

Minimum test requirements

ELECTRICAL

Insulation Resistance Per IEC 309-1, Clause 19	500V for 1 min. Resistance $\geq 5M \Omega$
Dielectric Strength Per IEC 309-1, Clause 19	3000V for 1 min.
Norm. Operation, Connect & Disconnect Cycles Per IEC 309-1, Clause 21	See Table 1
Breaking Capacity Per IEC 309-1, Clause 20	Tested at 110 % of the rated operating voltage and 125% of the rated current.
Temperature Rise Per IEC 309-1, Clause 22	Maximum 50 K rise at full rated current.

MECHANICAL

Cable Secureness Per IEC 309, Clause 23	See Table 2
Impact Per IEC 309, Clause 24	A device is wired with a 2.25m length of flexible cord and dropped from a height of 75 cm, 8 times. The device is then tested for applicable degrees of protection against moisture.

ENVIRONMENTAL

Flammability	Self-extinguishing Per IEC 309-1, Clause 27
Ambient Temperature Range	Minimum: -25°C with impact Maximum: 90°C
Moisture Resistance	Watertight (IP67): Device immersed for 24 hours in water at a temp. of 25°C, the highest point of the device being 5cm (2") below the water level. Splashproof (IP44): Device is sprayed with water for 10 minutes and immediately afterwards subjected to splashing water in all directions (360°).
UV Resistance	Exposed plastic materials are UV stabilized.

TABLE 1

Connect and Disconnect Cycles			
Device Rating Amperes	Cycles with Load at Rated Current and Voltage	No-Load Cycles	Sequence
16	5000 p.f of 0.6	0	-
32	1000 p.f of 0.6	1000	Alternating
63	1000 p.f of 0.6	1000	Alternating
125	250 p.f of 0.7	250	Alternating

The test sequence is conducted by using a no-load, followed by a load sequence.

TABLE 2

Cable Secureness Test			
Device Rating Amperes	Force	Torque	Maximum Displacement
	N	N•m	mm
16	80	0.350	2
32	100	0.425	2
63	120	0.8	2
125	200	1.5	2

The flexible cord or cable is twisted and pulled. Values for the applied twisting torque and force of pull are shown in Table 2. In all cases the cord displacement is less than 2mm.



DECLARATION OF CONFORMITY

WALTHER WERKE, Ferdinand Walther GmbH
Ramsener Strasse 6
67304 Eisenberg

We declare, under our sole responsibility, the conformity of the following products and standards:

Plugs and Sockets (Pin and Sleeve devices)
DIN EN 60 309, T. 1
DIN EN 60 309, T. 2

This declaration of conformity is according to the EC regulations 73/23, 91/368 and 89/336 (Low Voltage Directive), module A, in consideration of DIN EN 45 014.



Norway



Germany



Finland



Switzerland



Austria



Sweden



Belgium



Denmark



Italy



Netherlands



Czechoslovakia



Hungary



Russia



For all plugs, sockets & receptacles



United States



Canada







China
*part specific

DIN EN ISO 9001 Certificate Registration No. 4678-01







MALE PLUGS

 LISTED

			WATERTIGHT (IP67)	SPLASHPROOF (IP44)		
				with cable gland	with cable sleeve	Angled 90°
3	2P + G	110				
		230	219306	211306	210306	216306
		400	219309	211309	210309	216309
4	3P + G	110	219404	211404	210404	216404
		230	219409	211409	210409	216409
		400	219406	211406	210406	216406
		440	219411	211411	210411	216411
		500	219407	211407	210407	216407
		>50 (100-300Hz)	219410	211410	210410	216410
		>50 (300-500Hz)	219402	211402	210402	216402
5	3P + N + G	110	219504	211504	210504	216504
		230	219509	211509	210509	216509
		400	219	211	210	216
		440	219511	211511	210511	216511
7	6P + G	400		211706	210706	







FEMALE CONNECTORS (Couplers)

 LISTED

			WATERTIGHT (IP67)	SPLASHPROOF (IP44)		
				with cable gland	with cable sleeve	Angled 90°
3	2P + G	110				
		230	319306	311306	310306	316306
		400	319309	311309	310309	316309
4	3P + G	110	319404	311404	310404	
		230	319409	311409	310409	
		400	319406	311406	310406	
		440	319411	311411	310411	
		500	319407	311407	310407	
		>50 (100-300Hz)	319410	311410	310410	
		>50 (300-500Hz)	319402	311402	310402	
5	3P + N + G	110	319504	311504	310504	
		230	319509	311509	310509	
		400	319	311	310	
		440	319511	311511	310511	
7	6P + G	400		311706	310706	

FEMALE PANEL MOUNTED SOCKET-OUTLET







UL LISTED

			WATERTIGHT (IP67)			SPLASHPROOF (IP44)		
			Straight	Angled 15°	Angled 80°	Straight	Angled 15°	Angled 80°
3	2P + G	110						
		230						
		400						
4	3P + G	110						
		230						
		400						
		440						
		500						
		>50 (100-300Hz)						
		>50 (300-500Hz)						
5	3P + N + G	110						
		230						
		400						
		440						
7	6P + G	400				411706		514706

Note: See page 28 for surface mount socket-outlets.





MALE APPLIANCE PLUG (Inlet)

UL LISTED

			WATERTIGHT (IP67)		SPLASHPROOF (IP44)			
			Angled 80°	Surface Mount	Straight	Angled 80°	Surface Mount External Mounting	Surface Mount Internal Mounting
3	2P + G	110						
		230						
		400						
4	3P + G	110						
		230						
		400						
		440						
		500						
		>50 (100-300Hz)						
		>50 (300-500Hz)						
5	3P + N + G	110						
		230						
		400						
		440						
7	6P + G	400			615706	611706	610706	616706




MALE PLUGS

 LISTED

			WATERTIGHT (IP67)	SPLASHPROOF (IP44)		
					with cable gland	with cable sleeve
No. of Wires	Voltage AC	Clock Position of Ground Contact				
3	2P + G	110	239304	231304	230304	236304
		230	239306	231306	230306	236306
		400	239309	231309	230309	236309
4	3P + G	110	239404	231404	230404	236404
		230	239409	231409	230409	236409
		400	239406	231406	230406	236406
		380/440*	239403*			
		440	239411	231411	230411	236411
		500	239407	231407	230407	236407
		>50 (100-300Hz)	239410	231410	230410	236410
>50 (300-500Hz)	239402	231402	230402	236402		
5	3P + N + G	110	239504	231504	230504	236504
		230	239509	231509	230509	236509
		400	239	231	230	236
		440	239511	231511	230511	236511
7	6P + G	400		231706	230706	

FEMALE CONNECTORS (Couplers)







 LISTED

			WATERTIGHT (IP67)	SPLASHPROOF (IP44)	
					with cable gland
No. of Wires	Voltage AC	Clock Position of Ground Contact			
3	2P + G	110	339304	331304	330304
		230	339306	331306	330306
		400	339309	331309	330309
4	3P + G	110	339404	331404	330404
		230	339409	331409	330409
		400	339406	331406	330406
		380/440*	339403*		
		440	339411	331411	330411
		500	339407	331407	330407
		>50 (100/300Hz)	339410	331410	330410
>50 (300/500Hz)	339402	331402	330402		
5	3P + N + G	110	339504	331504	330504
		230	339509	331509	330509
		400	339	331	330
		440	339511	331511	330511
7	6P + G	400		331706	330706

* Only for refrigerated containers.

FEMALE PANEL MOUNTED SOCKET-OUTLET







UL LISTED

			WATERTIGHT (IP67)			SPLASHPROOF (IP44)		
			Straight	Angled 15°	Angled 80°	Straight	Angled 15°	Angled 80°
3	2P + G	110						
		230	439306	539306	538306	430306	530306	534306
		400	439309	539309	538309	430309	530309	534309
4	3P + G	110	439404	539404	538404	430404	530404	534404
		230	439409	539409	538409	430409	530409	534409
		400	439406	539406	538406	430406	530406	534406
		380/440*	439403*					
		440	439411	539411	538411	430411	530411	534411
		500	439407	539407	538407	430407	530407	534407
		>50 (100-300Hz)	439410	539410	538410	430410	530410	534410
>50 (300-500Hz)	439402	539402	538402	430402	530402	534402		
5	3P + N + G	110	439504	539504	538504	430504	530504	534504
		230	439509	539509	538509	430509	530509	534509
		400	439	539	538	430	530	534
		440	439511	539511	538511	430511	530511	534511
7	6P + G	400				431706		534706

Note: See page 28 for surface mount socket-outlets.

MALE APPLIANCE PLUG (Inlet)




UL LISTED

			WATERTIGHT (IP67)		SPLASHPROOF (IP44)			
			Angled 80°	Surface Mount	Straight	Angled 80°	Surface Mount External Mounting	Surface Mount Internal Mounting
3	2P + G	110						
		230	639306	638306	635306	631306	630306	636306
		400	639309	638309	635309	631309	630309	636309
4	3P + G	110	639404	638404	635404	631404	630404	636404
		230	639409	638409	635409	631409	630409	636409
		400	639406	638406	635406	631406	630406	636406
		380/440*	639403*	638403*				
		440	639411	638411	635411	631411	630411	636411
		500	639407	638407	635407	631407	630407	636407
		>50 (100-300Hz)	639410	638410	635410	631410	630410	636410
>50 (300-500Hz)	639402	638402	635402	631402	630402	636402		
5	3P + N + G	110	639504	638504	635504	631504	630504	636504
		230	639509	638509	635509	631509	630509	636509
		400	639	638	635	631	630	636
		440	639511	638511	635511	631511	630511	636511
7	6P + G	400			635706	631706	630706	636706

* Only for refrigerated containers.




MALE PLUGS

 LISTED

			WATERTIGHT (IP67)	SPLASHPROOF (IP44)		
					with cable gland	with cable sleeve
No. of Wires	Voltage AC	Clock Position of Ground Contact				
3	2P + G	110	4	269304	261304	260304
		230	6	269306	261306	260306
		400	9	269309	261309	260309
4	3P + G	110	4	269404	261404	260404
		230	9	269409	261409	260409
		400	6	269406	261406	260406
		440	11	269411	261411	260411
		500	7	269407	261407	260407
5	3P + N + G	110	4	269504	261504	260504
		230	9	269509	261509	260509
		400	6	269	261	260
		440	11	269511	261511	260511

FEMALE CONNECTORS (Couplers)

 LISTED

			WATERTIGHT (IP67)	SPLASHPROOF (IP44)		
					with cable gland	with cable sleeve
No. of Wires	Voltage AC	Clock Position of Ground Contact				
3	2P + G	110	4	369304	361304	360304
		230	6	369306	361306	360306
		400	9	369309	361309	360309
4	3P + G	110	4	369404	361404	360404
		230	9	369409	361409	360409
		400	6	369406	361406	360406
		440	11	369411	361411	360411
		500	7	369407	361407	360407
5	3P + N + G	110	4	369504	361504	360504
		230	9	369509	361509	360509
		400	6	369	361	360
		440	11	369511	361511	360511

FEMALE PANEL MOUNTED SOCKET-OUTLET

UL LISTED

			WATERTIGHT (IP67)			SPLASHPROOF (IP44)		
			Straight	Angled 15°	Angled 80°	Straight	Angled 15°	Angled 80°
3	2P + G	110						
		230						
		400						
4	3P + G	110						
		230						
		400						
		440						
		500						
5	3P + N + G	110						
		230						
		400						
		440						

Note: See page 28 for surface mount receptacles.


MALE APPLIANCE PLUG (Inlet)

UL LISTED

			WATERTIGHT (IP67)		SPLASHPROOF (IP44)	
			Angled 80°	Surface Mount	Straight	Angled 80°
3	2P + G	110				
		230				
		400				
4	3P + G	110				
		230				
		400				
		440				
		500				
5	3P + N + G	110				
		230				
		400				
		440				


MALE PLUGS

UL LISTED

			WATERTIGHT (IP67)	
				
No. of Wires	Voltage AC	Clock Position of Ground Contact		
3	2P + G	110	4	279304
		230	6	279306
		400	9	279309
4	3P + G	110	4	279404
		230	9	279409
		400	6	279406
		440	11	279411
		500	7	279407
5	3P + N + G	110	4	279504
		230	9	279509
		400	6	279
		440	11	279511

FEMALE CONNECTORS (Couplers)



UL LISTED

			WATERTIGHT (IP67)	
				
No. of Wires	Voltage AC	Clock Position of Ground Contact		
3	2P + G	110	4	379304
		230	6	379306
		400	9	379309
4	3P + G	110	4	379404
		230	9	379409
		400	6	379406
		440	11	379411
		500	7	379407
5	3P + N + G	110	4	379504
		230	9	379509
		400	6	379
		440	11	379511

Note: 125-Amp devices are only available in IP67-Watertight configuration.

FEMALE PANEL MOUNTED SOCKET-OUTLET



UL LISTED

			WATERTIGHT (IP67)		
			Straight	Angled 15°	
No. of Wires	Voltage AC	Clock Position of Ground Contact			
3	2P + G	110	4	479304	579304
		230	6	479306	579306
		400	9	479309	579309
4	3P + G	110	4	479404	579404
		230	9	479409	579409
		400	6	479406	579406
		440	11	479411	579411
		500	7	479407	579407
5	3P + N + G	110	4	479504	579504
		230	9	479509	579509
		400	6	479	579
		440	11	479511	579511

Note: See page 28 for surface mount receptacles.

MALE APPLIANCE PLUG (Inlet)

UL LISTED

			WATERTIGHT (IP67)		
			Straight	Surface Mount	
No. of Wires	Voltage AC	Clock Position of Ground Contact			
3	2P + G	110	4	679304	678304
		230	6	679306	678306
		400	9	679309	678309
4	3P + G	110	4	679404	678404
		230	9	679409	678409
		400	6	679406	678406
		440	11	679411	678411
		500	7	679407	678407
5	3P + N + G	110	4	679504	678504
		230	9	679509	678509
		400	6	679	678
		440	11	679511	678511

SURFACE MOUNT SOCKET-OUTLETS



(Internal Mounting)

				WATERTIGHT (IP67)				SPLASHPROOF (IP44)		
				16 Amps	32 Amps	63 Amps	125 Amps	16 Amps	32 Amps	63 Amps
	No. of Wires	Voltage AC	Clock Position of Ground Contact							
3	2P + G	110	4	119304	139304		179304	111304	131304	
		230	6	119306	139306		179306	111306	131306	
		400	9	119309	139309		179309	111309	131309	
4	3P + G	110	4	119404	139404	169404	179404	111404	131404	161404
		230	9	119409	139409	169409	179409	111409	131409	161409
		400	6	119406	139406	169406	179406	111406	131406	161406
		440	11	119411	139411	169411	179411	111411	131411	161411
		500	7	119407	139407	169407	179407	111407	131407	161407
		>50 (100-300Hz)	10	119410	139410	169410	179410	111410	131410	161410
		>50 (300-500Hz)	2	119402	139402	169402	179402	111402	131402	161402
5	3P + N + G	110	4	119504	139504	169504	179504	111504	131504	161504
		230	9	119509	139509	169509	179509	111509	131509	161509
		400	6	119	139	169	179	111	131	161
		440	11	119511	139511	169511	179511	111511	131511	161511
7	6P + G	400	6					111706	131706	

SURFACE MOUNT SOCKET-OUTLETS



LISTED (External Mounting)

				SPLASHPROOF (IP44)	
				16 Amps	32 Amps
	No. of Wires	Voltage AC	Clock Position of Ground Contact		
3	2P + G	110	4	110304	130304
		230	6	110306	130306
		400	9	110309	130309
4	3P + G	110	4	110404	130404
		230	9	110409	130409
		400	6	110406	130406
		440	11	110411	130411
		500	7	110407	130407
		>50 (100-300Hz)	10	110410	130410
		>50 (300-500Hz)	2	110402	130402
5	3P + N + G	110	4	110504	130504
		230	9	110509	130509
		400	6	110	130
		440	11	110511	130511
7	6P + G	400	6	110706	130706