

OPTIMA Series

Plugs and sockets for industrial applications



INDUSTRIAL PLUGS AND SOCKETS

REFERENCE STANDARDS



EN 60309-1
Plugs, socket-outlets and couplers for industrial purposes.
Part 1: general requirements.

EN 60309-2
Plugs, socket-outlets and couplers for industrial purposes.
Part 2: dimensional interchangeability requirements for pin and contact-tube accessories.

QUALITY MARKS



VERSIONS

	Plugs
	Connectors
	Appliance inlets
	Flush mounting socket outlets

TECHNICAL CHARACTERISTICS

Rated current:	20A-32A-63A-125A
Rated voltage:	100÷690V~
Frequency:	c.c - 50÷500Hz
Insulating voltage:	500/690V~
Protection degree:	IP44-IP66/IP67
Operating temperature according to the reference standard:	-25°C +40°C
Max operating temperature:	60°C
Glow Wire test:	650°C/850°C
Material:	Engineering plastic
IK degree at 20°C:	IK08
Cable inlets:	Cable gland
Halogen free:	Yes
Terminals:	Screw (20A-32A-63A-125A)
Snap-on device:	20A-32A

BEHAVIOUR WITH CHEMICAL AND ATMOSPHERIC AGENTS

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

PLUGS

Current rating	No of poles	Hr position	Voltage AC	IP44	
				213.2033	218.2033
20A	2P+E		200-250		
	3P+E	6	380-415	213.2036	218.2036
	3P+N+E		346-415	213.2037	218.2037
32A	2P+E		200-250	213.3233	218.3233
	3P+E	6	380-415	213.3236	218.3236
	3P+N+E		346-415	213.3237	218.3237
63A	2P+E		200-250		218.6333
	3P+E	6	380-415		218.6336
	3P+N+E		346-415		218.6337
125A	2P+E		200-250		218.12533
	3P+E	6	380-415		218.12536
	3P+N+E		346-415		218.12537

WIRING AND INSTALLATION

Wiring capacity of the terminals
Cross-section of the connectable conductors (mm²)

Rated voltage	Rated current (A)	Plugs, connectors and appliance inlets		Socket outlets	
		Min	Max	Min	Max
>50V	20A	1	2,5	1,5	4
	32A	2,5	6	2,5	10
	63A	6	16	6	25
	125A	16	50	25	70

Max. cable size accepted by the cable clamp:

Rated current (A)	Outside Ø mm	
	Min	Max
20A	8	15
32A	11,5	21
63A	17	31
125A	26	48

DIMENSIONS

IP44					
20A	2P+E	A	Ø D	L Min	Ø Min
	3P+E	30	56	128	6
	3P+N+E	34	60	135	6
32A	2P+E	38	65	153	9
	3P+E	40	65	162	9
	3P+N+E	40	65	162	9
63A	2P+E	45	73	176	13
	3P+E				
	3P+N+E				

IP66/IP67

20A	2P+E	A	Ø G	L Min	Ø Min
	3P+E	103	73	128	6
	3P+N+E	110	81	135	6
32A	2P+E	129	88	153	9
	3P+E	131	93	162	9
	3P+N+E	131	93	162	9
63A	2P+E	145	101	176	13
	3P+E	145	101	176	13
	3P+N+E	145	101	176	13
125A	2P+E	160	112	220	17
	3P+E	160	112	220	17
	3P+N+E	160	112	220	17

(Dimensions in mm)

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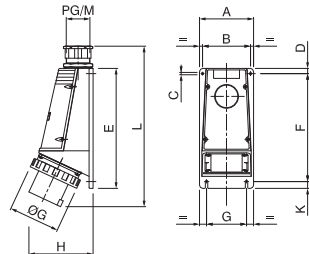
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PLUGS AND SOCKETS
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SURFACE MOUNTING APPLIANCE INLETS

245.					
					
Current rating	No of poles	Hr position	Voltage AC	IP66/IP67 PG entry	IP66/IP67 metric entry
63A	2P+E	6	200-250	245.6393	245.M6393
	3P+E		380-415	245.6396	245.M6396
	3P+N+E		346-415	245.6398	245.M6398
125A	2P+E	6	200-250	245.12593	245.M12593
	3P+E		380-415	245.12596	245.M12596
	3P+N+E		346-415	245.12598	245.M12598

DIMENSIONS

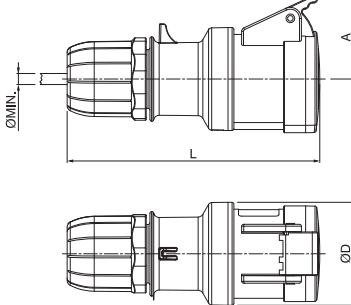
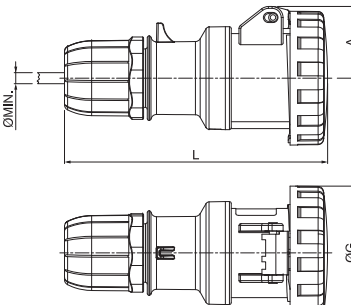
IP66/IP67										
										
63A	2P+E	A	B	ØC	ØD	E	F	ØG	H	I
	3P+E	85	80	79	4.5	110	100	112	88.5	44.5
	3P+N+E	85	80	79	4.5	110	100	112	88.5	44.5
125A	2P+E	80	85	79	4.5	110	100	112	88.5	44.5
	3P+E	100	100	90	6	114	114	128.5	97	53.5
	3P+N+E	100	100	90	6	114	114	128.5	97	53.5

(Dimensions in mm)

CONNECTORS

313.					
					
318.					
					
Current rating	No of poles	Hr position	Voltage AC	IP44	IP66/IP67
20A	2P+E	6	200-250	313.2043	318.2043
	3P+E		380-415	313.2046	318.2046
	3P+N+E		346-415	313.2047	318.2047
32A	2P+E	6	200-250	313.3243	318.3243
	3P+E		380-415	313.3246	318.3246
	3P+N+E		346-415	313.3247	318.3247
63A	2P+E	6	200-250		318.6343
	3P+E		380-415		318.6347
	3P+N+E		346-415		318.6347
125A	2P+E	6	200-250		318.12543
	3P+E		380-415		318.12546
	3P+N+E		346-415		318.12547

DIMENSIONS

IP44					
					
20A	2P+E	A	Ø D	L Min	Ø Min
	3P+E	46	56	138	6
	3P+N+E	49	60	145	6
32A	2P+E	54	65	165	9
	3P+E	54	65	175	9
	3P+N+E	59	73	190	13
IP66/IP67					
					
20A	2P+E	A	Ø G	L Min	Ø Min
	3P+E	39	73	141	6
	3P+N+E	43	81	148	6
32A	2P+E	51	88	168	9
	3P+E	56	93	178	9
	3P+N+E	52	101	195	13
63A	2P+E	57.5	112	230	17
	3P+N+E	64,25	128	288	26

(Dimensions in mm)

SURFACE MOUNTING APPLIANCE INLETS

243.					
					
248.					
					
246.					
					
Current rating	No of poles	Hr position	Voltage AC	IP44	IP66/IP67
20A	2P+E	6	200-250	243.2093	248.2093
	3P+E		380-415	243.2096	248.2096
	3P+N+E		346-415	243.2097	248.2097
32A	2P+E	6	200-250	243.3293	248.3293
	3P+E		380-415	243.3296	248.3296
	3P+N+E		346-415	243.3297	248.3297
63A	2P+E	6	200-250		246.6393
	3P+E		380-415		246.6396
	3P+N+E		346-415		246.6398
125A	2P+E	6	200-250		246.12593
	3P+E		380-415		246.12596
	3P+N+E		346-415		246.12597

DIMENSIONS

IP44

		A	B
20A	2P+E	2	65
	3P+E	2	65
	3P+N+E	2	65
32A	2P+E	19	73
	3P+E	19	73
	3P+N+E	19	73

IP66/IP67

		A	B
20A	2P+E	2	65
	3P+E	2	65
	3P+N+E	2	65
32A	2P+E	19	73
	3P+E	19	73
	3P+N+E	19	73

IP66/IP67

		A	B	C	D	E	F	G	H	K	L	PGM	ØG
63A	2P+E	120	200	45	137	235	205	80	131	15	267	29/32	112
	3P+E	123	205	46	141	235	205	80	131	15	267	29/32	112
	3P+N+E	120	203	45	141	235	205	80	131	15	267	29/32	112
125A	2P+E	124	215	46	151	300	270	100	159	171	346	48/63	128
	3P+E	120	223	45	160	300	270	100	159	17	346	48/63	128
	3P+N+E	126	220	46	154	300	270	100	159	17	346	48/63	128

(Dimensions in mm)



"Snap-on" device with stainless steel spring to guarantee frequent opening/closing (possibility to inspect the terminals).

Insertion of the conductor with insulation into the perforating terminal.

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FLUSH MOUNTING SOCKET OUTLETS

Current rating	No of poles	Hr position	Voltage AC	IP44	IP66/IP67
20A	2P+E	6	200-250	413.2063	418.2063
	3P+E		380-415	413.2066	418.2066
	3P+N+E		346-415	413.2067	418.2067
32A	2P+E	6	200-250	413.3263	418.3263
	3P+E		380-415	413.3266	418.3266
	3P+N+E		346-415	413.3267	418.3267
63A	2P+E	6	200-250		415.6363
	3P+E		380-415		415.6366
	3P+N+E		346-415		415.6367
125A	2P+E	6	200-250		415.12563
	3P+E		380-415		415.12566
	3P+N+E		346-415		415.12567

DIMENSIONS

IP44

		A	B	C	D	F	G	H	I
20A	2P+E	70	87	56	70	73	65	45	40
	3P+E	70	87	56	70	73	65	46	40
	3P+N+E	70	87	56	70	73	65	48	41
32A	2P+E	90	106	68	84	87	76	52	60
	3P+E	90	106	68	84	87	76	52	60
	3P+N+E	90	106	68	84	87	76	54	61

IP66/IP67

		A	B	C	D	E	F	G	H	I
20A	2P+E	70	87	56	70	73	73	65	52	40
	3P+E	70	87	56	70	81	73	65	54	40
	3P+N+E	70	87	56	70	88	73	65	55	41
32A	2P+E	90	106	68	84	93	87	76	61	60
	3P+E	90	106	68	84	93	87	76	61	60
	3P+N+E	90	106	68	84	101	87	76	63	61

		A	B	C	D	E	F	G	H	I
63A	2P+E	85	110	80	100	4.5	92	80	63	89
	3P+E	85	110	80	100	4.5	92	80	63	89
	3P+N+E	85	110	80	100	4.5	92	80	63	89
125A	2P+E	90	114	90	114	6	104	92	92	101
	3P+E	90	114	90	114	6	104	92	92	101
	3P+N+E	90	114	90	114	6	104	92	92	101

SURFACE MOUNTING SOCKET OUTLETS

Current rating	No of poles	Hr position	Voltage AC	IP44	IP66/IP67
20A	2P+E	6	200-250	513.2053	513.2053T
	3P+E		380-415	513.2056	513.2056T
	3P+N+E		346-415	513.2057	513.2057T
32A	2P+E	6	200-250	513.3253	513.3253T
	3P+E		380-415	513.3256	513.3256T
	3P+N+E		346-415	513.3257	513.3257T

DIMENSIONS

IP44

The image shows a technical drawing of an IP44 socket. The left view is a front elevation showing the internal structure with dimensions A (total width), B (internal width), C (internal width at the top), D (height of the main body), and a 5mm gap. The right view is a side elevation showing the height E, the angled top surface with height H, and the base width G.

		A	B	C	D	E	F	G	H
20A	2P+E	76	63	52	/	103	133	98	M20X1.5
	3P+E	91	76	65	60	123	155	103	M25X1.5
	3P+N+E	91	76	65	60	123	157	110	M25X1.5
32A	2P+E	99	84	72	78	141	182	115	M32X1.5
	3P+E	99	84	72	78	141	182	115	M32X1.5
	3P+N+E	99	84	72	78	141	184	122	M32X1.5

SURFACE MOUNTING SOCKET OUTLETS

Current rating	No of poles	Hr position	Voltage AC	IP66/IP67
63A	2P+E	6	200-250	515.6353
	3P+E		380-415	515.6356
	3P+N+E		346-415	515.6357
125A	2P+E	6	200-250	515.12553
	3P+E		380-415	515.12556
	3P+N+E		346-415	515.12557

DIMENSIONS

IP66/IP67

		A	B	C	D	E	F	G	H	K	L	PGM	ØG
63A	2P+E	115	96	6	10	235	205	80	125	15	267	29/32	112
	3P+E	115	96	6	10	235	205	80	125	15	267	29/32	112
	3P+N+E	115	96	6	10	235	205	80	125	15	267	29/32	112
125A	2P+E	135	120	6	13	300	270	100	157	17	346	48/63	128
	3P+E	135	120	6	13	300	270	100	157	17	346	48/63	128
	3P+N+E	135	120	6	13	300	270	100	157	17	346	48/63	128

EMPTY SURFACE MOUNTING BOXES - DOMO SERIES - IP67

Cable Inlet		Suitable for sockets	Flange dim (mm)	Cable Inlet			
Knockout hole	20A	IP44/IP67	70x87	PG16	10	570.0016 (*)	570.0116
	32A	IP44/IP67	84x106	PG21	10	570.0032 (*)	570.0132
Threaded	63A	IP67	100x110	PG29	6		570.0163
	125A	IP67	114x114	PG48	6		570.0125

- Supplied with socket fastening screws.
- Screw cap with seal.
(*) Suitable for the sealing caps.

SEALING CAPS

Description		
Sealing caps (12 pieces)	10/100	654.0080