

Industrial plugs and sockets >50V

A

> WATERTIGHT PIN AND SLEEVE DEVICES IP67 - 60A

EUREKA-HD Series

UL LISTED
E238171, E238172

UL CLASSIFIED
E238170



(For approvals see page A-19)



60A - WATERTIGHT - IP67

Poles & Wires	Configuration			Voltage/ Colour Coding	Plug	Connector	Cable O.D. Range Inches	Receptacle	Inlet
	Receptacle/ Connector	Plug/ Inlet	Clock position						
2P 3W			4h	125	SCM360P4W	SCM360C4W	.937-1.375	SCM360R4W	SCM360B4W
2P 3W			6h	250	SCM360P6W	SCM360C6W	.937-1.375	SCM360R6W	SCM360B6W
2P 3W			5h	277	SCM360P5W	SCM360C5W	.937-1.375	SCM360R5W	SCM360B5W
2P 3W			7h	480	SCM360P7W	SCM360C7W	.937-1.375	SCM360R7W	SCM360B7W
2P 3W			3h	250DC	SCM360P3W	SCM360C3W	.937-1.375	SCM360R3W	SCM360B3W
3P 4W			12h	125/250	SCM460P12W	SCM460C12W	.937-1.375	SCM460R12W	SCM460B12W
3P 4W			9h	3Ø250	SCM460P9W	SCM460C9W	.937-1.375	SCM460R9W	SCM460B9W
3P 4W			7h	3Ø480	SCM460P7W	SCM460C7W	.937-1.375	SCM460R7W	SCM460B7W
3P 4W			5h	3Ø600	SCM460P5W	SCM460C5W	.937-1.375	SCM460R5W	SCM460B5W
4P 5W			9h	3ØY120/208	SCM560P9W	SCM560C9W	.937-1.375	SCM560R9W	SCM560B9W
4P 5W			7h	3ØY277/480	SCM560P7W	SCM560C7W	.937-1.375	SCM560R7W	SCM560B7W
4P 5W			5h	3ØY347/600	SCM560P5W	SCM560C5W	.937-1.375	SCM560R5W	SCM560B5W

EUREKA-HD Series

Watertight and splashproof IEC

A

> PIN AND SLEEVE DEVICES



> VERSIONS



Plugs and connectors



Appliance inlets



Receptacle



Accessories Back Box and closure caps

> TECHNICAL CHARACTERISTICS FOR BACK BOX

Protection degree (IEC 60529):	IP66/IP67
Operating temperature:	-25°C +40°C
Max. operating temperature:	+70°C
Self-extinguishing (IEC 60695-2-1):	GW test 850°C
Self-extinguishing (UL94):	V2 (3,2mm)
Material:	Polyamide 6
IK degree at 20°C (EN 50102):	IK10 (20J)

> REFERENCE STANDARDS

IEC 60309-1

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

IEC 60309-2

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

UL 1682

Plugs, receptacles and cable connectors of the pin and sleeve type.

UL 1686

Standard for pin and sleeve configuration.



> QUALITY MARKS

UL LISTED:
E238171, E238172



UL CLASSIFIED:
E238170



For specific quality marks please contact our technical service.

> TECHNICAL CHARACTERISTICS FOR PIN & SLEEVE

Rated current:	16A - 32A - 63A - 125A (SERIES I) 20A - 30A - 60A - 100A (SERIES II)
Rated voltage:	100÷690V~
Frequency:	D.C. - 50÷500Hz
Insulating voltage:	500/690V~
Protection degree (IEC 60529):	IP44 - IP67
Operating temperature according to the reference standard:	-25°C + 40°C
Max. operating temperature:	+70°C
Self-extinguishing (IEC 60695-2-1):	GW test 650°C / 850°C
Self-extinguishing (UL94):	V1 (3mm)
Material:	VALOX®
IK degree at 20°C (EN 50102):	IK10 (20J)

EUREKA-HD Series

> 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	Limited Resistance	Resistant	Not Resistant	Not Resistant	Not Resistant	Limited Resistance	Resistant	Resistant

For specific substances please contact our technical service.

> WIRING AND INSTALLATION

Cross-section of connectable conductors (awg/mm²)

Rated current		Plugs, connectors and appliance inlets				Receptacle			
Series I	Series II	Min awg	Min mm²	Max awg	Max mm²	Min awg	Min mm²	Max awg	Max mm²
16A	20A	16	1	12	2,5	16	1,5	12	4
32A	30A	14	2,5	10	6	14	2,5	8	10
63A	60A	10	6	6	16	10	6	4	25
125A	100A	6	16	2	50	4	25	0	70

Cord grip range

(Plugs and connectors)

Rated current		Outside Ø mm			
Series I	Series II	Min awg	Min mm²	Max awg	Max mm²
16A	20A	,570	14	,710	18
32A	30A	,675	17	,910	23
63A	60A	,937	24	1,375	35
125A	100A	1,265	32	1,790	45

> APPLICATION EXAMPLES



EUREKA-HD Series

A

> PERFORMANCE - ELECTRICAL (SERIES I)

Dielectric Voltage Withstand:	3000 Volts for 1 minute per IEC 60309-1, Clause 19
Maximum Working Voltage:	690VAC/250 VDC (minimum creepage and clearances per IEC)
Current Interrupting/Load Breaking:	Tested to 125% rated current at 110% rated voltage per IEC309-1 clause 20
Temperature Rise:	Maximum 50°C rise at rated current per IEC309-1 Clause 22, Table 8
Endurance with Load:	16 Amp: 5000 cycles; Load only
Per IEC 60309-1 Clause 21:	32 Amp: 1000 cycles - Alternating load 63 Amp: 1000 cycles - Alternating load 125 Amp: 250 cycles - Alternating load

> PERFORMANCE - ELECTRICAL (SERIES II)

Dielectric Voltage Withstand:	3000 Volts for 1 minute (fixed devices) 2200 Volts for 1 minute (portable devices)
Maximum Working Voltage:	600VAC/250 VDC (minimum creepage and clearances per UL 840)
Current Interrupting/Load Breaking:	Tested to 150% of full rated current for circuit interrupting
Temperature Rise:	Maximum 30°C rise at full rated current after 50 cycles overload at 150% rated load at 0.75-pf
Horsepower Ratings:	Per Nec 430-151b reference for non-interrupting ratings
Endurance with Load:	20 Amp: 5000 cycles; Load only
Per IEC 60309-1 Clause 21:	30 Amp: 1000 cycles - Alternating load 60 Amp: 1000 cycles - Alternating load 100 Amp: 250 cycles - Alternating load

> MATERIALS FOR PIN & SLEEVE (SERIES I & II)

Housing:	Valox®
Contact Carriers:	Valox®
Cable Gland Nut:	Valox®
Cable Bushing:	Solid neoprene, onion ring type
O-Ring, Seals & Gaskets:	Solid neoprene
Pins & Sleeves:	Nickel plated brass
Sleeve Force Ring:	Zinc plated steel
Terminal Screws:	Nickel plated steel
Flap/Screw Cover Springs:	Stainless steel
SNAP-ON Spring:	Stainless steel
Mounting Flanges:	Valox®

> PERFORMANCE - MECHANICAL (SERIES I)

Cold (-25°C) Impact Resistance:	Per IEC 60309-1 Clause 24; (-25°C) with 75cm drop
Cable O.D. Accommodation:	Round portable service cords from 14.5mm O.D. through 50mm O.D.
Terminal Identification:	In accordance with IEC 60309-1 standards; as L1-L2-L3-N-G
Cable Pull-Out Force:	In accordance with IEC 60309-1, Clause 23

> PERFORMANCE - MECHANICAL (SERIES II)

Cold (-25°C) Impact Resistance:	Per UL 1682 Section 34 and IEC 60309-1 Clause 24
Cable O.D. Accommodation:	Round portable service cord from 0.57" O.D. through 1.79" O.D.
Terminal Identification:	In accordance with UL 1682 standards and IEC 60390-1: as L1-L2-L3-N-G
Cable Pull-Out Force:	Per UL 1682 Section 33 and IEC 60309-1 Clause 23

> PERFORMANCE - ENVIRONMENTAL (SERIES I & II)

Corrosion Resistance:	All metallic components stainless steel or nickel plated brass Sleeve pressure rings of zinc plated steel
-----------------------	--

> MATERIALS FOR BACK BOX (SERIES I & II)

Housing:	Polyamide 6
Gasket:	Solid neoprene
Screws:	Stainless steel
Grounding plate:	2 inch plated steel

Standard Interface / World Ready

Full International Compliances

EN 60309

UL Classification to IEC 60309-1 and IEC 60309-2.

cULus Listing: UL 1682/1686 and CSA C22.2

No. 182.1.

CE conforms to EC Low Voltage Directive.

North American and Global Voltage

Polarization "clock positions" available in all standard ratings.

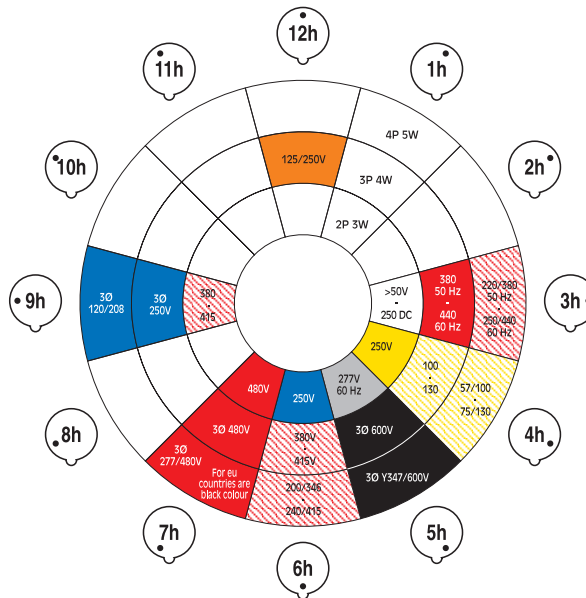
Solid, Safe Voltage Selections

One-Piece contact carriers with Full-Color IEC standard voltage-phasing Coding ensures correct product application every time.

EUREKA-HD Series

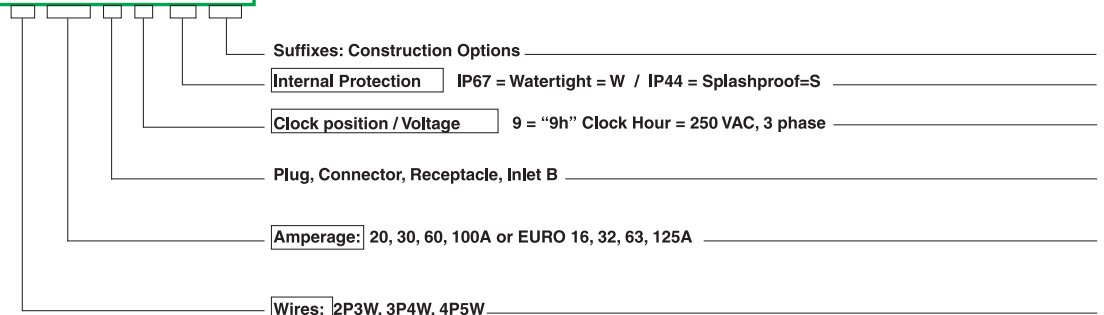
> CLOCK POSITION - NORTH AMERICAN RATINGS

RATED VOLTAGE	COLOUR	USAGE (NORTH AMERICAN)
110-130V	Yellow	North American
208-250V	Blue	North American
380-415V	Red	Europe
600V +	Black	North American and Europe (500V)
277/480V	Red	North American
277V	Grey	North American
125/250V	Orange	North American
250/440V	Red	Latin America
220/440V	Red with diagonal lines	Europe
57/130V	Yellow with diagonal lines	Europe



> CATALOG NUMBERING SYSTEM

SCM 430P9W



EUREKA-HD Series

A

> WATERTIGHT - IP67



IP67

Watertight design and construction meet stringent IP67 internal protection standards. Rugged thermoplastic housings resist impact or abuse and provide excellent corrosion resistance. Unique Scame strain relief grip and sealing system assure superior cable retention and watertight conductor termination. Ideal for outdoor, wet marine and washdown applications. Unique 75% faster assembly with Snap-on handle locking, and cable grip system.

> SPLASHPROOF - IP44



IP44

Suitable for indoor use where splashing liquids and other contaminants may interfere with electrical connections. Ideal for most heavy commercial applications and light industrial applications. Available 16A, 20A, 30A and 32A Amp ratings.



No Tools, No Screws Necessary

Snap-on locking handle saves 75% on assembly time.

Unique Snap-on assembly feature on 16A, 20A, 30A and 32A Amp plugs and connectors makes installation and inspection fast and reliable.

Captive gaskets in handles seal out water, chemicals and dust.



Easy Action Single-Wiring Point Access Saves Time Wiring

All terminal screws face in same direction allowing installer to make safe and secure conductor terminations in 30% less time than other devices. Rugged, corrosion free thermoplastic housings are colour-coded for safe reliable connections to all other mating type/polarizations, with raised earth terminal standard.

Simple Cable Clamping

Threaded cable gland on 16/32A and 20/30A devices makes assembly fast and easy.

One-piece lock screw verifies clamp locking hold, with no external metal contact possible (16/32A and 20/30A devices).



Unique and Quick

One-piece cable gland with locking screw loads to cable followed by cable grip 6-Finger cable clamp/grip piece. Watertight onion ring bushing fits a wide variety of outside diameters.



Watertight and cable Grip Safety

Grip cable flexible 6-Finger clamp teeth holds well beyond all agency test pull-out forces.

No internal clamps required. Available in all amperages.



The Performance Connection

Watertight spring-loaded covers with high-strength flex-hinge screw covers on IP67 devices.

Flap covers on IP44 splashproof styles. Safety, performance and durability for all EN 60309 applications worldwide.



EUREKA-HD Series

> WATERTIGHT - IP67

Safe Connections Standard

- Heart contacts make first, break last for safe connections even under load



The Easy Way

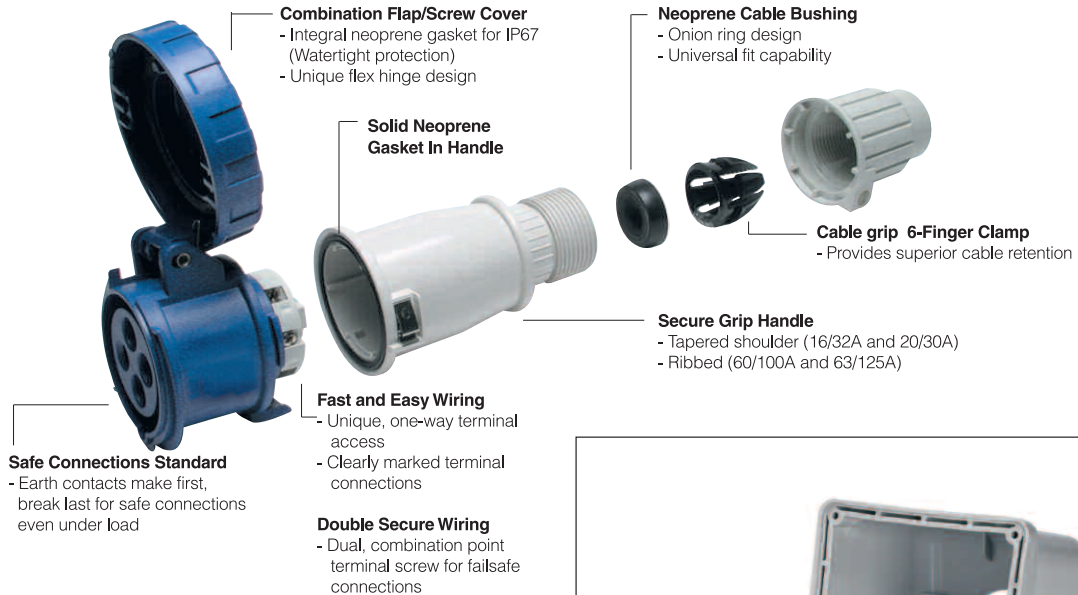
- Snap-on locking feature on all 16/32A and 20/30A plugs and connectors

Screw Collars Stay Put

- Turreted grip allows for easy handling

75% Faster Cable builds

- Nylon lock screw System
- One-piece cable gland
- Nylon locking screw prevents loosening
- Hand assembly of cable gland, cable grip
- 6 Finger clamp and onion-ring bushing



Combination Flap/Screw Cover

- Integral neoprene gasket for IP67 (Watertight protection)
- Unique flex hinge design

Neoprene Cable Bushing

- Onion ring design
- Universal fit capability

Solid Neoprene Gasket In Handle

Cable grip 6-Finger Clamp

- Provides superior cable retention

Secure Grip Handle

- Tapered shoulder (16/32A and 20/30A)
- Ribbed (60/100A and 63/125A)

Fast and Easy Wiring

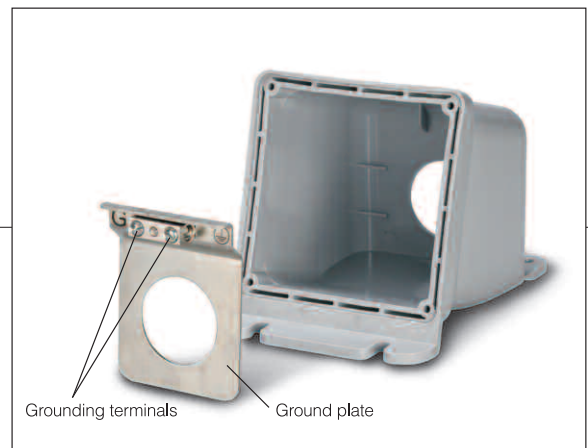
- Unique, one-way terminal access
- Clearly marked terminal connections

Double Secure Wiring

- Dual, combination point terminal screw for failsafe connections

Safe Connections Standard

- Earth contacts make first, break last for safe connections even under load



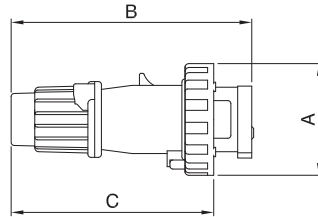
Grounding terminals

Ground plate

EUREKA-HD Series

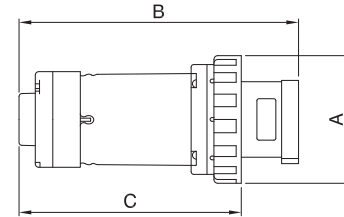
> DIMENSIONS

A



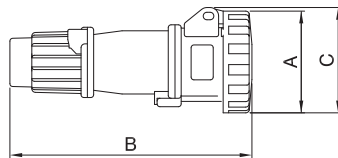
PLUG IP67 16/20A AND 30/32A

	A		B		C		Corp grip range	
	inches	mm	inches	mm	inches	mm		
16/20A 2P3W	2,87	73	6,20	157	5,23	133	,570-.710	14-18
16/20A 3P4W	3,17	81	6,47	164	5,51	140	,570-.710	14-18
16/20A 4P5W	3,48	88	7,02	178	6,06	154	,570-.710	14-18
30/32A 2P3W	3,66	93	7,37	187	6,13	156	,675-.910	17-23
30/32A 3P4W	3,66	93	7,37	187	6,13	156	,675-.910	17-23
30/32A 4P5W	3,96	101	8,15	207	6,91	176	,675-.910	17-23



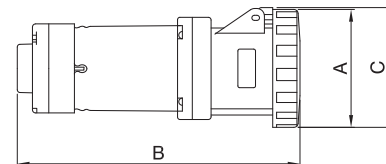
PLUG IP67 60/63A AND 100/125A

	A		B		C		Corp grip range	
	inches	mm	inches	mm	inches	mm		
60/63A 2P3W	4,41	112	9,68	246	7,67	195	,937-1,375	24-35
60/63A 3P4W	4,41	112	9,68	246	7,67	195	,937-1,375	24-35
60/63A 4P5W	4,41	112	9,68	246	7,67	195	,937-1,375	24-35
100/125A 3P4W	5,06	129	12,16	309	9,83	250	1,265-1,790	32-45
100/125A 4P5W	5,06	129	12,16	309	9,83	250	1,265-1,790	32-45



CONNECTOR IP67 16/20A AND 30/32A

	A		B		C		Corp grip range	
	inches	mm	inches	mm	inches	mm		
16/20A 2P3W	2,87	73	6,75	171	2,97	75	,570-.710	14-18
16/20A 3P4W	3,17	81	7,04	179	3,28	83	,570-.710	14-18
16/20A 4P5W	3,48	88	7,62	194	3,75	95	,570-.710	14-18
30/32A 2P3W	3,66	93	8,04	204	4,04	103	,675-.910	17-23
30/32A 3P4W	3,66	93	8,04	204	4,04	103	,675-.910	17-23
30/32A 4P5W	3,96	101	8,83	224	4,03	102	,675-.910	17-23



CONNECTOR IP67 60/63A AND 100/125A

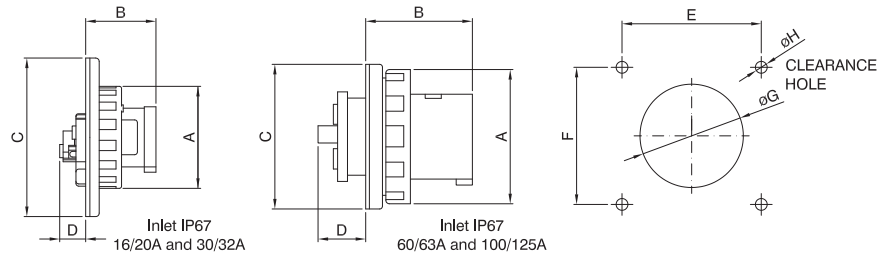
	A		B		C		Corp grip range	
	inches	mm	inches	mm	inches	mm		
60/63A 2P3W	4,41	112	10,52	267	4,47	114	,937-1,375	24-35
60/63A 3P4W	4,41	112	10,52	267	4,47	114	,937-1,375	24-35
60/63A 4P5W	4,41	112	10,52	267	4,47	114	,937-1,375	24-35
100/125A 3P4W	5,06	129	12,80	325	5,06	129	1,265-1,790	32-45
100/125A 4P5W	5,06	129	12,80	325	5,06	129	1,265-1,790	32-45

(Dimensions in mm)

EUREKA-HD Series

A

> DIMENSIONS

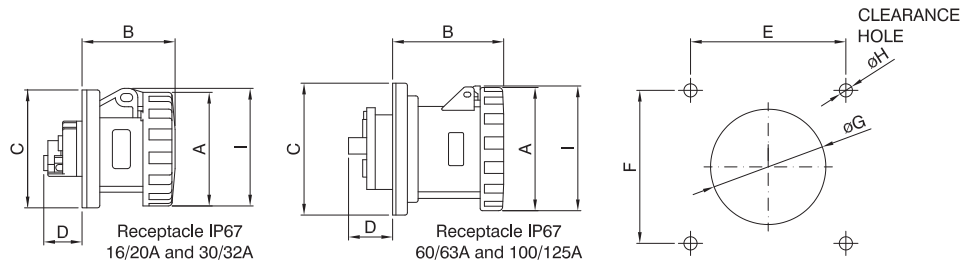


INLET IP67 16/20A AND 30/32A

	A		B		C		D		E		F		G		H	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
16/20A 2P3W	2.87	73	1.96	50	4.50	114	.75	19	3.87	98	3.87	98	2.38	60	.282	7.2
16/20A 3P4W	3.17	81	1.96	50	4.50	114	.75	19	3.87	98	3.87	98	2.38	60	.282	7.2
16/20A 4P5W	3.48	88	1.96	50	4.50	114	.75	19	3.87	98	3.87	98	2.38	60	.282	7.2
30/32A 2P3W	3.66	93	2.32	59	4.50	114	1.32	34	3.87	98	3.87	98	2.38	60	.282	7.2
30/32A 3P4W	3.66	93	2.32	59	4.50	114	1.32	34	3.87	98	3.87	98	2.38	60	.282	7.2
30/32A 4P5W	3.96	101	2.32	59	4.50	114	1.32	34	3.87	98	3.87	98	2.38	60	.282	7.2

INLET IP67 60/63A AND 100/125A

	A		B		C		D		E		F		G		H	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
60/63A 2P3W	4.41	112	3.44	87	4.50	114	1.68	43	3.87	98	3.87	98	3.25	83	.282	7.2
60/63A 3P4W	4.41	112	3.44	87	4.50	114	1.68	43	3.87	98	3.87	98	3.25	83	.282	7.2
60/63A 4P5W	4.41	112	3.44	87	4.50	114	1.68	43	3.87	98	3.87	98	3.25	83	.282	7.2
100/125A 3P4W	5.06	129	3.88	99	5.50	140	1.94	49	4.87	124	4.87	124	3.75	95	.282	7.2
100/125A 4P5W	5.06	129	3.88	99	5.50	140	1.94	49	4.87	124	4.87	124	3.75	95	.282	7.2



RECEPTACLE IP67 16/20A AND 30/32A

	A		B		C		D		E		F		G		H		I	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
16/20A 2P3W	2.87	73	2.32	59	2.97	.76	.94	24	2.36	60	2.36	60	2.38	60	.219	5.5	2.97	75
16/20A 3P4W	3.17	81	2.34	60	2.97	.76	.94	24	2.36	60	2.36	60	2.38	60	.219	5.5	3.28	83
16/20A 4P5W	3.48	88	2.37	60	2.97	.76	.94	24	2.36	60	2.36	60	2.38	60	.219	5.5	3.75	95
30/32A 2P3W	3.66	93	2.79	71	2.97	.76	1.52	39	2.36	60	2.36	60	2.38	60	.219	5.5	4.04	103
30/32A 3P4W	3.66	93	2.79	71	2.97	.76	1.52	39	2.36	60	2.36	60	2.38	60	.219	5.5	4.04	103
30/32A 4P5W	3.96	101	2.81	71	2.97	.76	1.52	39	2.36	60	2.36	60	2.38	60	.219	5.5	4.03	102

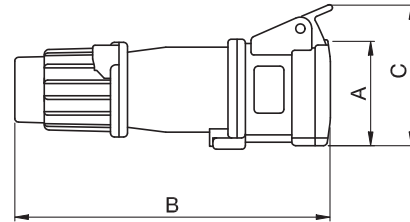
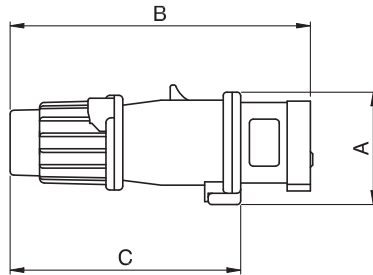
RECEPTACLE IP67 60/63A AND 100/125A

	A		B		C		D		E		F		G		H		I	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
60/63A 2P3W	4.41	112	4.16	106	4.50	114	1.68	43	3.87	98	3.87	98	3.25	83	.282	7.2	4.47	114
60/63A 3P4W	4.41	112	4.16	106	4.50	114	1.68	43	3.87	98	3.87	98	3.25	83	.282	7.2	4.47	114
60/63A 4P5W	4.41	112	4.16	106	4.50	114	1.68	43	3.87	98	3.87	98	3.25	83	.282	7.2	4.47	114
100/125A 3P4W	5.06	129	4.52	115	5.50	140	1.94	49	4.87	124	4.87	124	3.75	95	.282	7.2	5.06	129
100/125A 4P5W	5.06	129	4.52	115	5.50	140	1.94	49	4.87	124	4.87	124	3.75	95	.282	7.2	5.06	129

(Dimensions in mm)

EUREKA-HD Series

> DIMENSIONS

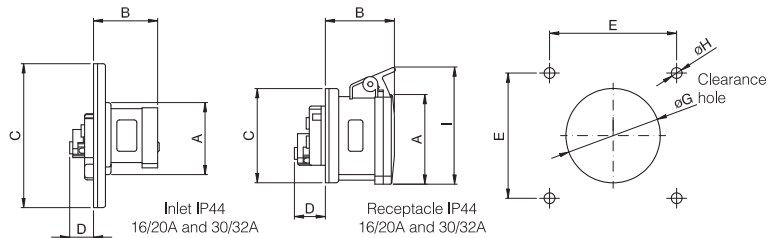


PLUG IP44

	A		B		C		Corp Grip Range	
	inches	mm	inches	mm	inches	mm	inches	mm
16/20A 2P3W	2,26	58	6,20	157	4,76	121	,570-.710	14-18
16/20A 3P4W	2,52	64	6,47	164	5,04	128	,570-.710	14-18
16/20A 4P5W	2,85	73	7,02	178	5,58	142	,570-.710	14-18
30/32A 2P3W	2,85	73	7,37	187	5,58	142	,675-.910	17-23
30/32A 3P4W	2,85	73	7,37	187	5,58	142	,675-.910	17-23
30/32A 4P5W	3,13	80	8,15	207	6,36	162	,675-.910	17-23

PLUG IP44

	A		B		C		Corp Grip Range	
	inches	mm	inches	mm	inches	mm	inches	mm
16/20A 2P3W	2,18	55	6,53	166	3,07	73	,570-.710	14-18
16/20A 3P4W	2,43	62	6,83	173	3,33	80	,570-.710	14-18
16/20A 4P5W	2,81	71	7,41	188	3,79	91	,570-.710	14-18
30/32A 2P3W	2,81	71	7,81	198	3,79	91	,675-.910	17-23
30/32A 3P4W	2,81	71	7,81	198	3,79	91	,675-.910	17-23
30/32A 4P5W	3,09	79	8,62	219	4,17	101	,675-.910	17-23



INLET IP44

	A		B		C		D		E		F		G		H	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
16/20A 2P3W	2,26	58	1,96	50	4,50	114	,75	19	3,87	98	3,87	98	2,38	60	,282	7,2
16/20A 3P4W	2,52	64	1,96	50	4,50	114	,75	19	3,87	98	3,87	98	2,38	60	,282	7,2
16/20A 4P5W	2,85	73	1,96	50	4,50	114	,75	19	3,87	98	3,87	98	2,38	60	,282	7,2
30/32A 2P3W	2,85	73	2,32	59	4,50	114	1,32	34	3,87	98	3,87	98	2,38	60	,282	7,2
30/32A 3P4W	2,85	73	2,32	59	4,50	114	1,32	34	3,87	98	3,87	98	2,38	60	,282	7,2
30/32A 4P5W	3,13	80	2,32	59	4,50	114	1,32	34	3,87	98	3,87	98	2,38	60	,282	7,2

RECEPTACLE IP44

	A		B		C		D		E		F		G		H		I	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
16/20A 2P3W	2,18	55	2,11	54	2,97	76	0,94	24	2,36	60	2,36	60	2,38	60	,219	5,5	3,07	73
16/20A 3P4W	2,43	62	2,13	54	2,97	76	0,94	24	2,36	60	2,36	60	2,38	60	,219	5,5	3,33	80
16/20A 4P5W	2,81	71	2,17	55	2,97	76	0,94	24	2,36	60	2,36	60	2,38	60	,219	5,5	3,79	91
30/32A 2P3W	2,81	71	2,56	65	2,97	76	1,52	39	2,36	60	2,36	60	2,38	60	,219	5,5	3,79	91
30/32A 3P4W	2,81	71	2,56	65	2,97	76	1,52	39	2,36	60	2,36	60	2,38	60	,219	5,5	3,79	91
30/32A 4P5W	3,09	79	2,60	66	2,97	76	1,52	39	2,36	60	2,36	60	2,38	60	,219	5,5	4,17	101

(Dimensions in mm)