

New range of plugs and socket-outlets meeting the dimensional, construction/performance and safety requisites defined by the international Standards IEC 60309-1 and IEC 60309-2, subsequently assimilated at European level as EN 60309-1 and EN 60309-2.

## Technical data and compliance with Standards

ELECTRICAL CHARACTERISTICS						
Rated current (In) (A)	Rated frequency (Hz)	Rated voltage Un (V)	Permissible overload (A)	No. of operations carried out	Breaking capacity at 1.1 Un (A)	Insulation resistance (MΩ)
16	50/60 100 ÷ 300 > 300 ÷ 500 direct current	> 50 ÷ 690 transformer	22	> 5000	20	> 10
32			42	> 2000	40	
63	50/60 100 ÷ 300 > 300 ÷ 500 direct current	> 50 ÷ 690	-	> 2000	79	> 10
125			-	> 500	156	

MECHANICAL AND PHYSICAL CHARACTERISTICS				
Operating temperature (°C)	Degree of protection (IP)	Impact resistance (IK)	Heat resistance	Resistance to abnormal heat and fire
			Thermo-pressure with ball (°C)	Glow wire test (°C)
-25 ÷ +55	Straight plugs and sockets HP*: IP44/IP54 e IP66/IP67/IP68/IP69	Straight plugs and sockets HP: IK 09	125 (active parts) 80 (passive parts)	850 (active parts) 650 (passive parts)
	10° flush-mounting sockets HP: IP44/IP54 e IP66/IP67	10° flush-mounting sockets HP: IK 09		
	Other: IP44 e IP67	Other: IK 08		

(\*) Although the international product standard IEC 60 309 does not currently require it, these products have been voluntarily subjected to tests with degrees of protection higher than IP66/IP67.

IP68: 2 bar/6 h according to EN 60529 standard after aging test in conformity with EN 60309 standards.

IP69: according to IEC 60529 standard after aging test in conformity with EN 60309 standards.

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

## Wiring information - Plugs and sockets IEC 309 HP

TIGHTENING CAPACITY OF THE TERMINALS (mm <sup>2</sup> )				
Rated current (In) (A)	Flexible cables		Rigid or stranded cables	
	MIN.	MAX.	MIN.	MAX.
16	1	2.5	1.5	4
32	2.5	6	2.5	10
63	6	16	6	25
125	16	50	25	70

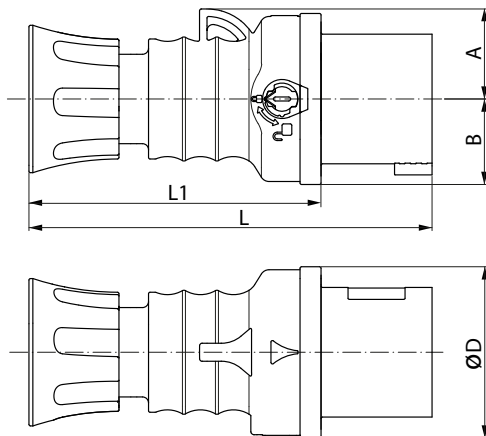
TIGHTENING CAPACITY OF THE CABLE FASTENER CLAMP * (mm)			
Rated current (In) (A)	No. poles	MIN.	MAX.
16	2P + $\frac{\perp}{\perp}$	7.5	13.8
	3P + $\frac{\perp}{\perp}$	7.5	13.8
	3P + N + $\frac{\perp}{\perp}$	9.2	19.9
32	2P + $\frac{\perp}{\perp}$	9.2	19.9
	3P + $\frac{\perp}{\perp}$	9.2	19.9
	3P + N + $\frac{\perp}{\perp}$	9.2	19.9
63**	2P + $\frac{\perp}{\perp}$	16.1	37
	3P + $\frac{\perp}{\perp}$	17.9	37
	3P + N + $\frac{\perp}{\perp}$	19.9	37
125**	2P + $\frac{\perp}{\perp}$	24.7	38.5
	3P + $\frac{\perp}{\perp}$	27	49
	3P + N + $\frac{\perp}{\perp}$	29.9	49

(\*) NB: these values refer to flexible, rigid and stranded cables.

(\*\*) Contact SAT customer service for indications of the cable size to be used in order to maintain the IPX8 degree

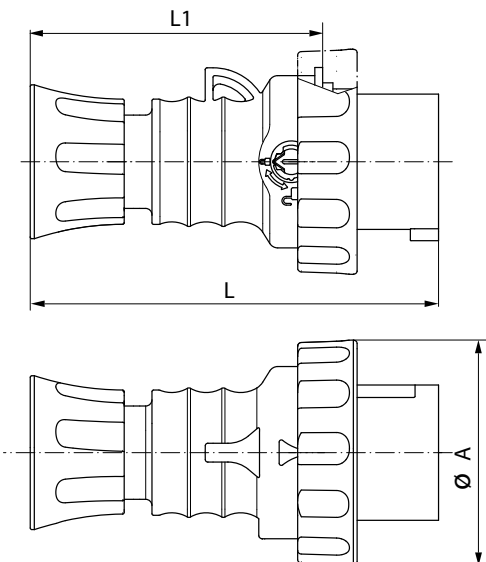
## Dimension tables - Plugs and sockets IEC 309 HP 16-32A

### STRAIGHT PLUGS - IP44/IP54



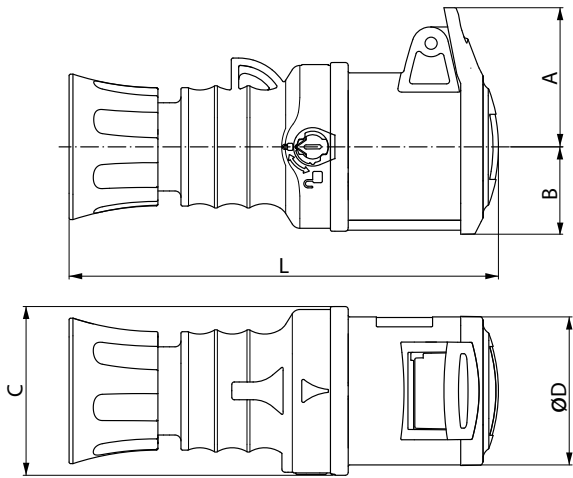
TYPE		A	B	D	L	L1
16A	2P + $\frac{\perp}{\perp}$	30	28.5	57	134	97
	3P + $\frac{\perp}{\perp}$	34	32	62	134	97
	3P+N+ $\frac{\perp}{\perp}$	38	36	68	153	115
32A	2P + $\frac{\perp}{\perp}$	40	41.5	71	162	115
	3P + $\frac{\perp}{\perp}$	40	41.5	71	162	115
	3P+N+ $\frac{\perp}{\perp}$	45	42	75	176	130

### STRAIGHT PLUGS - IP66 / IP67 / IP68 / IP69



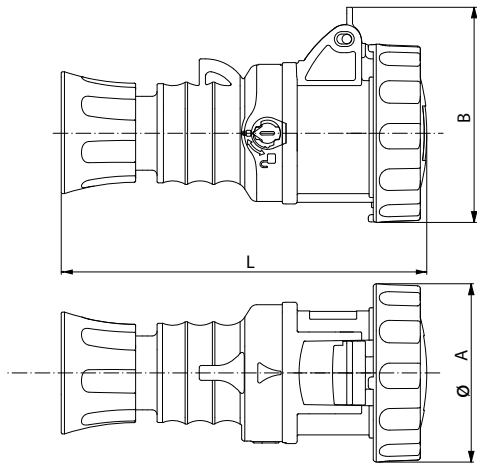
TYPE		A	L	L1
16A	2P + $\frac{\perp}{\perp}$	72	130	96
	3P + $\frac{\perp}{\perp}$	81	130.5	96.5
	3P+N+ $\frac{\perp}{\perp}$	88	150	116
32A	2P + $\frac{\perp}{\perp}$	93	158	114
	3P + $\frac{\perp}{\perp}$	93	158	114
	3P+N+ $\frac{\perp}{\perp}$	101	170	127

## STRAIGHT CONNECTORS - IP44/IP54



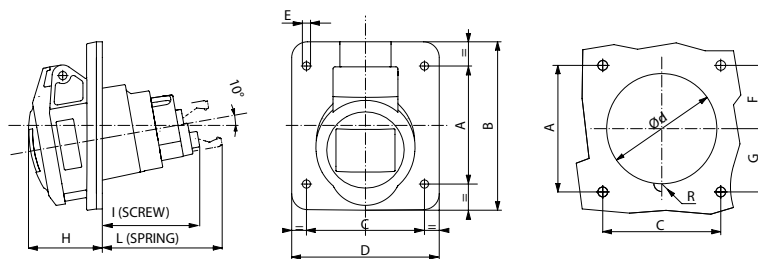
TYPE		A	B	C	D	L
16A	2P+ $\pm$	47	29.5	57	50	148
	3P+ $\pm$	50	32	62	55.5	148
	3P+N+ $\pm$	56.5	35.5	68	62.5	165
32A	2P+ $\pm$	59	39	71	64.5	176
	3P+ $\pm$	59	39	71	64.5	176
	3P+N+ $\pm$	62	42	75	70.5	190

## STRAIGHT CONNECTORS - IP66 / IP67 / IP68 / IP69



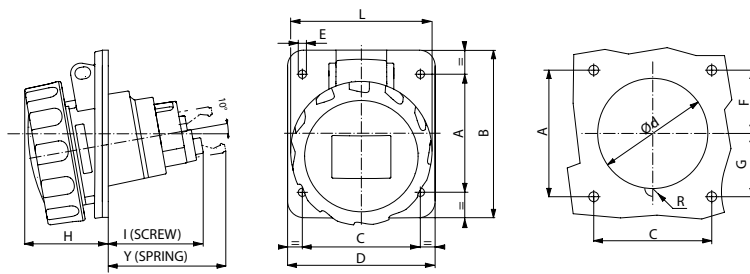
TYPE		A	B	L
16A	2P+ $\pm$	72	87	148
	3P+ $\pm$	81	95	148
	3P+N+ $\pm$	88	102.5	167
32A	2P+ $\pm$	93	108	178
	3P+ $\pm$	93	108	178
	3P+N+ $\pm$	101	116	189

## 10° FLUSH-MOUNTING SOCKET-OUTLETS - IP44/IP54



TYPE		A	B	C	D	E	F	G	H	I	L	Ød	R
16A	2P+ $\pm$	60	85	60	75	4.2	38	22	37.5	49.5	61	56	-
	3P+ $\pm$	60	85	60	75	4.2	35	25	37	51.5	61	62	-
	3P+N+ $\pm$	60	85	60	75	4.2	29	31	39.5	49	60	65	8
32A	2P+ $\pm$	70	95	60	80	4.2	32	38	46.5	60	68	68	8
	3P+ $\pm$	70	95	60	80	4.2	32	38	46.5	60	68	68	8
	3P+N+ $\pm$	70	95	60	80	4.2	29.5	40.5	48.5	60	68	74	8

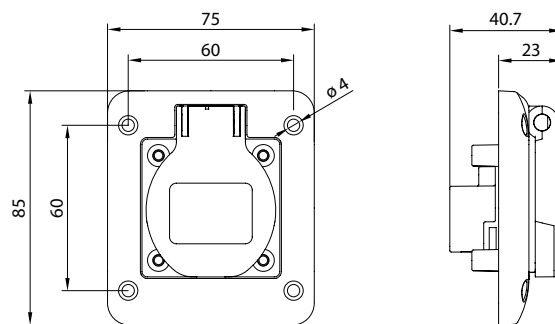
## 10° FLUSH-MOUNTING SOCKET-OUTLETS - IP66 / IP67



TYPE	A	B	C	D	E	F	G	H	I	L	Y	ød	R	
16A	2P+ $\frac{1}{2}$	60	85	60	75	4.2	38	22	42.5	48	72	60	56	-
	3P+ $\frac{1}{2}$	60	85	60	75	4.2	35	25	43	50.5	81	60	62	-
	3P+N+ $\frac{1}{2}$	60	85	60	75	4.2	29	31	44.5	48.5	88	60	66	5
32A	2P+ $\frac{1}{2}$	70	95	60	80	4.2	32	38	51	60.5	93	68.5	68	7
	3P+ $\frac{1}{2}$	70	95	60	80	4.2	32	38	51	60.5	93	68.5	68	7
	3P+N+ $\frac{1}{2}$	70	95	60	80	4.2	29.5	40.5	53	60.5	101	68.5	74	7

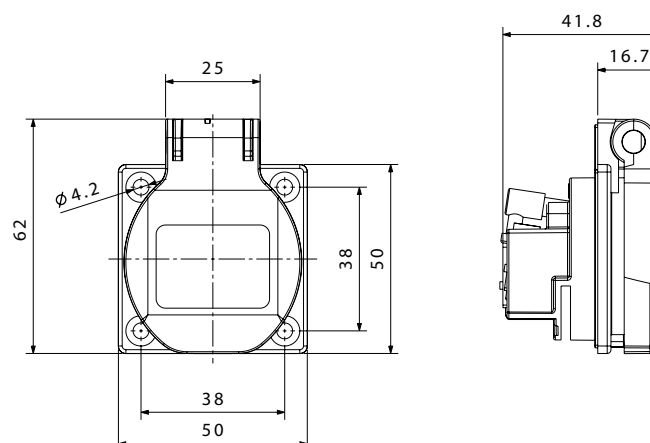
## Dimension tables - Flush-mounting domestic socket-outlets

### FLUSH-MOUNTING SOCKET-OUTLETS GERMAN STD 85X75 MM - IP54



GW62392

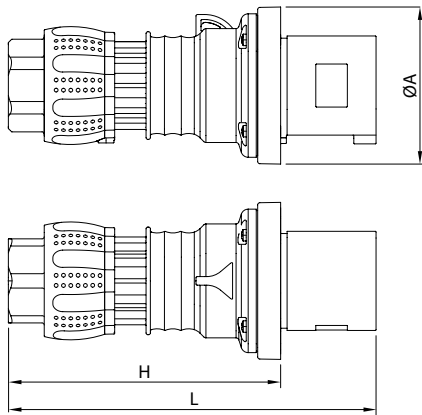
### FLUSH-MOUNTING SOCKET-OUTLETS GERMAN OR FRENCH STD 50X50 MM - IP54



GW62393 and GW62394

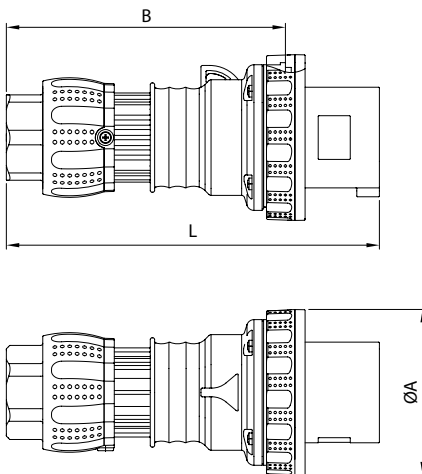
## Dimension tables - Plugs and sockets IEC 309 HP 63-125A

### STRAIGHT PLUGS - IP44/IP54



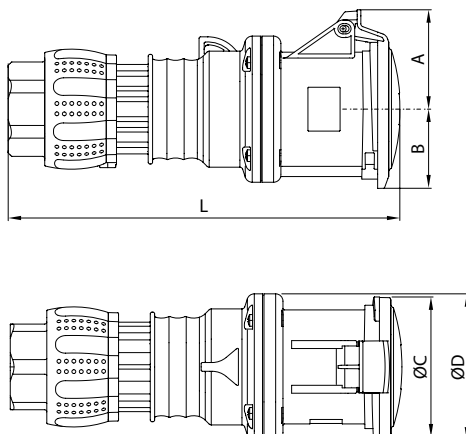
TYPE		A	L	H
63A	2P+ $\frac{1}{2}$	109	256	190
	3P+ $\frac{1}{2}$			
	3P+N+ $\frac{1}{2}$			

### STRAIGHT PLUGS - IP66 / IP67 / IP68 / IP69



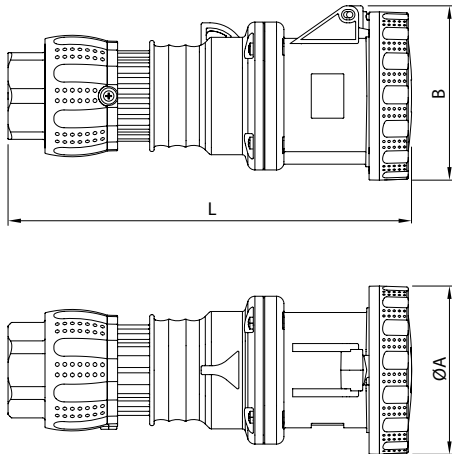
TYPE		A	B	L
63A	2P+ $\frac{1}{2}$	114	192	256
	3P+ $\frac{1}{2}$			
	3P+N+ $\frac{1}{2}$			
125A	2P+ $\frac{1}{2}$	131	241	313
	3P+ $\frac{1}{2}$			
	3P+N+ $\frac{1}{2}$			

### STRAIGHT CONNECTORS - IP44/IP54



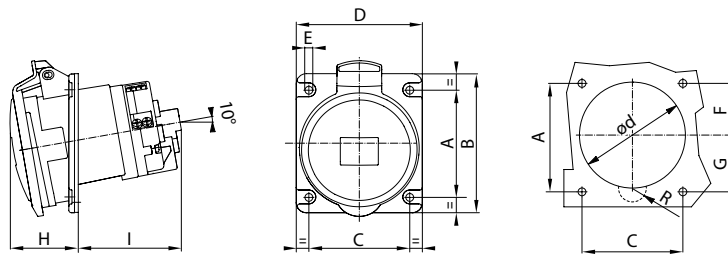
TYPE		A	B	C	D	L
63A	2P+ $\frac{1}{2}$	68	54	96	100	268
	3P+ $\frac{1}{2}$					
	3P+N+ $\frac{1}{2}$					

## STRAIGHT CONNECTORS - IP66 / IP67 / IP68 / IP69



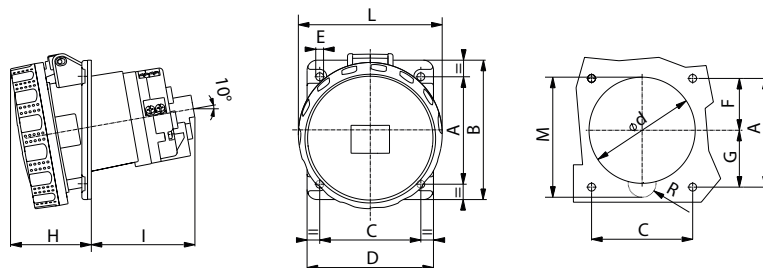
TYPE		A	B	L
63A	2P+ $\pm$	114	118	273
	3P+ $\pm$			
	3P+N+ $\pm$			
125A	2P+ $\pm$	130	131	335
	3P+ $\pm$			
	3P+N+ $\pm$			

## 10° FLUSH-MOUNTING SOCKET-OUTLETS - IP44/IP54



TYPE		A	B	C	D	E	F	G	H	I	Ød	R
63A	2P+ $\pm$	85	110	80	100	6	41	44	54	82	84	11
	3P+ $\pm$											
	3P+N+ $\pm$											

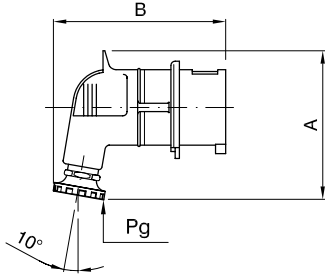
## 10° FLUSH-MOUNTING SOCKET-OUTLETS - IP66 / IP67



TYPE		A	B	C	D	E	F	G	H	I	L	Ød	R	M
63A	2P+ $\pm$	85	110	80	100	6	41	44	64	82	114	84	11	95
	3P+ $\pm$													
	3P+N+ $\pm$													
125A	2P+ $\pm$	90	114	90	114	6	43	47	76	108	131	95	13	104
	3P+ $\pm$													
	3P+N+ $\pm$													

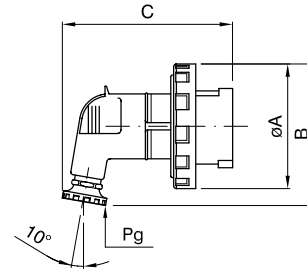
## Dimension tables - Plugs and sockets IEC 309

### PROTECTED 90° MOBILE PLUGS - IP 44



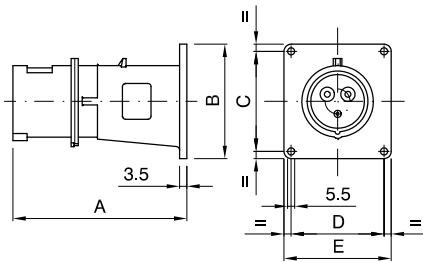
	TYPE	A	B	Pg
16 A	2P + $\frac{1}{2}$	88	105	16
	3P + $\frac{1}{2}$	94	108	16
	3P + N + $\frac{1}{2}$	101	119	16
32 A	2P + $\frac{1}{2}$	113	129	21
	3P + $\frac{1}{2}$	113	129	21
	3P + N + $\frac{1}{2}$	121	140	21

### WATERTIGHT 90° MOBILE PLUGS - IP 67



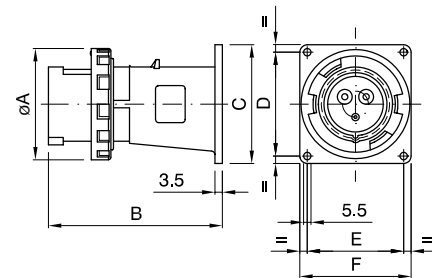
	TYPE	A	B	C	Pg
16 A	2P + $\frac{1}{2}$	73	95	105	16
	3P + $\frac{1}{2}$	80	100	108	16
	3P + N + $\frac{1}{2}$	88	107	119	16
32 A	2P + $\frac{1}{2}$	95	121	129	21
	3P + $\frac{1}{2}$	95	121	129	21
	3P + N + $\frac{1}{2}$	102	127	140	21

### FLUSH-MOUNTING PROTECTED FIXED PLUGS - IP 44



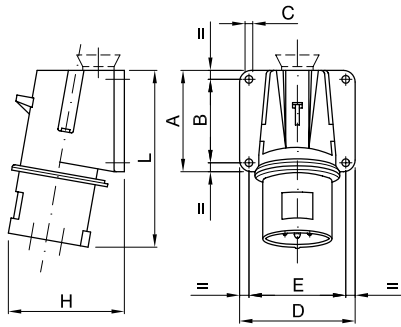
	TYPE	A	B	C	D	E
16 A	2P + $\frac{1}{2}$	116	85	60	60	75
	3P + $\frac{1}{2}$	121	85	60	60	75
	3P + N + $\frac{1}{2}$	131	85	60	60	75
32 A	2P + $\frac{1}{2}$	140	95	70	60	80
	3P + $\frac{1}{2}$	140	95	70	60	80
	3P + N + $\frac{1}{2}$	152	95	70	60	80

### FLUSH-MOUNTING WATERTIGHT FIXED PLUGS - IP 67



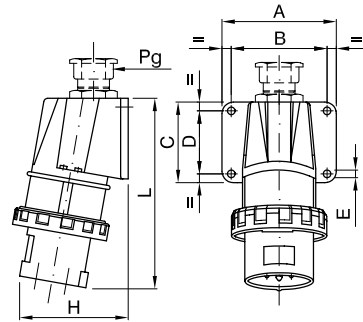
	TYPE	A	B	C	D	E	F
16 A	2P + $\frac{1}{2}$	73	116	85	60	60	75
	3P + $\frac{1}{2}$	81	121	85	60	60	75
	3P + N + $\frac{1}{2}$	89	131	85	60	60	75
32 A	2P + $\frac{1}{2}$	95	140	95	70	60	80
	3P + $\frac{1}{2}$	95	140	95	70	60	80
	3P + N + $\frac{1}{2}$	102	152	95	70	60	80

## SURFACE-MOUNTING PROTECTED 90° FIXED PLUGS - IP 44



TYPE	A	B	C	D	E	H	L
<b>16 A</b>	2P + $\pm$	60	47	6.5	75	62	78
	3P + $\pm$	65	52	6.5	80	67	86
	3P + N + $\pm$	75	62	6.5	85	72	90
<b>32 A</b>	2P + $\pm$	80	67	6.5	90	77	93
	3P + $\pm$	80	67	6.5	90	77	93
	3P + N + $\pm$	80	67	6.5	90	77	103

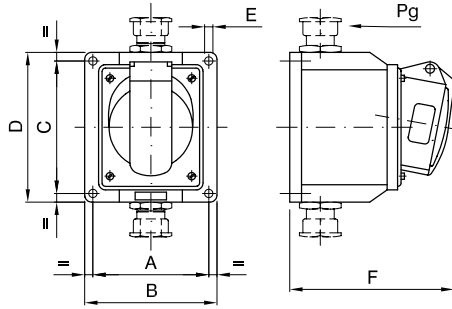
## SURFACE-MOUNTING WATERTIGHT 90° FIXED PLUGS - IP 67



TYPE	A	B	C	D	E	H	L	Pg
<b>16 A</b>	2P + $\pm$	75	62	60	47	6.5	83	21
	3P + $\pm$	82	67	65	52	6.5	98	21
	3P + N + $\pm$	90	72	75	62	6.5	105	21
<b>32 A</b>	2P + $\pm$	95	77	80	67	6.5	115	21
	3P + $\pm$	95	77	80	67	6.5	115	21
	3P + N + $\pm$	105	77	80	67	6.5	122	21
<b>63 A</b>	2P + $\pm$	115	95	90	70	6.5	135	36
	3P + $\pm$	115	95	90	70	6.5	135	36
	3P + N + $\pm$	115	95	90	70	6.5	135	36
<b>125 A</b>	3P + $\pm$	140	120	140	120	6.5	150	48
	3P + N + $\pm$	140	120	140	120	6.5	150	48

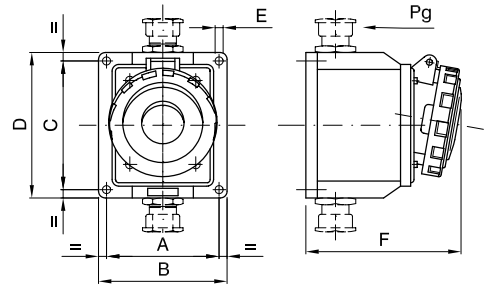


## SURFACE-MOUNTING PROTECTED 10° FIXED SOCKET-OUTLETS - IP44



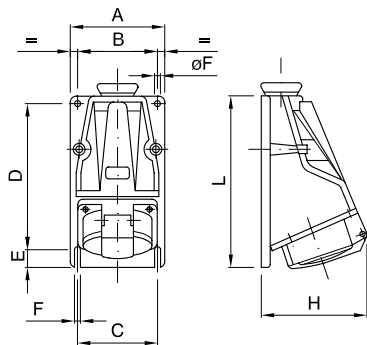
TYPE	A	B	C	D	E	F	Pg
16 A	2P + $\frac{1}{2}$	75	90	95	110	6.2	105 21
	3P + $\frac{1}{2}$	75	90	95	110	6.2	107 21
	3P + N + $\frac{1}{2}$	75	90	95	110	6.2	109 21
32 A	2P + $\frac{1}{2}$	90	105	105	120	6.2	125 21
	3P + $\frac{1}{2}$	90	105	105	120	6.2	125 21
	3P + N + $\frac{1}{2}$	90	105	105	120	6.2	125 21

## SURFACE-MOUNTING WATERTIGHT 10° FIXED SOCKET-OUTLETS - IP67



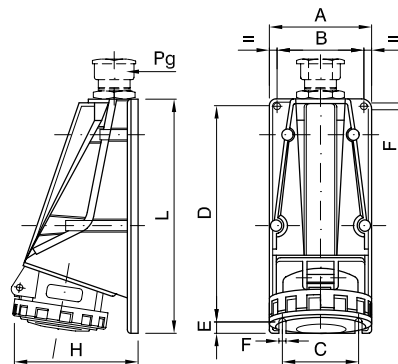
TYPE	A	B	C	D	E	F	Pg
16 A	2P + $\frac{1}{2}$	75	90	95	110	6.2	113 21
	3P + $\frac{1}{2}$	75	90	95	110	6.2	115 21
	3P + N + $\frac{1}{2}$	75	90	95	110	6.2	115 21
32 A	2P + $\frac{1}{2}$	90	105	105	120	6.2	130 21
	3P + $\frac{1}{2}$	90	105	105	120	6.2	130 21
	3P + N + $\frac{1}{2}$	90	105	105	120	6.2	130 21
63 A	2P + $\frac{1}{2}$	100	115	125	140	6.2	173 36
	3P + $\frac{1}{2}$	100	115	125	140	6.2	173 36
	3P + N + $\frac{1}{2}$	100	115	125	140	6.2	173 36

## SURFACE-MOUNTING PROTECTED 90° FIXED SOCKET-OUTLETS -IP44



TYPE	A	B	C	D	E	F	H	L	
16 A	2P + $\frac{1}{2}$	90	70	70	138	15	6	93	160
	3P + $\frac{1}{2}$	90	70	70	138	15	6	98	160
	3P + N + $\frac{1}{2}$	90	70	70	138	15	6	103	160
32 A	2P + $\frac{1}{2}$	105	85	85	148	15	6	110	170
	3P + $\frac{1}{2}$	105	85	85	148	15	6	110	170
	3P + N + $\frac{1}{2}$	105	85	85	148	15	6	115	170

## SURFACE-MOUNTING WATERTIGHT 90° FIXED SOCKET-OUTLETS - IP67



TYPE	A	B	C	D	E	F	H	L	Pg	
16 A	2P + $\frac{1}{2}$	90	70	70	138	15	6	95	160	21
	3P + $\frac{1}{2}$	90	70	70	138	15	6	100	160	21
32 A	2P + $\frac{1}{2}$	105	85	85	148	15	6	113	170	21
	3P + $\frac{1}{2}$	105	85	85	148	15	6	113	170	21
63 A	2P + $\frac{1}{2}$	115	95	80	230	15	6	140	255	36
	3P + $\frac{1}{2}$	115	95	80	230	15	6	140	255	36
	3P + N + $\frac{1}{2}$	115	95	80	230	15	6	140	255	36
125 A	2P + $\frac{1}{2}$	132	110	90	275	15	6	160	300	48
	3P + $\frac{1}{2}$	132	110	90	275	15	6	160	300	48