA plug



Right angle cable plugs	4147.93.8914.123	4166.93.8914.123
-------------------------	------------------	------------------

- Adapter for car cradle application
- Float mount installation
- 100.000 mating cycles
- For cable Enviroflex RG 316*

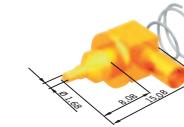


* (other cable types on request)

Adapters suitable for 4546

Cable mount angle plug	4449.93.8914.123
------------------------	------------------

- Adapter for automatic testing
- 20.000 mating cycles
- For cable Enviroflex RG 316*



Test cable assembly K-2571

Cable lengths:

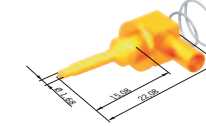
- 150, 300, 500, 750, 1000 mm
- Other lengths available on request

Counterpart: SMA plug



Cable mount angle plug	4637.93.8914.123
------------------------	------------------

- Adapter for automatic testing
- 20.000 mating cycles
- For cable Enviroflex RG 316*



Test cable assembly K-2602-02

Cable lengths:

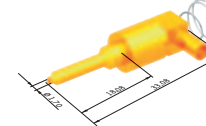
- 150, 300, 500, 750, 1000 mm
- Other lengths available on request

Counterpart: SMA plug



Cable mount angle plug	4703.93.8914.123
------------------------	------------------

- Adapter for automatic testing
- 20.000 mating cycles
- For cable Enviroflex RG 316*



Test cable assembly K-2602-01

Cable lengths:

- 150, 300, 500, 750, 1000 mm
- Other lengths available on request

Counterpart: SMA plug



Test cable assembly K-2641

Cable lengths:

- 150, 300, 500, 750, 1000 mm
- Other lengths available on request

Counterpart: MMCX plug



* (other cable types on request)

Technical specifications

Electrical characteristics		4546	
		Un-switched	Switched
Impedance		50 Ω	
Frequency range		DC...4 GHz	
Return loss	≤ 1,0 GHz	> 30,00 dB	> 24,00 dB
	≤ 2,0 GHz	> 27,00 dB	> 20,00 dB
	≤ 3,0 GHz	> 27,00 dB	> 18,00 dB
	≤ 4,0 GHz	> 27,00 dB	> 18,00 dB
	Isolation		
Isolation	≤ 1,0 GHz	-	> 36,00 dB
	≤ 2,0 GHz	-	> 30,00 dB
	≤ 3,0 GHz	-	> 27,00 dB
	≤ 4,0 GHz	-	> 24,00 dB
	Insertion loss	≤ 1,0 GHz	< 0,10 dB
≤ 2,0 GHz		< 0,13 dB	< 0,20 dB
≤ 3,0 GHz		< 0,18 dB	< 0,25 dB
≤ 4,0 GHz		< 0,22 dB	< 0,30 dB
Insulation resistance- initial > 0,50 GΩ		> 1,00 GΩ	
Contact resistance			
Center contact		< 80 mΩ	< 80 mΩ
Outer contact		< 50 mΩ	< 50 mΩ
Proof voltage/ withstand voltage		500 Vrms	
Rated voltage		150 Vrms	
Mechanical characteristics			
Engagement force		max. 10 N	
Watertight		IP 67	
Mating cycles		20.000 with 4449.91.1420.01	
Handling information			
Tape & reel		1.400 pcs. per reel	
Pick & place		✓	
Lead-free soldering		✓	

(All electrical and mechanical characteristics are valid for 4546.99.0030.003)