

61 SL / 63 SL - QUICK WIRING AND MOUNTING PLUGS AND SOCKETS

REFERENCE STANDARDS

The IEC 309 SL industrial plugs and sockets meets the dimensional, construction-performance and safety requirements defined by IEC 60309-1 and IEC 60309-2 International Standards assimilated on a European level as EN 60309-1 and EN 60309-2 Standards. For the purpose of ensuring maximum safety, reliability and quality, GEWISS has specifically designed the terminal as well. In fact, development of the terminal took into consideration the requirements of the IEC 60998-2-3 International Standards assimilated on a European level as EN 60998-2-3 Standard regarding insulation perforation terminals.

CLAMP CHARACTERISTICS

The terminal is made from special high-quality copper alloys. It enables clamping of the flexible type copper wires for a range of nominal sections from 1 to 2,5 mm². The perforating system can cut cable insulated in PVC or rubber. For its conformation, terminal tightening occurs without the use of special tools. In accordance with regulations, every terminal is marked with the corresponding polarity and can be reused for an unlimited number of times. To disconnect the cable, the slider can be released simply by using a screwdriver.

MATERIAL CHARACTERISTICS

The parts in insulating material are made of self-extinguishing thermoplastic polymers, with high dimensional stability, resistant to chemical and atmospheric agents. Sockets and plugs are in brass. The plugs are nickel-plated for better abrasion and corrosion resistance. The socket lid closing springs are in stainless steel.

ELECTRICAL CHARACTERISTICS

Nominal voltage Un:	110 ÷ 500 V
Nominal current In:	16 A
Nominal frequency f:	50/60 Hz
Overtemperature test:	carried out according to EN 60998-1 Standard at I = 24 A
Breaking capacity:	20A at 1.1 Un
Number of possible operations at Un and In:	> 5000 operations
Insulation resistance:	> 10 MWΩ

MECHANICAL AND PHYSICAL CHARACTERISTICS

Operating temperature:	- 25 - +40 °C
Terminal connection capacity:	flexible cables with sections from 1 mm ² to 2,5 mm ²
External section of usable cables:	2P+ $\frac{\perp}{\perp}$ from 8,1 to 13 mm 3P+ $\frac{\perp}{\perp}$ from 8,8 to 14 mm 3P+N+ $\frac{\perp}{\perp}$ from 10 to 15 mm
Impact resistance according to 50102:	IK 08 (5J)
Self-extinguishing according to thermo-pressure with ball:	125 °C (socket or plug) 80 °C (all other parts)
Self-extinguishing according to Glow Wire Test:	850 °C (socket or plug) 650 °C (all other parts)

BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS

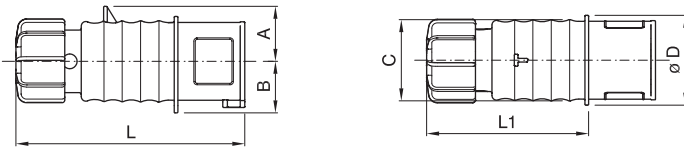
Saline solution	Acids		Bases		Solvents				Mineral oil	UV rays
	Concentrated	Diluted	Concentrated	Diluted	Hexane	Benzol	Acetone	Alcohol		
Resistant	NOT resistant	Limited resistance	Limited resistance	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant

IEC 309 RANGE

PLUGS AND SOCKETS IEC 309 STANDARDS

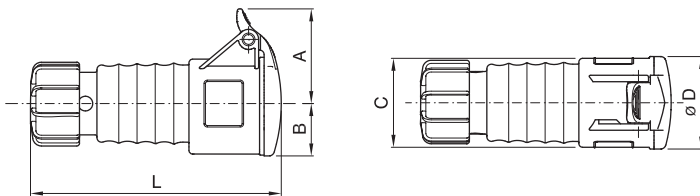
DIMENSION TABLES

PROTECTED STRAIGHT PLUGS



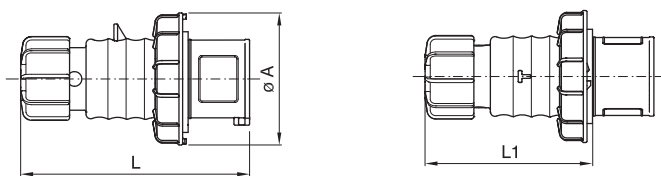
Type	A	B	C	D	L	L1
16A 2P+ $\frac{1}{2}$	30	28	45	49	125	89
16A 3P+ $\frac{1}{2}$	34	32	80	88	125	89
16A 3P+N+ $\frac{1}{2}$	37	36	55	62	137	100

PROTECTED STRAIGHT CONNECTORS



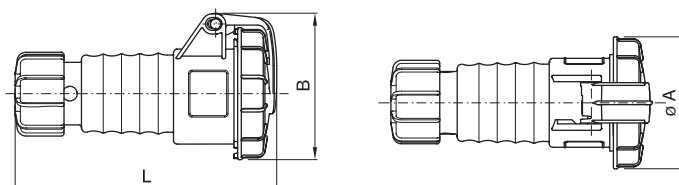
Type	A	B	C	D	L
16A 2P+ $\frac{1}{2}$	52	29	49	51	137
16A 3P+ $\frac{1}{2}$	54	32	55	57	137
16A 3P+N+ $\frac{1}{2}$	58	36	62	66	149

WATERTIGHT STRAIGHT PLUGS



Type	A	L	L1
16A 2P+ $\frac{1}{2}$	72	125	91
16A 3P+ $\frac{1}{2}$	80	125	91
16A 3P+N+ $\frac{1}{2}$	88	137	103

WATERTIGHT STRAIGHT CONNECTORS



Type	A	B	L
16A 2P+ $\frac{1}{2}$	72	80	143
16A 3P+ $\frac{1}{2}$	80	88	143
16A 3P+N+ $\frac{1}{2}$	88	96	155

60 / 61 / 62 / 63 / 64 - PLUGS, SOCKETS AND MULTIPLE OUTLET SOCKETS IEC 309

A range of removable type trailing and fixed plugs and sockets for industrial use, compliant with dimensional and performance standards unified on an international level (IEC 60309) and assimilated by European Standards (EN 60309) and Italian Standards (CEI 23-12). Equipped with an extra pilot contact (CP) for creating an electric interlock on plug and socket versions with nominal current of 63 and 125A. These supplement the range of 90° fixed plugs and 10° and 90° sockets. Elastic sockets and plugs obtained from bar in solid brass, type Pt. CuZn40Pb2 (Cu 58%, Zn 40%, Pb 2%); anti-loosening terminal with unlosable screws, cable clamp incorporated with anti-abrasion cable glands.

The range of multiple-outlet sockets, adaptors and shunts should be considered an integral part of the electrical system, since they are products suitable only for temporary, trailing installations and connections, and not for permanent applications. Furthermore, the range cannot be used in areas with a fire hazard.

TECHNICAL DATA AND COMPLIANCE WITH STANDARDS

Reference Standards:	Nominal voltage Un (V)	Nominal current In (A)	Permissible overload (A)	Total No. operations	Breaking capacity at 1,1 Un (A)	Impact resistance at ambient temperature (IK code)	Insulation resistance (MΩ)	Resistance to abnormal heat and fire	
								Thermo-pressure with ball (°C)	Glow Wire Test (°C)
CEI 23-12/1	from 110 to 500	16	22	> 5000	20	IK 08	> 10	125 (active parts) 80 (passive parts)	850 (active parts) 650 (passive parts)
CEI 23-12/2		32	42	> 2000	40				
EN 60309-1/2		63	-	> 2000	79				
IEC 60309-1/2		125	-	> 500	156				

BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS

Agent	Saline solution	Acids		Bases		Solvents				Mineral oil	UV rays
		Concentrated	Diluted	Concentrated	Diluted	Hexane	Benzol	Acetone	Alcohol		
Resistance	Resistant	Not resistant	Limited resistance	Limited resistance	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant

TERMINAL CLAMPING CAPACITY (mm²)

Socket or plug nominal current	flexible cables		rigid or stranded cables		Possibility of clamping several wires in the same terminal
	min	max	min	max	
16A	1	2,5	1,5	4	Up to 2 flexible cables with total section not exceeding the clamping capacity
32A	2,5	6	2,5	10	
63A	6	16	6	25	
125A	16	50	25	70	

APPLICATION FIELDS

Sector	Environment	Typical system	Socket nominal currents (A)	Recommended installation
Commercial	Data processing centres	Connection of "big" processors with $I\Delta n > 3,5$ mA	16	IP 44 flush-mounting
	Public entertainment premises	Stage light connection	16 - 32	
Industrial	Maintenance Departments	Movable and portable user connection	16 - 32	IP 67 surface-mounting on IP 55 Q-DIN
	Production departments	Machine tool and process machine connection	63 - 125	IP 67 surface-mounting
	Chemical industry			
Building industry	Construction and demolition sites	Distribution boards	16 - 32 - 63	On Q-BOX ACS
		Plugs and sockets boards	16 - 32	On Q-DIN ACS
Agriculture	Greenhouses	Movable sprayers and pumps	16	IP 67 surface-mounting On IP 55 Q-DIN
	Sheds	Movable and portable machinery connection	16 - 32 - 63	
Tourism	Campsites	Power outlet in service area	16 - 32	On 68 Q-MC range terminal
	Tourist harbours		16 - 125	

EXTERNAL CABLE SECTION

Nominal current In (A)	No. poles	Sections allowed by the IEC 309 Standard		Sections allowed by the GEWISS IEC 309 Range	
		Min. (mm)	Max. (mm)	Min. (mm)	Max. (mm)
16	2P+ \neq	8.1	13	8	13.2
	3P+ \neq	8.8	14	8.5	14.3
	3P+N+ \neq	10	15.3	10	15.6
32	2P+ \neq	11.5	17.3	11	19.6
	3P+ \neq	12.5	19.3	12	19.6
	3P+N+ \neq	14	21.3	14	21.6
63	2P+ \neq	17.3	26	17	37
	3P+ \neq	19.3	28.5	19	37
	3P+N+ \neq	21.3	31.3	21	37
125	3P+ \neq	28.5	43.3	28	49
	3P+N+ \neq	31.3		31	49

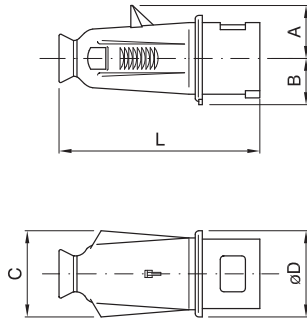
IEC 309 RANGE

PLUGS AND SOCKETS IEC 309 STANDARDS



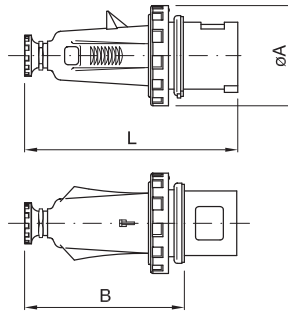
DIMENSION TABLES

PROTECTED STRAIGHT PLUGS



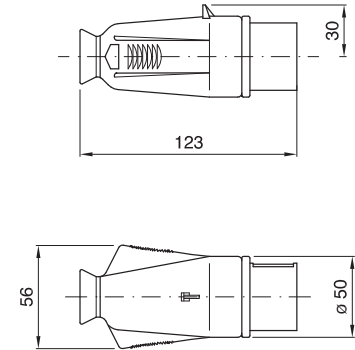
	TYPE	A	B	C	D	L
16 A	2P + \pm	30	28,5	56	51	125
	3P + \pm	34	32	60	56	125
	3P + N + \pm	38	36	66	63	137
32 A	2P + \pm	40	38,5	66	65	157
	3P + \pm	40	38,5	66	65	157
	3P + N + \pm	45	42	71	71	157

WATERTIGHT STRAIGHT PLUGS



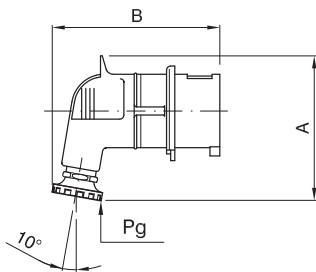
	TYPE	A	B	L	Pg
16 A	2P + \pm	73	105	138	16
	3P + \pm	81	113	147	16
	3P + N + \pm	89	125	158	16
32 A	2P + \pm	95	135	177	21
	3P + \pm	95	135	177	21
	3P + N + \pm	102	135	177	21
63 A	2P + \pm	113	167	228	36
	3P + \pm	113	167	228	36
	3P + N + \pm	113	167	228	36
125 A	3P + \pm	130	230	300	48
	3P + N + \pm	130	230	300	48

EXTRA LOW-VOLTAGE PROTECTED STRAIGHT PLUGS



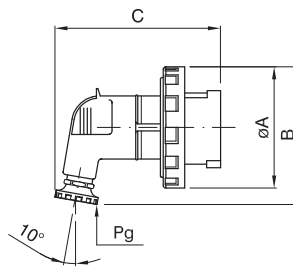
Dimensions valid for all versions

PROTECTED 90° PLUGS



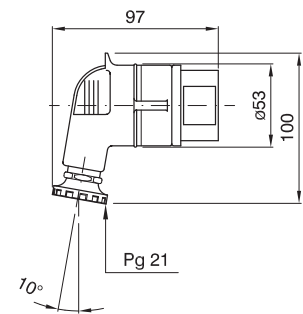
	TYPE	A	B	Pg
16 A	2P + \pm	88	105	16
	3P + \pm	94	108	16
	3P + N + \pm	101	119	16
32 A	2P + \pm	113	129	21
	3P + \pm	113	129	21
	3P + N + \pm	121	140	21

WATERTIGHT 90° PLUGS



	TYPE	A	B	C	Pg
16 A	2P + \pm	73	95	105	16
	3P + \pm	80	100	108	16
	3P + N + \pm	88	107	119	16
32 A	2P + \pm	95	121	129	21
	3P + \pm	95	121	129	21
	3P + N + \pm	102	127	140	21

EXTRA LOW-VOLTAGE PROTECTED 90° PLUGS



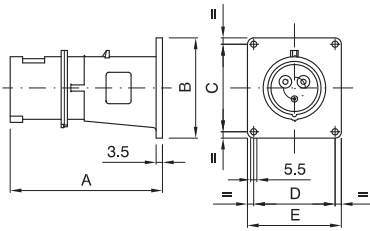
Dimensions valid for all versions

IEC 309 RANGE

PLUGS AND SOCKETS IEC 309 STANDARDS

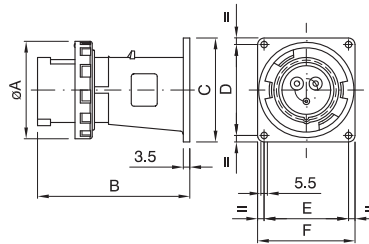


FLUSH-MOUNTING PROTECTED PLUGS



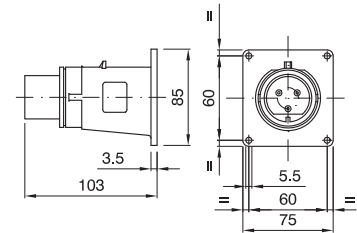
	TYPE	A	B	C	D	E
16 A	2P + \pm	116	85	60	60	75
	3P + \pm	121	85	60	60	75
	3P + N + \pm	131	85	60	60	75
32 A	2P + \pm	140	95	70	60	80
	3P + \pm	140	95	70	60	80
	3P + N + \pm	152	95	70	60	80

WATERTIGHT FLUSH-MOUNTING PLUGS



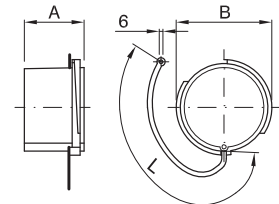
	TYPE	A	B	C	D	E	F
16 A	2P + \pm	73	116	85	60	60	75
	3P + \pm	81	121	85	60	60	75
	3P + N + \pm	89	131	85	60	60	75
32 A	2P + \pm	95	140	95	70	60	80
	3P + \pm	95	140	95	70	60	80
	3P + N + \pm	102	152	95	70	60	80

EXTRA LOW VOLTAGE FLUSH-MOUNTING PROTECTED FIXED PLUGS



Dimensions valid for all versions

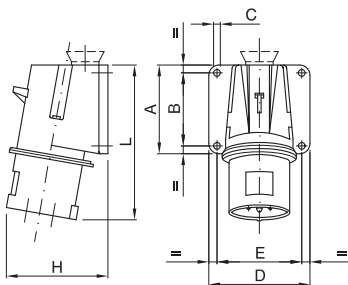
WATERTIGHT COVERS FOR PLUGS



Dimensions valid for all versions

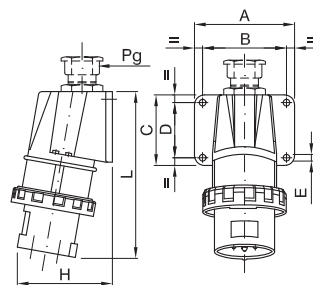
	TYPE	A	B	L
16 A	2P + \pm	41	60	160
	3P + \pm	41	68	160
	3P + N + \pm	41	76	165
32 A	2P + \pm	51	82	165
	3P + \pm	51	82	165
	3P + N + \pm	51	89	180

SURFACE-MOUNTING PROTECTED 90° PLUGS



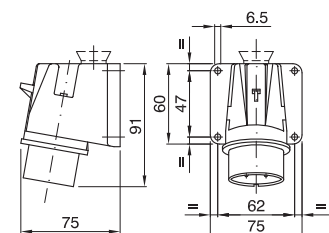
	TYPE	A	B	C	D	E	H	L
16 A	2P + \pm	60	47	6,5	75	62	78	106
	3P + \pm	65	52	6,5	80	67	86	110
	3P + N + \pm	75	62	6,5	85	72	90	122
32 A	2P + \pm	80	67	6,5	90	77	93	135
	3P + \pm	80	67	6,5	90	77	93	135
	3P + N + \pm	80	67	6,5	90	77	93	135

SURFACE-MOUNTING 90° WATERTIGHT PLUGS



	TYPE	a	B	C	D	E	H	L	Pg
16 A	2P + \pm	75	62	60	47	6,5	83	115	21
	3P + \pm	82	67	65	52	6,5	98	120	21
	3P + N + \pm	90	72	75	62	6,5	105	130	21
32 A	2P + \pm	95	77	80	67	6,5	115	145	21
	3P + \pm	95	77	80	67	6,5	115	145	21
	3P + N + \pm	105	77	80	67	6,5	122	145	21
63 A	2P + \pm	115	95	90	70	6,5	135	200	36
	3P + \pm	115	95	90	70	6,5	135	200	36
	3P + N + \pm	115	95	90	70	6,5	135	200	36
125 A	3P + \pm	140	120	140	120	6,5	150	280	48
	3P + N + \pm	140	120	140	120	6,5	150	280	48

EXTRA LOW VOLTAGE 90° SURFACE-MOUNTING PROTECTED FIXED PLUGS



Dimensions valid for all versions

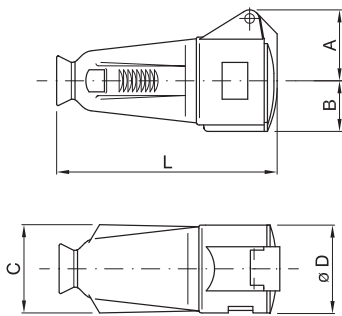
IEC 309 RANGE

IEC 309 RANGE

PLUGS AND SOCKETS IEC 309 STANDARDS

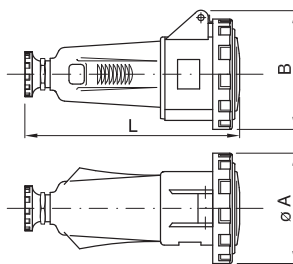


PROTECTED STRAIGHT CONNECTORS



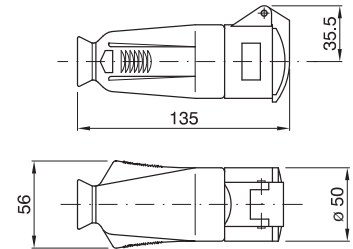
	TYPE	A	B	C	D	L
16 A	2P + ±	40,5	28,5	56	51	132
	3P + ±	43	32	60	56	132
	3P + N + ±	47	36	66	63	144
32 A	2P + ±	48	38,5	66	65	164
	3P + ±	48	38,5	66	65	164
	3P + N + ±	51	42	71	71	164

WATERTIGHT STRAIGHT CONNECTORS



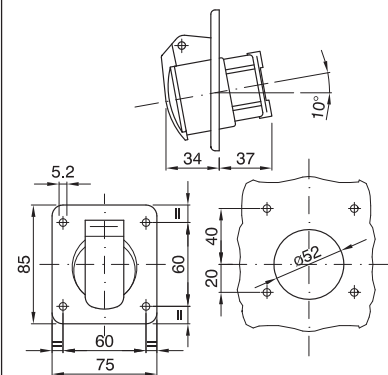
	TYPE	A	B	L	Pg
16 A	2P + ±	73	82	157	16
	3P + ±	81	90	163	16
	3P + N + ±	89	98	175	16
32 A	2P + ±	95	103	195	21
	3P + ±	95	103	195	21
	3P + N + ±	102	110	195	21
63 A	2P + ±	113	118	248	36
	3P + ±	113	118	248	36
	3P + N + ±	113	118	248	36
125 A	3P + ±	130	130	320	48
	3P + N + ±	130	130	320	48

EXTRA LOW-VOLTAGE PROTECTED STRAIGHT CONNECTORS

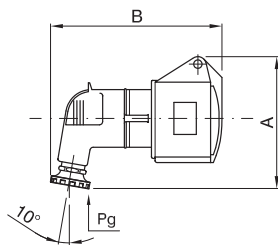


Dimensions valid for all versions

LOW-VOLTAGE PROTECTED

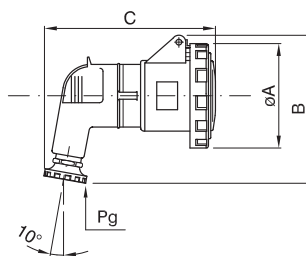


PROTECTED 90° CONNECTORS



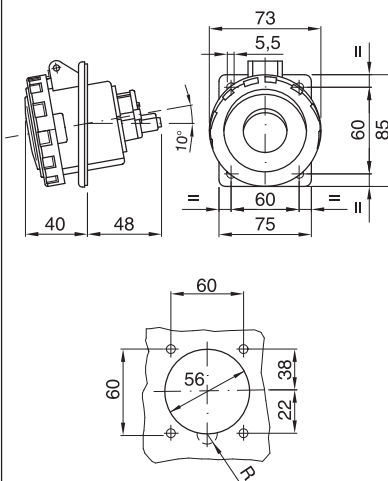
	TYPE	A	B	Pg
16 A	2P + ±	99	113	16
	3P + ±	103	116	16
	3P + N + ±	110	127	16
32 A	2P + ±	121	138	21
	3P + ±	121	138	21
	3P + N + ±	127	149	21

WATERTIGHT 90° CONNECTORS



	TYPE	A	B	C	Pg
16 A	2P + ±	73	102	123	16
	3P + ±	80	108	126	16
	3P + N + ±	88	115	137	16
32 A	2P + ±	95	128	148	21
	3P + ±	95	128	148	21
	3P + N + ±	102	135	159	21

EXTRA LOW-VOLTAGE WATERTIGHT



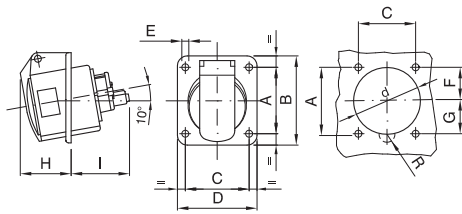
IEC 309 RANGE

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PLUGS AND SOCKETS IEC 309 STANDARDS

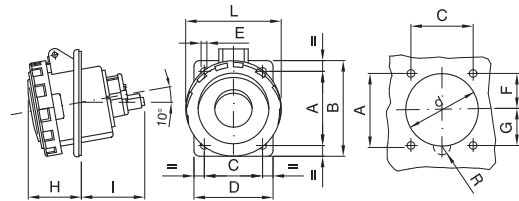


PROTECTED FLUSH-MOUNTING 10° SOCKET-OUTLETS



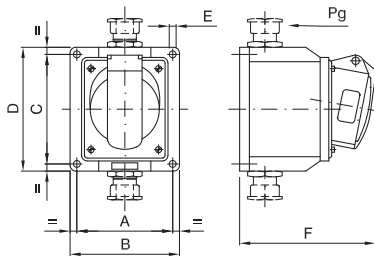
TYPE	A	B	C	D	E	F	G	H	I	∅d	R
2P + ⊕											
(fixing plate)	47	62	47	62	5,5	23,5	23,5	32	48	56	-
16 A 2P + ⊕	60	85	60	75	5,5	38	22	34	50	56	-
3P + ⊕	60	85	60	75	5,5	35	25	33	50	62	-
3P + N + ⊕	60	85	60	75	5,5	29	31	35	50	65	8
2P + ⊕	70	95	60	80	5,5	32	38	43	65	68	8
32 A 3P + ⊕	70	95	60	80	5,5	32	38	43	65	68	8
3P + N + ⊕	70	95	60	80	5,5	29,5	40,5	43	65	74	8

WATERTIGHT FLUSH-MOUNTING 10° SOCKET-OUTLETS



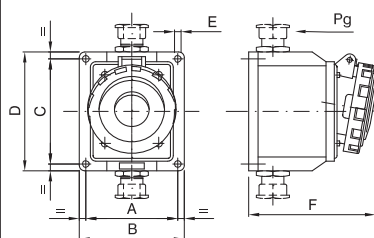
TYPE	A	B	C	D	E	F	G	H	I	L	R	d
2P + ⊕	60	85	60	75	5,5	38	22	40	48	73	-	56
16 A 3P + ⊕	60	85	60	75	5,5	35	25	42	48	81	-	62
3P + N + ⊕	60	85	60	75	5,5	29	31	42	48	89	5	66
2P + ⊕	70	95	60	80	5,5	32	38	47	63	95	7	68
32 A 3P + ⊕	70	95	60	80	5,5	32	38	47	63	95	7	68
3P + N + ⊕	70	95	60	80	5,5	29,5	40,5	48	63	102	7	74
2P + ⊕	85	110	80	100	6	41	44	61	93	113	11	84
63 A 3P + ⊕	85	110	80	100	6	41	44	61	93	113	11	84
3P + N + ⊕	85	110	80	100	6	41	44	61	93	113	11	84
125 A 3P + ⊕	90	114	90	114	6	43	47	80	130	130	13	95
3P + N + ⊕	90	114	90	114	6	43	47	80	130	130	13	95

SURFACE-MOUNTING PROTECTED 10° SOCKET-OUTLETS



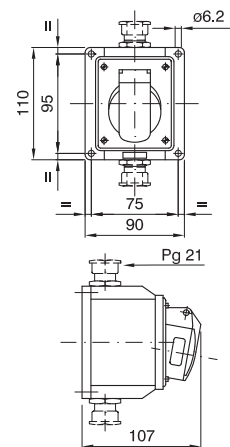
TYPE	A	B	C	D	E	F	Pg
2P + ⊕	75	90	95	110	6,2	105	21
16 A 3P + ⊕	75	90	95	110	6,2	107	21
3P + N + ⊕	75	90	95	110	6,2	109	21
2P + ⊕	90	105	105	120	6,2	125	21
32 A 3P + ⊕	90	105	105	120	6,2	125	21
3P + N + ⊕	90	105	105	120	6,2	125	21

SURFACE-MOUNTING WATERTIGHT 10° SOCKET-OUTLETS



TYPE	A	B	C	D	E	F	Pg
2P + ⊕	75	90	95	110	6,2	113	21
16 A 3P + ⊕	75	90	95	110	6,2	115	21
3P + N + ⊕	75	90	95	110	6,2	115	21
2P + ⊕	90	105	105	120	6,2	130	21
32 A 3P + ⊕	90	105	105	120	6,2	130	21
3P + N + ⊕	90	105	105	120	6,2	130	21
2P + ⊕	100	115	125	140	6,2	173	36
63 A 3P + ⊕	100	115	125	140	6,2	173	36
3P + N + ⊕	100	115	125	140	6,2	173	36

EXTRA LOW VOLTAGE SURFACE-MOUNTED PROTECTED 10° SOCKET-OUTLETS



Dimensions valid for all versions

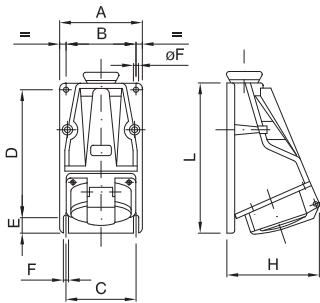
IEC 309 RANGE

IEC 309 RANGE

PLUGS AND SOCKETS IEC 309 STANDARDS

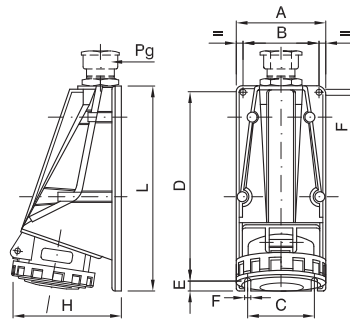


SURFACE-MOUNTING PROTECTED 90° SOCKET-OUTLETS



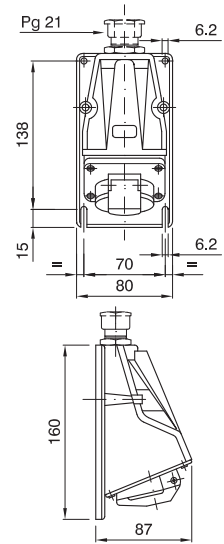
TYPE	A	B	C	D	E	F	H	L
2P+±	90	70	70	138	15	6	93	160
16 A 3P+±	90	70	70	138	15	6	98	160
3P+N+±	90	70	70	138	15	6	103	160
2P+±	105	85	85	148	15	6	110	170
32 A 3P+±	105	85	85	148	15	6	110	170
3P+N+±	105	85	85	148	15	6	115	170

SURFACE-MOUNTING WATERTIGHT 90° SOCKET-OUTLETS



TYPE	A	B	C	D	E	F	H	L	Pg
2P+±	90	70	70	138	15	6	95	160	21
16 A 3P+±	90	70	70	138	15	6	100	160	21
3P+N+±	90	70	70	138	15	6	105	160	21
2P+±	105	85	85	148	15	6	113	170	21
32 A 3P+±	105	85	85	148	15	6	113	170	21
3P+N+±	105	85	85	148	15	6	118	170	21
2P+±	115	95	80	230	15	6	140	255	36
63 A 3P+±	115	95	80	230	15	6	140	255	36
3P+N+±	115	95	80	230	15	6	140	255	36
125 A 3P+±	132	110	90	275	15	6	160	300	48
3P+N+±	132	110	90	275	15	6	160	300	48

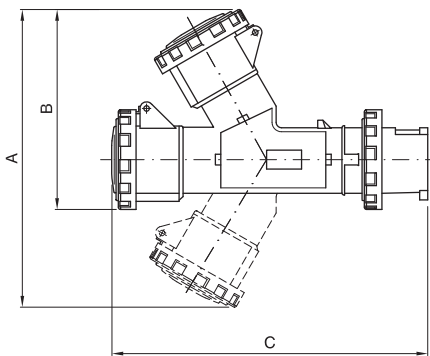
EXTRA LOW VOLTAGE SURFACE-MOUNTING 90° PROTECTED SOCKET-OUTLETS



Dimensions valid for all versions

IEC 309 RANGE

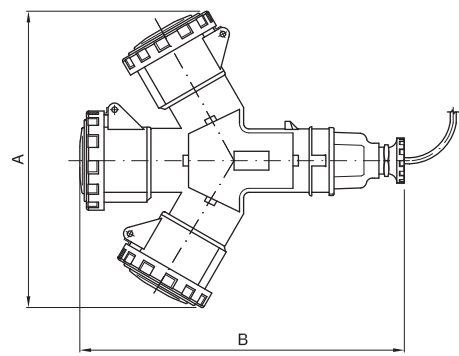
WATERTIGHT MULTIPLE-OUTLET SOCKETS



CODE	A	B	C	NO. OUTPUTS
GW 64 008				
GW 64 010		146	235	
GW 64 009				
GW 64 011		156	246	2
GW 64 012				
GW 64 014		166	258	
GW 64 022	218		235	
GW 64 024				
GW 64 023				3
GW 64 025	230		246	
GW 64 027				

CODE	A	C	NO. OUTPUTS
GW 64 026	242	258	
GW 64 028			
GW 64 059	245	260	
GW 64 060			
GW 64 062	235	265	
GW 64 063	250	280	3
GW 64 064	255	295	
GW 64 061	280	305	
GW 64 065	295	370	
GW 64 068	270	270	

MULTIPLE-OUTLET SOCKETS WITH WATERTIGHT CABLE AND PLUG



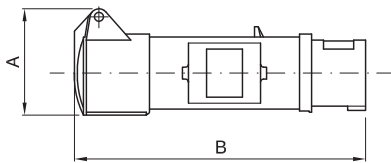
CODE	A	B
GW 64 050		
GW 64 052	218	254
GW 64 051		
GW 64 053	230	262
GW 64 055		
GW 64 054	242	277
GW 64 056		

IEC 309 RANGE

PLUGS AND SOCKETS IEC 309 STANDARDS

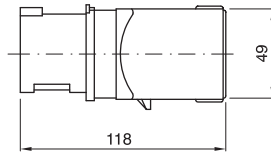


PROTECTED PHASE INVERTER



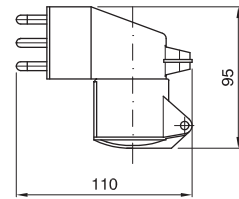
CODE	A	B
GW 64 066	76	196
GW 64 067	83	196

FROM INDUSTRIAL TO DOMESTIC SYSTEM ADAPTORS

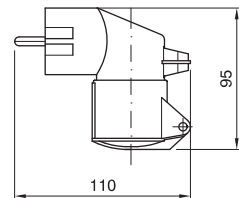


CODE	A
GW 64 203	118
GW 64 204	
GW 64 206	
GW 64 210	
GW 64 211	
GW 64 212	
GW 64 215	
GW 64 207	123
GW 64 216	
GW 64 217	
GW 64 217	

FROM DOMESTIC TO INDUSTRIAL SYSTEM ADAPTORS

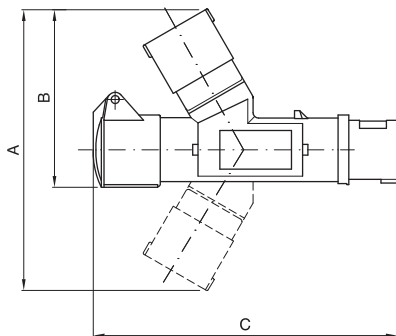


GW 64 208



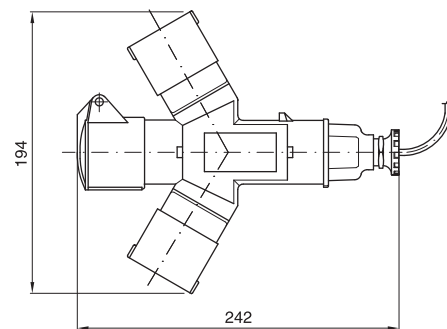
GW 64 209

SYSTEM BRANCHED ADAPTORS WITH PLUG



CODE	A	B	C	NO. OUTPUTS
GW 64 221	194	125	233	2
GW 64 222				
GW 64 223				
GW 64 226		134	245	3
GW 64 227				
GW 64 228				
GW 64 231	202	233	245	3
GW 64 232				
GW 64 236				
GW 64 237				

SYSTEM BRANCHED ADAPTORS WITH CABLE AND PLUG



CODE	A	B
GW 64 263	194	242
GW 64 265	202	254

IEC 309 RANGE