



THORNE &  
**DERRICK**  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
www.heatingandprocess.com

# Amphenol®



## Amphe – 309 PIN & SLEEVE

IEC & UL Industrial plug, sockets-outlets  
& mechanical interlocks



**Marinas LVSC "Cold Ironing"**  
 IEC80005-3 and IEC60309-5

A 309



**Data Centers**

A 309



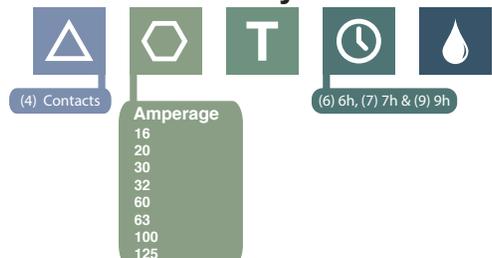
**Refriger Containers**

A 309



**Wineries and Food industry**

A 309





# Amphenol®

## Index

AMPHE-309 SERIES.....	4 – 6
CODE LOGIC – HOW TO ORDER .....	7
A309 SMART DESIGN .....	8 -11
<b>PRODUTCS</b>	
PLUG IP67.....	12
CONNECTOR IP67 .....	13
INLET IP67 .....	14
RECEPTACLE IP67 .....	15
PLUG IP44.....	16
CONNECTOR IP44 .....	17
INLET IP44 .....	18
RECEPTACLE IP44 .....	19
MECHANICAL INTERLOCK.....	20
ACCESSORIES .....	21 - 25
PART NUMBER - QUICK REFERENCE .....	26 - 33
EX309 .....	34 - 35
MECHANICAL INTERLOCK INSTRUCTIONS.....	36 - 37



**THORNE &  
DERRICK**  
INTERNATIONAL

**Thorne & Derrick**  
+44 (0) 191 410 4292  
[www.heatingandprocess.com](http://www.heatingandprocess.com)

**PIN AND SLEEVE**



**STANDARDS REFERENCE**

- IEC6 0309-1**  
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.*
- UL 1682**  
Plugs, receptacles and cable connectors of the pin and sleeve type
- UL 1686**  
Standard for pin and sleeve configuration.

**QUALITY MARKS**



**VERSIONS**

	Plug		Receptacle
	Connector		Accessories Back Box and caps
	Inlets		Conduit adaptor



**THORNE &  
DERRICK  
INTERNATIONAL**

**Thorne & Derrick**  
+44 (0) 191 410 4292  
www.heatingandprocess.com

### MATERIAL PROPERTIES

Saline solution	Acids		Bases		Solvents				Mineral oil	UV rays
	Concentrated	Diluted	Concentrated	DilutedH	exaneB	enzol	Acetone	Alcohol		
Resistant	Limited Resistance	Resistant	Limited Resistance	Resistant	Not Resistant	Not Resistant	Not Resistant	Limited Resistance	Resistant	Resistant

### WIRING AND INSTALLATION Conductors Cross-section (awg/mm2)

Rated current		Plugs, connectors and appliance inlets				Receptacle			
International	UL	Min		Max		Min		Max	
		AWG	mm <sup>2</sup>	AWG	mm <sup>2</sup>	AWG	mm <sup>2</sup>	AWG	mm <sup>2</sup>
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			
International	UL	Min		Max	
		AWG	mm <sup>2</sup>	AWG	mm <sup>2</sup>
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

### BACK BOX TECHNICAL PROPERTIES

Protection degree (IEC 60529):	<b>IP66/IP67</b>
Operating ambient temperature:	<b>-25°C +40°C</b>
Max. operating ambient temperature:	<b>+70°C</b>
Self-extinguishing (IEC 60695-2-1):	<b>GW test 850°C</b>
Self-extinguishing (UL94):	<b>5VA (3mm)</b>
Material:	<b>PC siloxane</b>
IK degree at 20°C (EN 50102):	<b>IK10 (20J)</b>

### TECHNICAL CHARACTERISTICS FOR PIN & SLEEVE

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



## INTERNATIONAL IEC

## ELECTRICAL PERFORMANCE

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

## UL LISTED

## ELECTRICAL PERFORMANCE

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

## UL LISTED &amp; INTERNATIONAL

## MATERIALS FOR PIN &amp; SLEEVE

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

## MECHANICAL PERFORMANCE

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

## MECHANICAL PERFORMANCE

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

## MATERIALS FOR BACK BOX

Housing:	<b>PC siloxane</b>
Gasket:	<b>Solid neoprene</b>
Screws:	<b>Stainless steel</b>
Grounding plate:	<b>zinc-coated steel</b>

## PERFORMANCE - ENVIRONMENTAL

Corrosion Resistance:	<b>All metallic components are stainless steel or nickel plated brass</b>
-----------------------	---

## Standard Interface / 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.

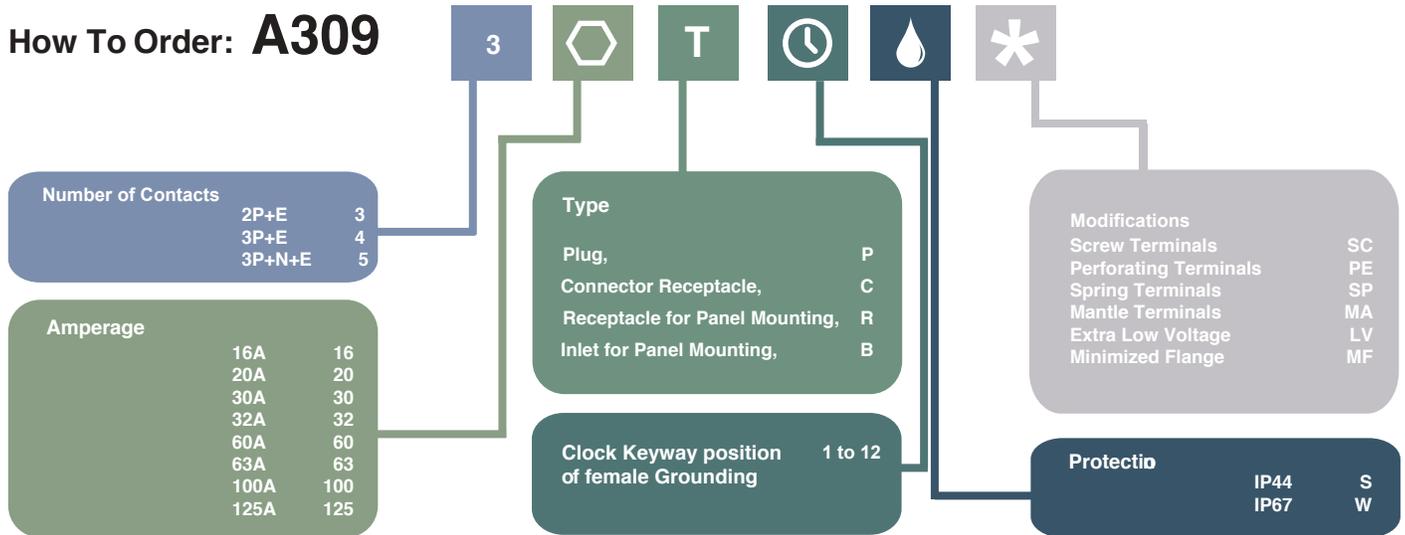


THORNE &  
DERRICK  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
www.heatingandprocess.com

## CATALOG NUMBERING SYSTEM

How To Order: **A309**



The voltage is determined by the location of the female ground contact relative to the housing keyway. Simply by manufacturing the device with a ground contact in a certain "clock" position, the device will be rated for a particular voltage system.

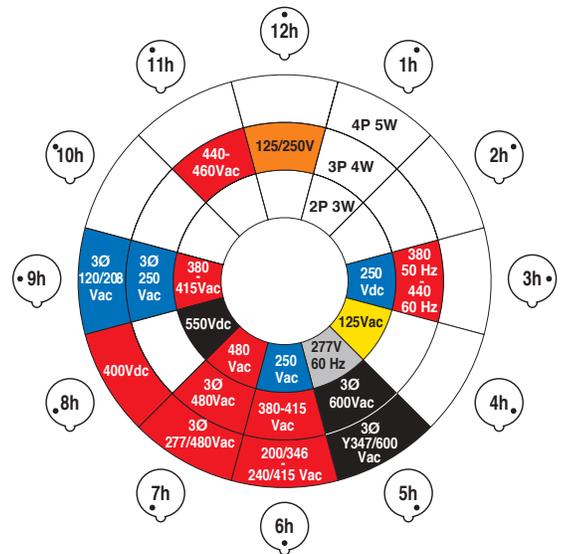
### CLOCK POSITION

The operating voltage is identified by conventional color as shown in the table:

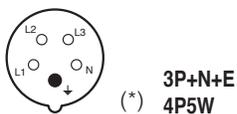
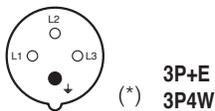
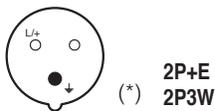
RATED VOLTAGE	COLOR
110-130V	Yellow
208-250V	Blue
380-480V	Red
500-690V	Black
277V	Grey
125/250V	Orange

### CLOCK FACE POSITION

North American ratings viewing connector and receptacle from the front, clock hour position (h) is established by the position of the earth contact respect the major keyway which is always situated at 6h clock position.



### CONNECTOR AND RECEPTACLE (FRONT VIEW)



(\*) Major keyway



**THORNE & DERRICK**  
INTERNATIONAL

**Thorne & Derrick**  
+44 (0) 191 410 4292  
www.heatingandprocess.com

## WATERTIGHT - IP67

A  
3  
0  
9  
△  
◇  
T  
⌚  
W



IP67

A309-XXXXX-W  
WATERTIGHT - IP67  
This family series is design to meet IP67 protection standards. (Effective against dust tight and liquid ingress up to 1m depth of submersion). This series is built with rugged thermoplastic housings resist impact or abuse and provide excellent corrosion resistance. Ideal for outdoor, harbors, and heavy duty applications.

## SPLASHPROOF - IP44

A  
3  
0  
9  
△  
◇  
T  
⌚  
S



IP44

A309-XXXXX-S  
SPLASHPROOF - IP44  
Designed for indoor applications where splashing liquids and other contaminants may interfere with electrical connections. This Series meet s IP44 (Effective against dust >1mm and splashing of water). Ideal for most heavy industrial applications and light industrial applications

## SMART DESIGN - UNIQUE FEATURES



**Fast access without Screws**  
Snap-on locking handle saves 75% on assembly time. Unique Snap-on assembly feature on 16A, 20A, 30A and 32A for plugs and connectors .



**Unique and Quick**  
One-piece cable gland with 6-Finger cable clamp/grip piece. Watertight onion ring bushing fits all cable diameters.



**Easy Single-Wiring Point Access**  
All terminal screws face in same direction allowing installer to make safe and secure conductor terminations in 30% less time than other devices.



**Watertight and Grip Safety**  
Grip cable flexible 6-Finger clamp teeth holds well beyond all agency test pullout Forces. Available in all amperages.



**Simple Cable Clamp**  
One-piece lock screw with no external metal contact possible (16/32A and 20/30A devices). Threaded cable gland on 16/32A and 20/30A devices makes assembly fast and easy.



**Interconnection Performance**  
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.



THORNE &  
DERRICK  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
www.heatingandprocess.com

## SMART DESIGN

A309     

### PLUG

#### Safe Connections Standard

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



#### The EasyWay

- 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

A309     

### CONNECTOR

#### 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 EasyWiring

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

#### Double SecureWiring

- Dual, combination point terminal screw for failsafe connections

#### Safe Connections Standard

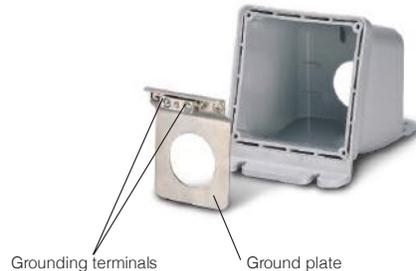
- Earth contacts make first, break last for safe connections even under load

## SMART DESIGN - ACCESSORIES

Conduit adaptor - A309SAXXX



Back Box - A309 BB0X



THORNE &  
**DERRICK**  
INTERNATIONAL

**Thorne & Derrick**  
+44 (0) 191 410 4292  
www.heatingandprocess.com

## SMART DESIGN - MECHANICAL INTERLOCK

A309   MI  W

Single-piece waterproof gasket



Dual mechanical interlock to increase safety

Pre-wired grounding plate connects to metal conduit grounding system

Fixing hole

Wide space for easy and comfortable wiring

Neutral terminal

Motor disconnect switch

Threaded metal insert

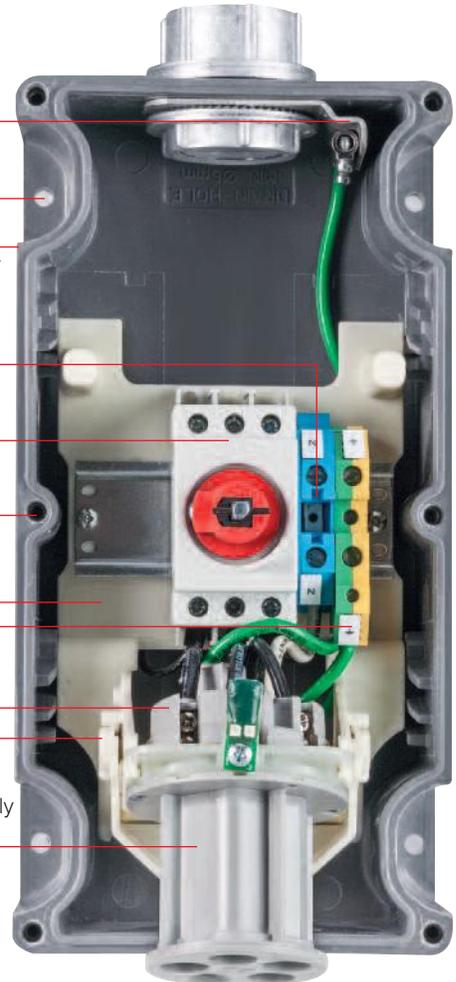
Easily extractable support

Earth terminal

Power indicator led

Possibility for plug-inserted control microswitch assembly

Prewired receptacle accepts all manufacturer's IEC 60309-2 pin and sleeve plugs



THORNE &  
**DERRICK**  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
www.heatingandprocess.com

## SMART DESIGN - MECHANICAL INTERLOCK

A309   MI  W



BOTTOM VIEW

Module in high-temperature resistant engineering polymer

(A)	Conduit hub
20/30	1"
60	1 1/4"



Possible entry from bottom side

TOP VIEW



Self-centering punch marks to facilitate drilling

Pre-drilled cable entries available on request.



**THORNE & DERRICK**  
INTERNATIONAL

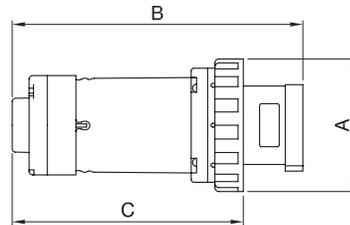
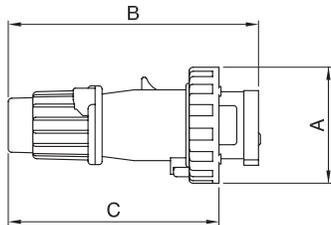
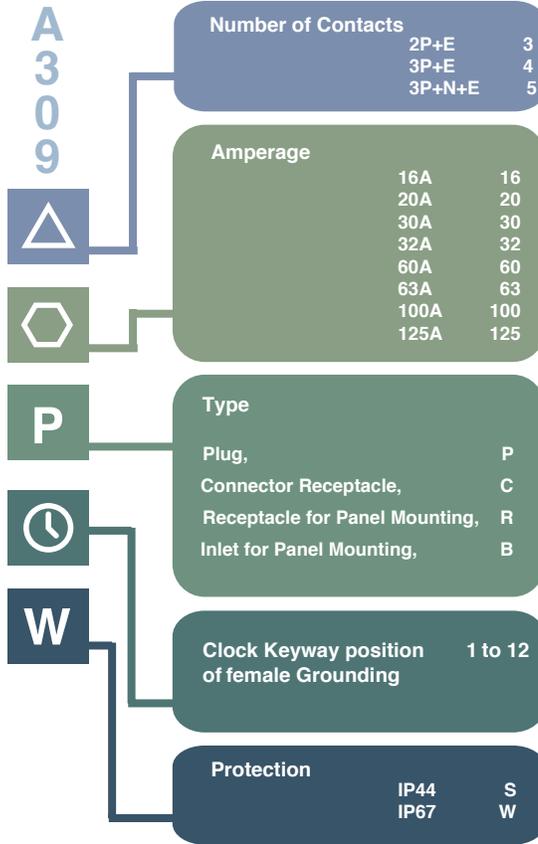
**Thorne & Derrick**  
+44 (0) 191 410 4292  
www.heatingandprocess.com

# AMPHE - 309 WATERTIGHT IP67

# Amphenol®

A309 - ▲ ◆ P ⌚ W

## PLUG WITH PINS IP67



PLUG IP67 16/20A AND 30/32A

	A		B		C		Corp grip range	
	inches	mm	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	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



**THORNE & DERRICK INTERNATIONAL**

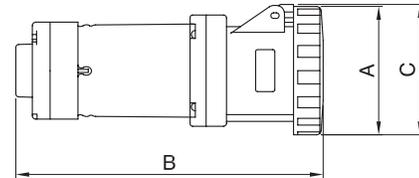
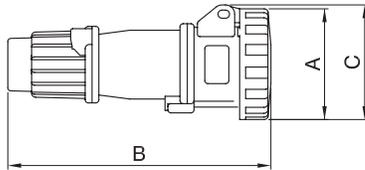
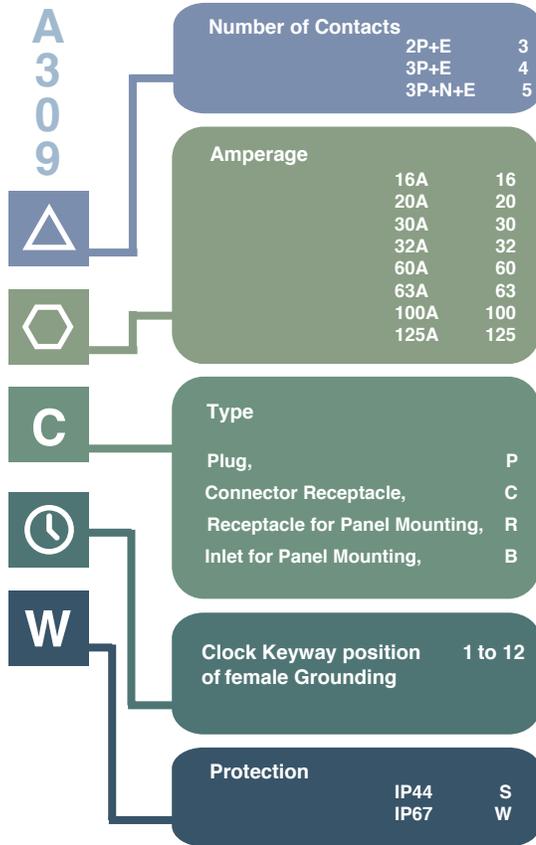
**Thorne & Derrick**  
 +44 (0) 191 410 4292  
[www.heatingandprocess.com](http://www.heatingandprocess.com)

# AMPHE - 309 WATERTIGHT IP67

A309 - ▲ ◆ C ⌚ W

# Amphenol®

## CONNECTOR WITH SOCKETS IP67



### CONNECTOR IP67 16/20A AND 30/32A

	A		B		C		Corp grip range	
	inches	mm	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	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



**THORNE &  
DERRICK  
INTERNATIONAL**

**Thorne & Derrick**  
+44 (0) 191 410 4292  
www.heatingandprocess.com

# AMPHE - 309 WATERTIGHT IP67

# Amphenol®

A309 - ▲ ◆ B ⌚ W

## INLET PLUG WITH PINS IP67

**A**  
309

**▲**

**◆**

**B**

**⌚**

**W**

**Number of Contacts**

2P+E	3
3P+E	4
3P+N+E	5

**Amperage**

16A	16
20A	20
30A	30
32A	32
60A	60
63A	63
100A	100
125A	125

**Type**

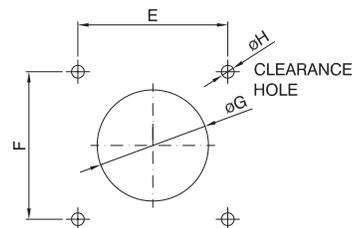
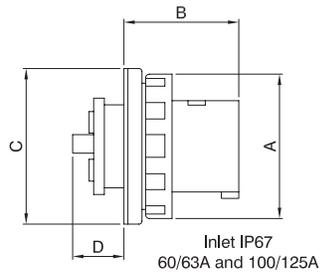
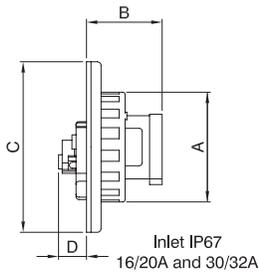
Plug,	P
Connector Receptacle,	C
Receptacle for Panel Mounting,	R
Inlet for Panel Mounting,	B

**Clock Keyway position of female Grounding**

1 to 12

**Protection**

IP44	S
IP67	W



### 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

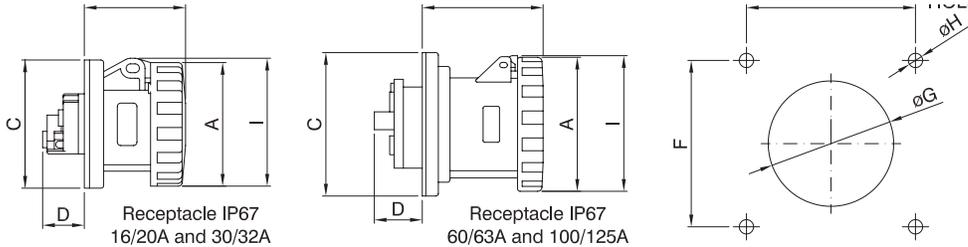
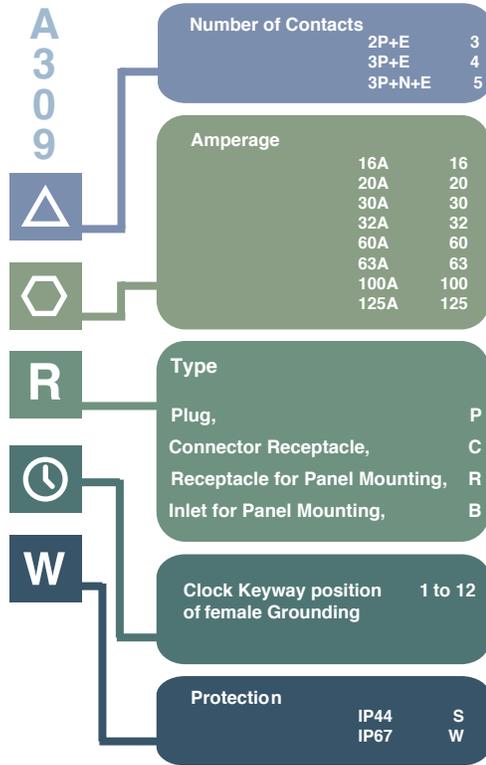
	A		B		C		D		E		F		G		H	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
60/63A 2P3W	4.41	112	3.44	87	4.50	114	1.68	43	3.87	98	3.87	98	3.25	83	.282	7.2
60/63A 3P4W	4.41	112	3.44	87	4.50	114	1.68	43	3.87	98	3.87	98	3.25	83	.282	7.2
60/63A 4P5W	4.41	112	3.44	87	4.50	114	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



**THORNE & DERRICK**  
INTERNATIONAL

**Thorne & Derrick**  
+44 (0) 191 410 4292  
www.heatingandprocess.com

RECEPTACLE FOR PANEL MOUNT WITH SOCKETS IP67



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



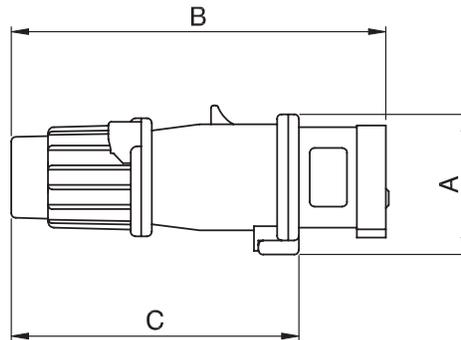
# AMPHE - 309 SPLASHPROOF IP44



A309 - ▲ ● P ⌚ S

## PLUG WITH PINS IP44

A 3 0 9	Number of Contacts	2P+E	3
		3P+E	4
		3P+N+E	5
▲	Amperage	16A	16
		20A	20
		30A	30
		32A	32
		60A	60
		63A	63
		100A	100
●	Type	Plug,	P
		Connector Receptacle,	C
		Receptacle for Panel Mounting,	R
		Inlet for Panel Mounting,	B
⌚	Clock Keyway position of female Grounding	1 to 12	
S	Protection	IP44	S
		IP67	W



### 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

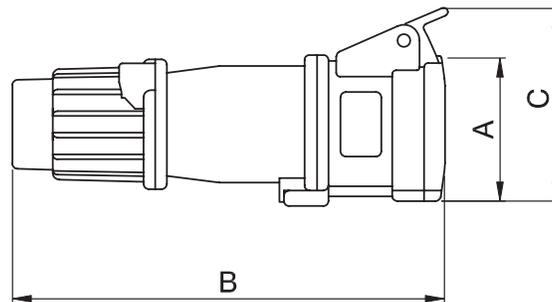
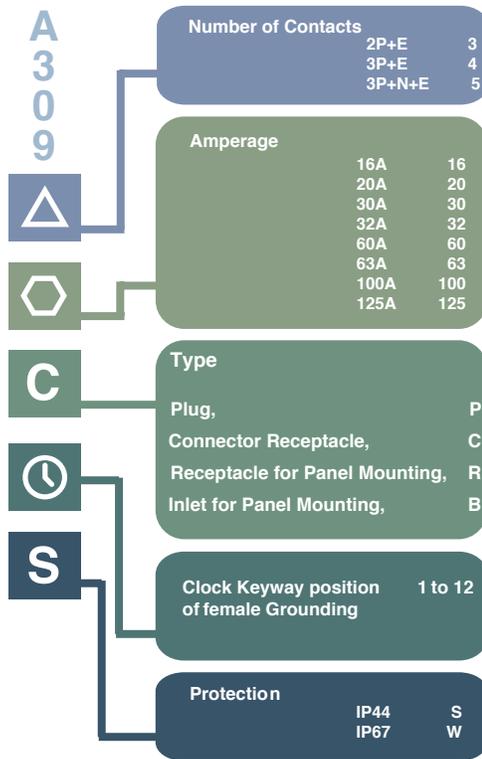


THORNE &  
DERRICK  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
www.heatingandprocess.com

A309 - ▲ ◆ C ⌚ S

CONNECTOR RECEPTACLE WITH SOCKETS IP44



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	188	3.79	91	.675-910	17-23
30/32A 4P5W	3.09	79	8.62	219	4.17	101	.675-910	17-23



A309 - ▲ ◆ B ⌚ S

INLET PLUG WITH PINS IP44

**A**  
309

**▲**

**◆**

**B**

**⌚**

**S**

**Number of Contacts**

2P+E	3
3P+E	4
3P+N+E	5

**Amperage**

16A	16
20A	20
30A	30
32A	32
60A	60
63A	63
100A	100
125A	125

**Type**

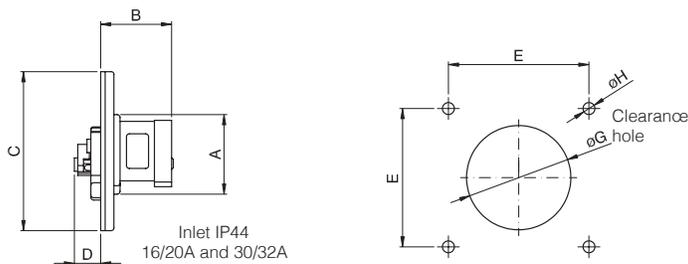
Plug,	P
Connector Receptacle,	C
Receptacle for Panel Mounting,	R
Inlet for Panel Mounting,	B

**Clock Keyway position of female Grounding**

1 to 12

**Protection**

IP44	S
IP67	W



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

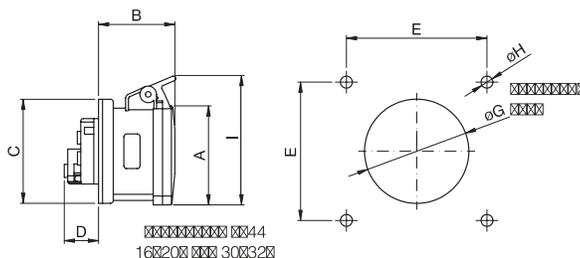
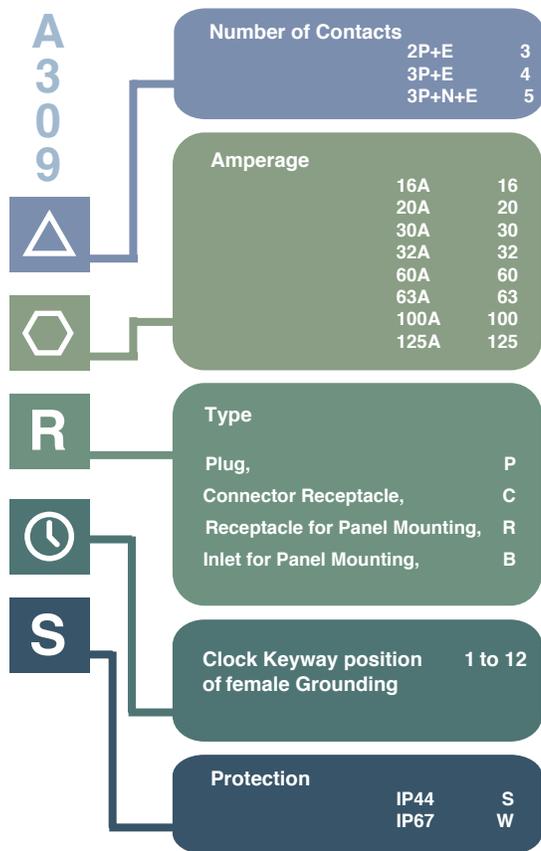


THORNE &  
DERRICK  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
www.heatingandprocess.com

A309 - ▲ ◆ R ⌚ S

RECEPTACLE FOR PANEL MOUNT WITH SOCKETS IP44



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



THORNE &  
DERRICK  
INTERNATIONAL

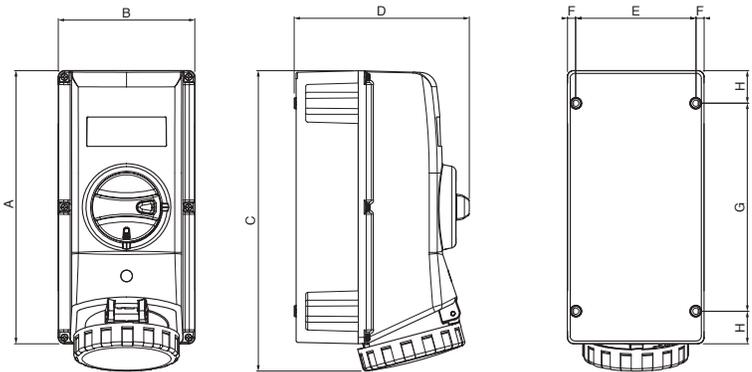
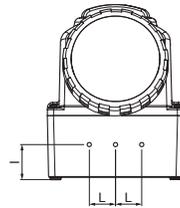
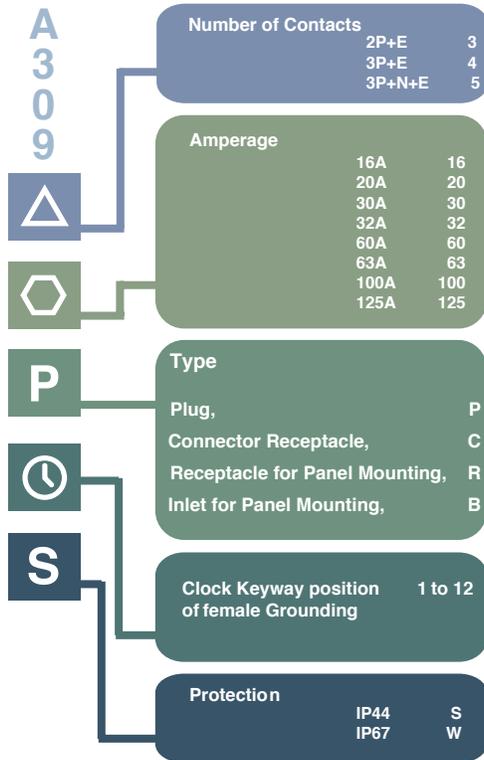
Thorne & Derrick  
+44 (0) 191 410 4292  
www.heatingandprocess.com

# AMPHE - 309 MECHANICAL INTERLOCK

## A309 - ▲ ◆ MI ⌚ W



### INLET PLUG WITH PINS IP44



VERSION		A	B	C	D	E	F	G	□	I	□
2P+E	20A	260	130	280	167	114	8	198	31	3305	25
3P+E	20A	260	130	282	167	114	8	198	31	3305	25
3P+N+E	20A	260	130	282	167	114	8	198	31	3305	25
2/3P+E	30A	260	130	285	167	114	8	198	31	3305	25
3P+N+E	30A	260	130	286	167	114	8	198	31	3305	25
2P+E	60A	380	170	420	206	150	10	310	35	40	3205
3P+E	60A	380	170	420	206	150	10	310	35	40	3205
3P+N+E	60A	380	170	420	206	150	10	310	35	40	3205



**THORNE & DERRICK**  
INTERNATIONAL

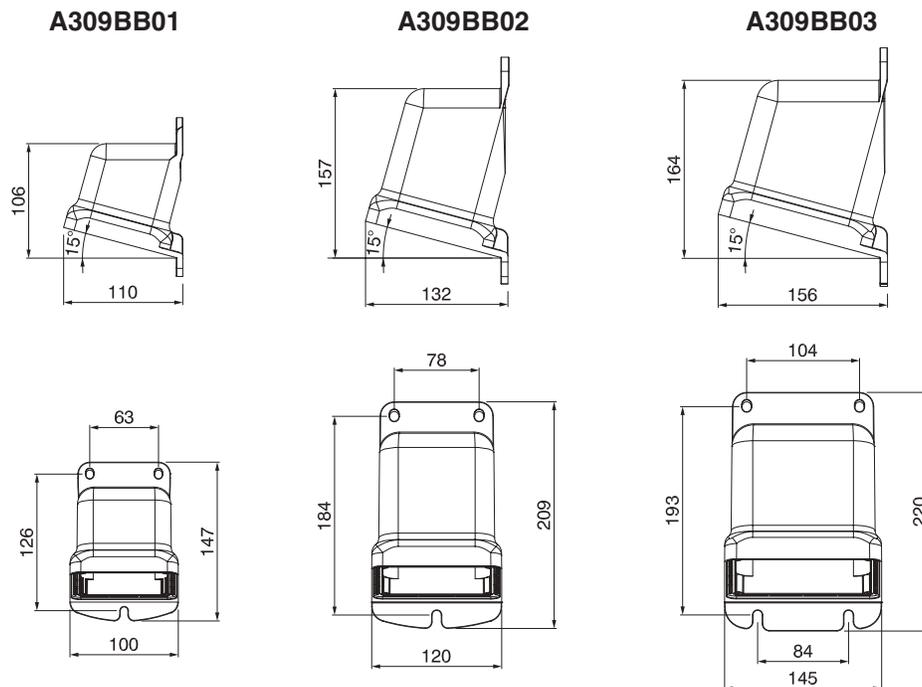
**Thorne & Derrick**  
+44 (0) 191 410 4292  
www.heatingandprocess.com

**BACK BOX FOR INLETS AND RECEPTACLES**



Description	HUB size (Inch)	Receptacle	Inlets	Cubic Inch capacity	Box Quantity	
Size 1 (small)	1	16/20A - 32/30A	-	30	1/10	<b>A309BB01</b>
Size 2 (medium)	1 ¼	63/60A	16/20A - 32/30A - 63/60A	75	1/10	<b>A309BB02</b>
Size 3 (large)	1 ½	125/100A	125/100A	120	1/5	<b>A309BB03</b>

Pack Quantity.  
 - Internal grounding plate provided  
 - HUB is not included



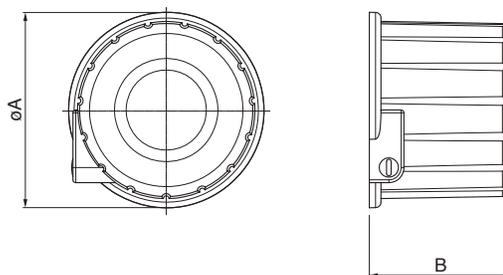
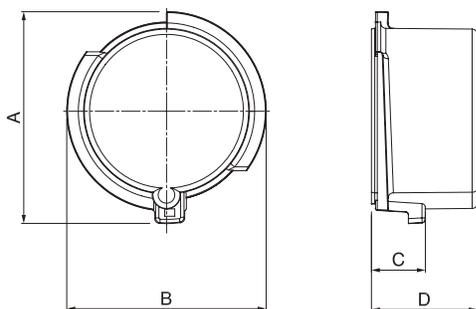
**THORNE &  
 DERRICK  
 INTERNATIONAL**

**Thorne & Derrick**  
 +44 (0) 191 410 4292  
[www.heatingandprocess.com](http://www.heatingandprocess.com)

## CAPS FOR PLUGS AND INLETS



Description	Box Quantity	
16/20A - 2P+E	10/100	A309 570.90163
16/20A - 3P+E	10/100	A309 570.90164
16/20A - 3P+N+E	10/100	A309 570.90165
32/30A - 2E+E & 3P+	10/100	A309 570.90324
32/30A - 3P+N+E	10/100	A309 570.90325
63/60A - all polarity	1/10	A309 570.9063
125/100A - all polarity	1/10	A309 570.9125



	A	B	C	D
A309 570.90163	64	60	20	40
A309 570.90164	72	68	20	40
A309 570.90165	81	76	20	40
A309 570.90324	85	82	22	50
A309 570.90325	93	89	22	50
A309 570.9063	99	96	25	71
A309 570.9125	113	109	25	79

	øA (mm)	B (mm)	fil.thread
A309 SAA12	48.5	39.2	1/2 NPT
A309 SAB12	61.9	45.1	1/2 NPT
A309 SAB34	61.9	45.1	3/4 NPT
A309 SAC100	70	51.3	1 NPT
A309 SAC125	84	39.9	1 1/4 NPT
A309 SAC34	70	51.3	3/4 NPT
A309 SAD125	96	41.5	1 1/4 NPT



THORNE &  
DERRICK  
INTERNATIONAL

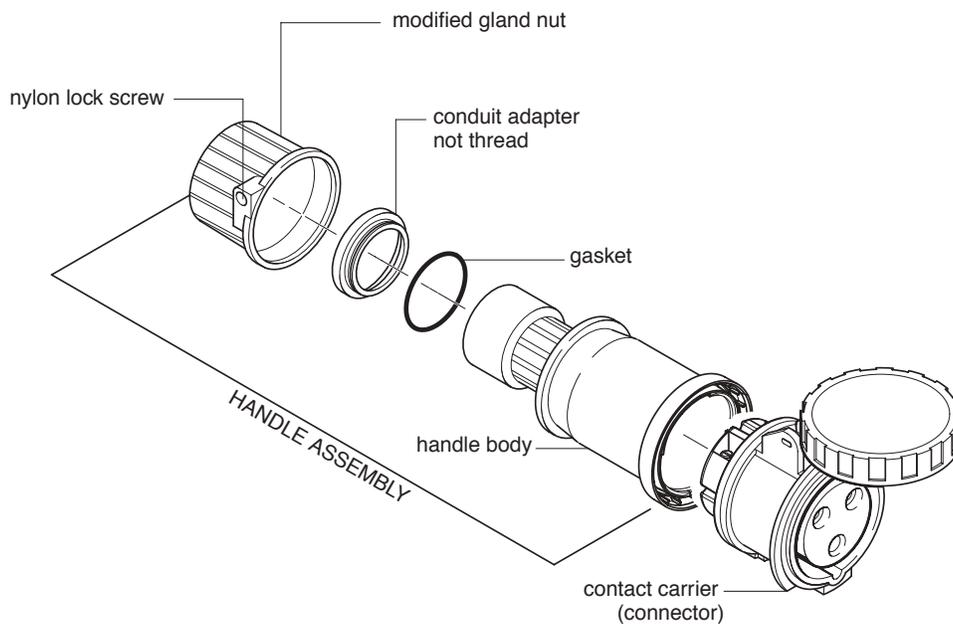
Thorne & Derrick  
+44 (0) 191 410 4292  
www.heatingandprocess.com

**CONDUIT ADAPTOR**



Versions	Box Quantity	
20A 3-4 WIRE 1/2" NPT	5	A309SAA12
20A 5 WIRE 1/2" NPT	5	A309SAB12
30A 3-4 WIRE 3/4" NPT	5	A309SAB34
30A 5 WIRE 1" NPT	5	A309SAC100
60A 3-4-5 WIRE 1 1/4" NPT	5	A309SAC125
30A 5 WIRE 3/4" NPT	5	A309SAC34
100A 3-4-5 WIRE 1 1/4" NPT	5	A309SAD125

**LIQUID TIGHT ADAPTER KIT**



**SWITCH AUXILIARY CONTACTS**



Description	For switches	Box Quantity		16A-32A
NC contact	20A-30A	10	A309 590.PL004001	
	60A	10	A309 590.PL004003	
NO contact	20A-30A	10	A309 590.PL004002	
	60A	10	A309 590.PL004004	

For auxiliary contact suitable for 125A socket contact technical support  
 NC= normally closed. NO= normally open.  
 Pack Quantity

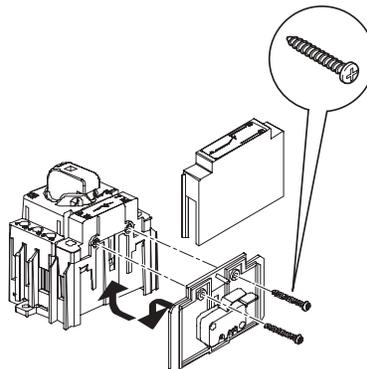
**MECHANICAL INTERLOCK ACCESORIES**



Description	Box Quantity	
M32 bottom jointing Kit M32 (*)	1/12	A309579.0332
4 DIN modules cover	10	A309579.0450
Thumb Screws	1/12	A309579.0400

(\*) IP66/IP67/IP69 when coupled with the respective component.  
 Pack Quantity

**SWITCH AUXILIARY CONTACTS**



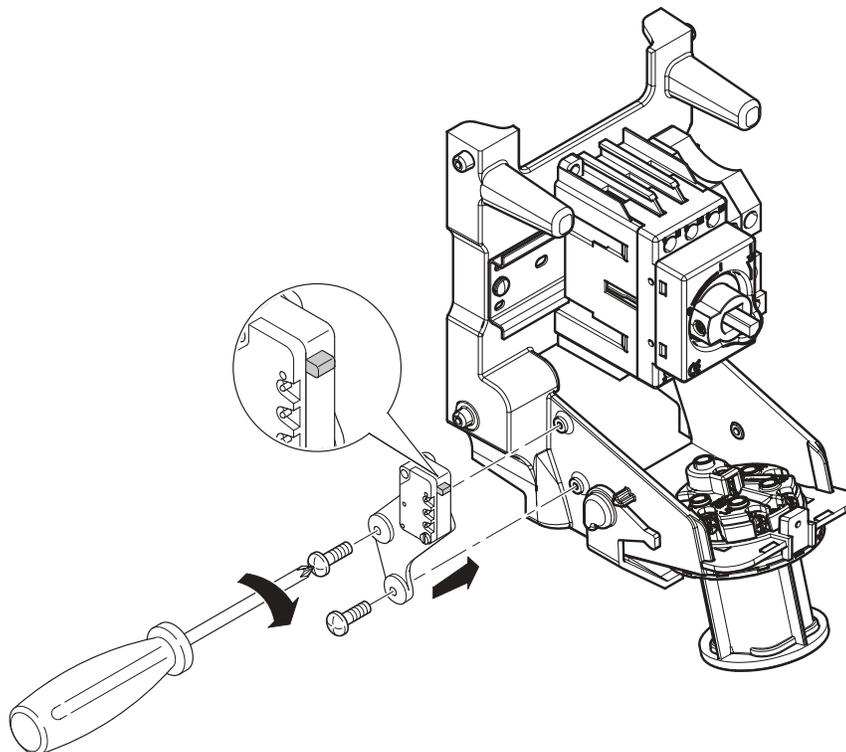
RECEPTACLE MICRO SWITCH



Description	Contacts	
Microswitch Kit for Advance GRP 16A-32A-63A for plug-inserted control	1NO/1NC	A309 579.0100

Max 2 kit 63A sockets. Max 1 kit for 16A-32A sockets.

RECEPTACLE MICRO SWITCH



# AMPHE -309 PART NUMBER - QUICK REFERENCE



## NORTH AMERICAN RATINGS - 20A



IP 44 Splashproof									
20A 16A	Number of Contacts △	Voltage Rating	P B	C R MI	Ⓢ	Plug P	Connector C	Receptacle R	Inlet B
20A	2P+E / 3W	125V	⊙	⊙	4h	A309 320P4S	A3093 20C45	A309 320R4S	A309 320B4S
20A/16A	2P+E / 3W	250V	⊙	⊙	6h	A309 320P6S	A309 320C6S	A309 320R6S	A309 320B6S
20A	2P+E / 3W	277V	⊙	⊙	5h	A309 320P5S	A309 320C5S	A309 320R5S	A309 320B5S
20A	2P+E / 3W	480V	⊙	⊙	7h	A309 320P7S	A309 320C7S	A309 320R7S	A309 320B7S
20A	3P+E / 4W	125/250V	⊙	⊙	12h	A309 420P12S	A309 420C12S	A309 420R12S	A309 420B12S
20A/16A	3P+E / 4W	250V	⊙	⊙	9h	A309 420P9S	A309 420C9S	A309 420R9S	A309 420B9S
20A/16A	3P+E / 4W	380-415V	⊙	⊙	6h	A309 420P6S	A309 420C6S	A309 420R6S	A309 420B6S
20A	3P+E / 4W	480V	⊙	⊙	7h	A309 420P7S	A309 420C7S	A309 420R7S	A309 420B7S
20A	3P+E / 4W	600V	⊙	⊙	5h	A309 420P5S	A309 420C5S	A309 420R5S	A309 420B5S
20A/16A	3P+N+E / 5W	250V	⊙	⊙	9h	A309 520P9S	A309 520C9S	A309 520R9S	A309 520B9S
20A/16A	3P+N+E / 5W	380-415V	⊙	⊙	6h	A309 520P6S	A309 520C6S	A309 520R6S	A309 520B6S
20A	3P+N+E / 5W	277/480V	⊙	⊙	7h	A309 520P7S	A309 520C7S	A309 520R7S	A309 520B7S
20A	3P+N+E / 5W	600V	⊙	⊙	5h	A309 520P5S	A309 520C5S	A309 520R5S	A309 520B5S



THORNE &  
**DERRICK**  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
[www.heatingandprocess.com](http://www.heatingandprocess.com)

# AMPHE -309 PN PART NUMBER - QUICK REFERENCE



## NORTH AMERICAN RATINGS - 20A



IP 67 Watertight					Accessories		
Plug P	Connector C	Receptacle R	Inlet B	Mechanical Interlock MI	Caps for Plug and Inlets	Back Box for Receptacle and Inlets	Conduit Adaptor 1/2" NPT
A309 320P4W	A309 320C4W	A309 320R4W	A309 320B4W	A309 320MI4W	A309 570.90163	A309 BB01	A309 SAA12
A309 320P6W	A309 320C6W	A309 320R6W	A309 320B6W	A309 320MI6W	A309 570.90163	A309 BB01	A309 SAA12
A309 320P5W	A309 320C5W	A309 320R5W	A309 320B5W		A309 570.90163	A309 BB01	A309 SAA12
A309 320P7W	A309 320C7W	A309 320R7W	A309 320B7W	A309 320MI7W	A309 570.90163	A309 BB01	A309 SAA12
A309 420P12W	A309 420C12W	A309 420R12W	A309 420B12W	A309 420MI12W	A309 570.90164	A309 BB01	A309 SAA12
A309 420P9W	A309 420C9W	A309 420R9W	A309 420B9W	A309 420MI9W	A309 570.90164	A309 BB01	A309 SAA12
A309 420P7W	A309 420C7W	A309 420R7W	A309 420B7W	A309 420MI7W	A309 570.90164	A309 BB01	A309 SAA12
A309 420P6W	A309 420C6W	A309 420R6W	A309 420B6W		A309 570.90164	A309 BB01	A309 SAA12
A309 420P5W	A309 420C5W	A309 420R5W	A309 420B5W	A309 420MI5W	A309 570.90164	A309 BB01	A309 SAA12
A309 520P9W	A309 520C9W	A309 520R9W	A309 520B9W	A309 520MI9W	A309 570.90165	A309 BB01	A309 SAB12
A309 520P6W	A309 520C6W	A309 520R6W	A309 520B6W		A309 570.90165	A309 BB01	A309 SAB12
A309 520P7W	A309 520C7W	A309 520R7W	A309 520B7W	A309 520MI7W	A309 570.90165	A309 BB01	A309 SAB12
A309 520P5W	A309 520C5W	A309 520R5W	A309 520B5W	A309 520MI5W	A309 570.90165	A309 BB01	A309 SAB12



**THORNE &  
DERRICK**  
INTERNATIONAL

**Thorne & Derrick**  
+44 (0) 191 410 4292  
www.heatingandprocess.com

# AMPHE -309 PART NUMBER - QUICK REFERENCE



## NORTH AMERICAN RATINGS - 30A



30A 32A	Number of Contacts ▲	Voltage Rating	C R MI	P C	Ⓢ	Plug P	Connector C	Receptacle R	Inlet B
30A	2P+E / 3W	125V	Ⓢ	Ⓢ	4h	A309 330P4S	A309 330C4S	A309 330R4S	A309 330B4S
30A/32A	2P+E / 3W	250V	Ⓢ	Ⓢ	6h	A309 330P6S	A309 330C6S	A309 330R6S	A309 330B6S
30A	2P+E / 3W	277V	Ⓢ	Ⓢ	5h	A309 330P5S	A309 330C5S	A309 330R5S	A309 330B5S
30A	2P+E / 3W	480V	Ⓢ	Ⓢ	7h	A309 330P7S	A309 330C7S	A309 330R7S	A309 330B7S
30A	3P+E / 4W	125/250V	Ⓢ	Ⓢ	12h	A309 430P12S	A309 430C12S	A309 430R12S	A309 430B12S
30A	2P+E / 3W	500V DC	Ⓢ	Ⓢ	8h	A309 330P8S	A309 330C8S	A309 330R8S	A309 330B8S
30A/32A	3P+E / 4W	250V	Ⓢ	Ⓢ	9h	A309 430P9S	A309 430C9S	A309 430R9S	A309 430B9S
30A/32A	3P+E / 4W	380-415V	Ⓢ	Ⓢ	6h	A309 430P6S	A309 430C6S	A309 430R6S	A309 430B6S
30A	3P+E / 4W	480V	Ⓢ	Ⓢ	7h	A309 430P7S	A309 430C7S	A309 430R7S	A309 430B7S
30A	3P+E / 4W	600V	Ⓢ	Ⓢ	5h	A309 430P5S	A309 430C5S	A309 430R5S	A309 430B5S
30A/32A	3P+N+E / 5W	250V	Ⓢ	Ⓢ	9h	A309 530P9S	A309 530C9S	A309 530R9S	A309 530B9S
30A/32A	3P+N+E / 5W	380-415V	Ⓢ	Ⓢ	6h	A309 530P6S	A309 530C6S	A309 530R6S	A309 530B6S
30A	3P+N+E / 5W	277/480V	Ⓢ	Ⓢ	7h	A309 530P7S	A309 530C7S	A309 530R7S	A309 530B7S
30A	3P+N+E / 5W	600V	Ⓢ	Ⓢ	5h	A309 530P5S	A309 530C5S	A309 530R5S	A309 530B5S
32A	3P+E / 4W	480V	Ⓢ	Ⓢ	3h				



THORNE &  
DERRICK  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
www.heatingandprocess.com

# AMPHE -309 PART NUMBER - QUICK REFERENCE



## NORTH AMERICAN RATINGS - 30A



<i>Plug P</i>	<i>Connector C</i>	<i>Receptacle R</i>	<i>Inlet B</i>	<i>Mechanical Interlock MI</i>	<i>Caps for Plug and Inlets</i>	<i>Back Box for Receptacle and Inlets</i>	<i>Conduit Adaptor 3/4" NPT</i>
A309 330P4W	A309 330C4W	A309 330R4W	A309 330B4W	A309 330MI4W	A309 570.90324	A309 BB01	A309 SAB34
A309 330P6W	A309 330C6W	A309 330R6W	A309 330B6W	A309 330MI6W	A309 570.90324	A309 BB01	A309 SAB34
A309 330P5W	A309 330C5W	A309 330R5W	A309 330B5W	A309 330MI5W	A309 570.90324	A309 BB01	A309 SAB34
A309 330P7W	A309 330C7W	A309 330R7W	A309 330B7W	A309 330MI7W	A309 570.90324	A309 BB01	A309 SAB34
A309 430P12W	A309 430C12W	A309 430R12W	A309 430B12W	A309 430MI12W	A309 570.90324	A309 BB01	A309 SAB34
A309 330P8W	A309 330C8W	A309 330R8W	A309 330B8W		A309 570.90324	A309 BB01	A309 SAB34
A309 430P9W	A309 430C9W	A309 430R9W	A309 430B9W	A309 430MI9W	A309 570.90324	A309 BB01	A309 SAB34
A309 430P6W	A309 430C6W	A309 430R6W	A309 430B6W		A309 570.90324	A309 BB01	A309 SAB34
A309 430P7W	A309 430C7W	A309 430R7W	A309 430B7W	A309 430MI7W	A309 570.90324	A309 BB01	A309 SAB34
A309 430P5W	A309 430C5W	A309 430R5W	A309 430B5W	A309 430MI5W	A309 570.90324	A309 BB01	A309 SAB34
A309 530P9W	A309 530C9W	A309 530R9W	A309 530B9W	A309 530MI9W	A309 570.90325	A309 BB01	A309 SAC34
A309 530P6W	A309 530C6W	A309 530R6W	A309 530B6W		A309 570.90325	A309 BB01	A309 SAC34
A309 530P7W	A309 530C7W	A309 530R7W	A309 530B7W	A309 530MI7W	A309 570.90325	A309 BB01	A309 SAC34
A309 530P5W	A309 530C5W	A309 530R5W	A309 530B5W	A309 530MI5W	A309 570.90325	A309 BB01	A309 SAC34
A309432P3W	A309432C3W	A309432R3W	A309432B3W	A309432MI3W	A309 570.90325	A309 BB01	A309 SAC34



THORNE &  
**DERRICK**  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
[www.heatingandprocess.com](http://www.heatingandprocess.com)

# AMPHE -309 PART NUMBER - QUICK REFERENCE



## NORTH AMERICAN RATINGS - 60A



						IP 67 Watertight				
60A 63A		Voltage Rating	C R MI	P C	Ⓢ	Plug P	Connector C	Receptacle R	Inlet B	Mechanical Interlock MI
60A	2P+E / 3W	125V			4h	A309 360P4W	A309 360C4W	A309 360R4W	A309 360B4W	
60A/63A	2P+E / 3W	250V			6h	A309 360P6W	A309 360C6W	A309 360R6W	A309 360B6W	A309 360MI6W
60A	2P+E / 3W	277V			5h	A309 360P5W	A309 360C5W	A309 360R5W	A309 360B5W	
60A	2P+E / 3W	480V			7h	A309 360P7W	A309 360C7W	A309 360R7W	A309 360B7W	A309 360MI7W
60A	2P+E / 3W	250V DC			3h	A309 360P3W	A309 360C3W	A309 360R3W	A309 360B3W	
60A	2P+E / 3W	500V DC			8h	A309 360P8W	A309 360C8W	A309 360R8W	A309 360B8W	
60A	3P+E / 4W	125/250V			12h	A309 460P12W	A309 460C12W	A309 460R12W	A309 460B12W	
60A/63A	3P+E / 4W	250V			9h	A309 460P9W	A309 460C9W	A309 460R9W	A309 460B9W	A309 460MI9W
60A/63A	3P+E / 4W	380-415V			6h	A309 460P6W	A309 460C6W	A309 460R6W	A309 460B6W	
60A	3P+E / 4W	480V			7h	A309 460P7W	A309 460C7W	A309 460R7W	A309 460B7W	A309 460MI7W
60A	3P+E / 4W	600V			5h	A309 460P5W	A309 460C5W	A309 460R5W	A309 460B5W	A309 460MI5W
60A/63A	3P+N+E / 5W	250V			9h					
60A/63A	3P+N+E / 5W	380-415V			6h					
60A	3P+N+E / 5W	277/480V			7h					
60A	3P+N+E / 5W	600V			5h					



THORNE &  
**DERRICK**  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
www.heatingandprocess.com



# AMPHE -309 PART NUMBER - QUICK REFERENCE



## 100A UL / 125A INTERNATIONAL



						IP 67 Watertight				
100A 125A	Number of Contacts 	Voltage Rating	C R MI	P C		Plug P	Connector C	Receptacle R	Inlet B	Mechanical Interlock MI
100A	2P+E / 3W	125V			4h	A309 3100P6W	A309 3100C6W	A309 3100R6W	A309 3100B6W	
100A/ 125A	2P+E / 3W	250V			6h	A309 3100P7W	A309 3100C7W	A309 3100R7W	A309 3100B7W	
100A	2P+E / 3W	277V			5h	A309 3100P8W	A309 3100C8W	A309 3100R8W	A309 3100B8W	
100A	2P+E / 3W	480V			7h	A309 4100P12W	A309 4100C12W	A309 4100R12W	A309 4100B12W	
100A	2P+E / 3W	500V DC			8h	A309 4100P9W	A309 4100C9W	A309 4100R9W	A309 4100B9W	
100A	3P+E / 4W	125/250V			12h	A309 4100P6W	A309 4100C6W	A309 4100R6W	A309 4100B6W	
100A/ 125A	3P+E / 4W	250V			9h	A309 4100P7W	A309 4100C7W	A309 4100R7W	A309 4100B7W	
100A/ 125A	3P+E / 4W	380-415V			6h	A309 4100P5W	A309 4100C5W	A309 4100R5W	A309 4100B5W	
100A	3P+E / 4W	480V			7h	A309 5100P9W	A309 5100C9W	A309 5100R9W	A309 5100B9W	
100A	3P+E / 4W	600V			5h	A309 5100P6W	A309 5100C6W	A309 5100R6W	A309 5100B6W	
100A/ 125A	3P+N+E / 5W	250V			9h	A309 5100P7W	A309 5100C7W	A309 5100R7W	A309 5100B7W	
100A/ 125A	3P+N+E / 5W	380-415V			6h	A309 5100P5W	A309 5100C5W	A309 5100R5W	A309 5100B5W	
100A	3P+N+E / 5W	277/480V			7h	A309 5100P8W	A309 5100C8W	A309 5100R8W	A309 5100B8W	
100A	3P+N+E / 5W	600V			5h					
100A	3P+N+E / 5W	400V DC			8h					



THORNE &  
DERRICK  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
www.heatingandprocess.com





## EX309

Amphenol Industrial Products Group introduces the EX309 connector series designed to perform in potentially hazardous areas identified as Zone 1 / 2 / 21 (ATEX).

EX309 is rated to IP66 and made of fire resistant glass-fiber reinforced polyester (Low Smoke Zero Halogen). This series is available in amperage ratings of 16A, 32A, 63A and 125A, with a voltage rating of 690V. Operating temperature range for the product is -50°C to +60°C.

The wall mounted receptacle has a switched interlock enabling it to be unmated when it is OFF.

The EX309 male plug can be mated to standard IEC60309 receptacles in safe areas. Standard plugs do not mate to EX309 Switched Interlock Receptacles.

## Technical Specifications

Rated Current:	16A - 32A - 63A - 125A
Rated Voltage:	100 ÷ 690V~
Frequency:	50 ÷ 60Hz
Insulating voltage:	690V~
ATEX Code:	II 2GD

Ex Protection type:	Ex d e BC Txxx°C Gb Ex tb #IC T80°C Db IP 66
---------------------	---

Ambient temperature range:	-50°C + 60°C for plug 16/32A, -40°C + 60°C for plug 63/125A
----------------------------	--

Maximum permissible surface temperature (DUST):	T80°C/T90°C
Temperature class (GAS):	T4/T5

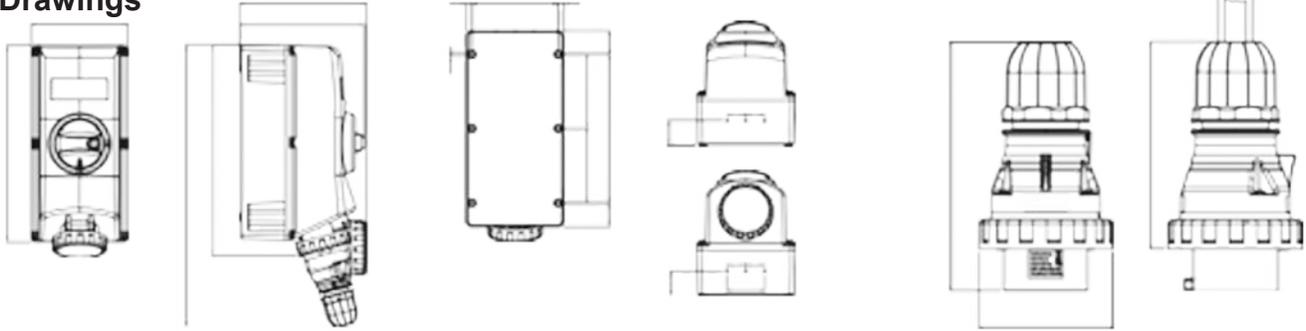
Impact resistance:	7J
Switched socket outlets with interlock material:	Dissipative Thermosetting (GRP)
Plug material:	PA6 - Dissipative



# EX309 Series for Zone 1 & 2



## Drawings



Type	A	B	C min	D	E	F	G	H	Ø	I	I/2	L	M	N	O	P
16A	2P+E	260	130	370	280	170	166.8	114.5	7.75	6	198	31	25	25		33.5
	3P+E	260	130	375	282	175	166.8	114.5	7.75	6	198	31	25	25		33.5
	3P+N+E	260	130	393	282	182	166.8	114.5	7.75	6	198	31	25	25		33.5
32A	2P+E	260	130	395	285	189	166.8	114.5	7.75	6	198	31	25	25		33.5
	3P+E	260	130	395	285	189	166.8	114.5	7.75	6	198	31	25	25		33.5
	3P+N+E	260	130	403	286	185	166.8	114.5	7.75	6	198	31	25	25		33.5
63A	3P+E	380	170	550	420	225	205.75	150	8.3	7	310	35	32.5	32.5		40
	3P+N+E	380	170	550	420	225	205.75	150	8.3	7	310	35	32.5	32.5		40
125A	3P+E	575	280	800	626	253	250	257	11.5	9	468	54	50		130	49
	3P+N+E	575	280	800	626	253	250	257	11.5	9	468	234	54	50		130

Type	A Min	ØG	L Min	ØMin	ØMax	
16A	2P+E	116	73	140.5	6	15
	3P+E	123	81	147.5	6	15
	3P+N+E	140.5	88	165	9	20
32A	2P+E	142.6	92	174	9	20
	3P+E	142.6	92	174	9	20
	3P+N+E	150	101	180.5	13	23
63A	3P+E	166.5	112	217.5	17	33
	3P+N+E	166.5	112	217.5	17	33
125A	3P+E	214.5	128	274	26	50
	3P+N+E	214.5	128	274	26	50

Poles	Hz	Rated Voltage	Color	Clocking (h)	16A PLUG	16A RECEPTACLE	32A PLUG	32A RECEPTACLE	63A PLUG	63A RECEPTACLE	125A PLUG	125A RECEPTACLE
2P+E	50/60	100-130V		4	EX309-1612-304	EX309-1611-304	EX309-3212-304	EX309-3211-304				
2P+E	50/60	200-250V		6	EX309-1612-306	EX309-1611-306	EX309-3212-306	EX309-3211-306				
2P+E	50/60	380-415V		9	EX309-1612-309	EX309-1611-309	EX309-3212-309	EX309-3211-309				
2P+E	50/60	480-500V		7	EX309-1612-307	EX309-1611-307	EX309-3212-307	EX309-3211-307				
2P+E	300+500	50-500		2	EX309-1612-302	EX309-1611-302	EX309-3212-302	EX309-3211-302				
2P+E	d.c.	50-250		3	EX309-1612-303	EX309-1611-303	EX309-3212-303	EX309-3211-303				
2P+E	d.c.	>250-500		8	EX309-1612-308	EX309-1611-308	EX309-3212-308	EX309-3211-308				
3P+E	50/60	100-130V		4	EX309-1612-404	EX309-1611-404	EX309-3212-404	EX309-3211-404	EX309-6312-404	EX309-6311-404	EX309-12512-404	EX309-12511-404
3P+E	50/60	200-250V		9	EX309-1612-409	EX309-1611-409	EX309-3212-409	EX309-3211-409	EX309-6312-409	EX309-6311-409	EX309-12512-409	EX309-12511-409
3P+E	50/60	380-415V		6	EX309-1612-406	EX309-1611-406	EX309-3212-406	EX309-3211-406	EX309-6312-406	EX309-6311-406	EX309-12512-406	EX309-12511-406
3P+E	60	440-460V		11	EX309-1612-411	EX309-1611-411	EX309-3212-411	EX309-3211-411	EX309-6312-411	EX309-6311-411	EX309-12512-411	EX309-12511-411
3P+E	50/60	480-500V		7	EX309-1612-407	EX309-1611-407	EX309-3212-407	EX309-3211-407	EX309-6312-407	EX309-6311-407	EX309-12512-407	EX309-12511-407
3P+E	50/60	600-690V		5	EX309-1612-405	EX309-1611-405	EX309-3212-405	EX309-3211-405	EX309-6312-405	EX309-6311-405	EX309-12512-405	EX309-12511-405
3P+E	50/60	380/440		3	EX309-1612-403	EX309-1611-403	EX309-3212-403	EX309-3211-403	EX309-6312-403	EX309-6311-403	EX309-12512-403	EX309-12511-403
3P+E	100+300	50-690		10	EX309-1612-410	EX309-1611-410	EX309-3212-410	EX309-3211-410	EX309-6312-410	EX309-6311-410	EX309-12512-410	EX309-12511-410
3P+E	>300+500	50-690		2	EX309-1612-402	EX309-1611-402	EX309-3212-402	EX309-3211-402	EX309-6312-402	EX309-6311-402	EX309-12512-402	EX309-12511-402
3P+N+E	50/60	100-130V		4	EX309-1612-504	EX309-1611-504	EX309-3212-504	EX309-3211-504	EX309-6312-504	EX309-6311-504	EX309-12512-504	EX309-12511-504
3P+N+E	50/60	208-250V		9	EX309-1612-509	EX309-1611-509	EX309-3212-509	EX309-3211-509	EX309-6312-509	EX309-6311-509	EX309-12512-509	EX309-12511-509
3P+N+E	50/60	346-415V		6	EX309-1612-506	EX309-1611-506	EX309-3212-506	EX309-3211-506	EX309-6312-506	EX309-6311-506	EX309-12512-506	EX309-12511-506
3P+N+E	50/60	480-500V		7	EX309-1612-507	EX309-1611-507	EX309-3212-507	EX309-3211-507	EX309-6312-507	EX309-6311-507	EX309-12512-507	EX309-12511-507
3P+N+E	50/60	600-690V		5	EX309-1612-505	EX309-1611-505	EX309-3212-505	EX309-3211-505	EX309-6312-505	EX309-6311-505	EX309-12512-505	EX309-12511-505
3P+N+E	60	440-460V		11	EX309-1612-511	EX309-1611-511	EX309-3212-511	EX309-3211-511	EX309-6312-511	EX309-6311-511	EX309-12512-511	EX309-12511-511
3P+N+E	50/60	380/440V		3	EX309-1612-503	EX309-1611-503	EX309-3212-503	EX309-3211-503	EX309-6312-503	EX309-6311-503	EX309-12512-503	EX309-12511-503
3P+N+E	>300+500	50-690		2	EX309-1612-502	EX309-1611-502	EX309-3212-502	EX309-3211-502	EX309-6312-502	EX309-6311-502	EX309-12512-502	EX309-12511-502



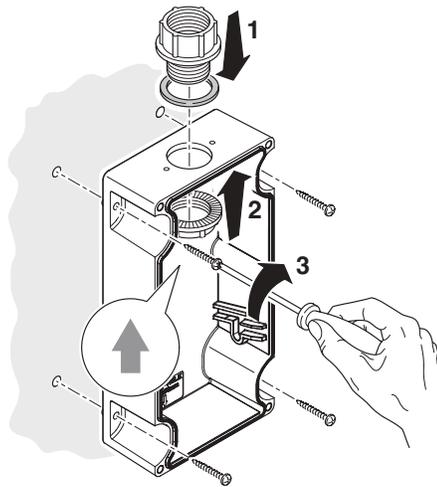
## MOUNTING INSTRUCTIONS



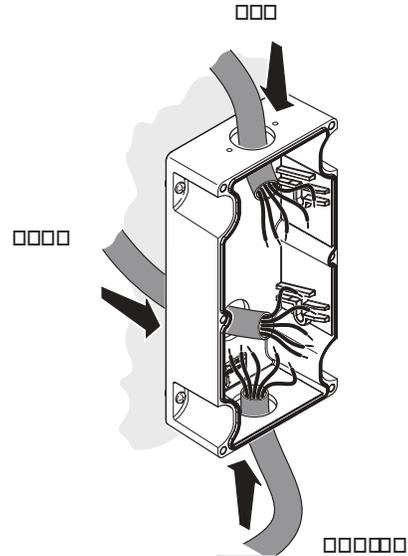
THORNE &  
DERRICK  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
www.heatingandprocess.com

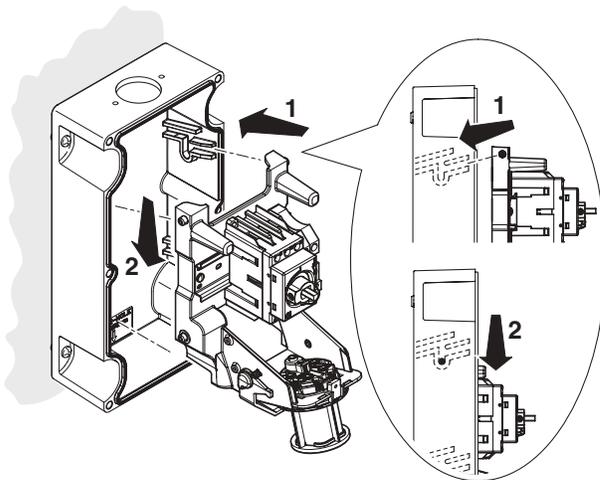
Base wall mounting



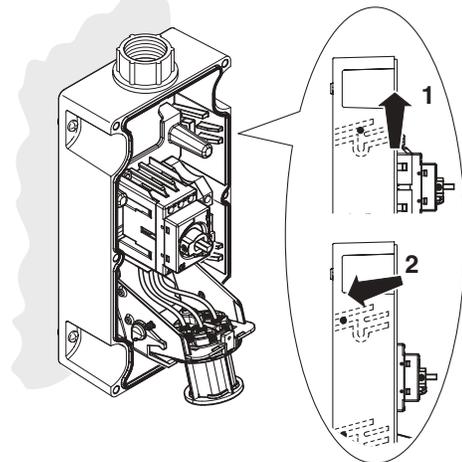
Cable entries



Insert assembly



Closure  
Closing



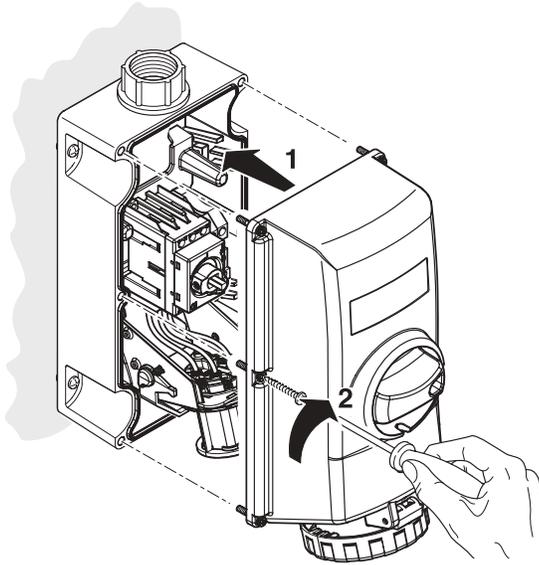
## MOUNTING INSTRUCTIONS



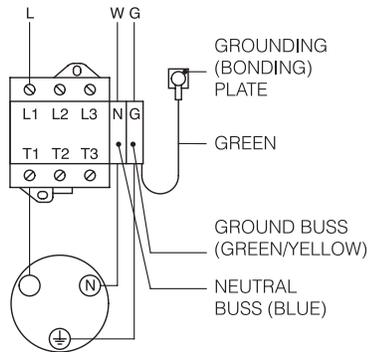
**THORNE & DERRICK**  
INTERNATIONAL

**Thorne & Derrick**  
+44 (0) 191 410 4292  
www.heatingandprocess.com

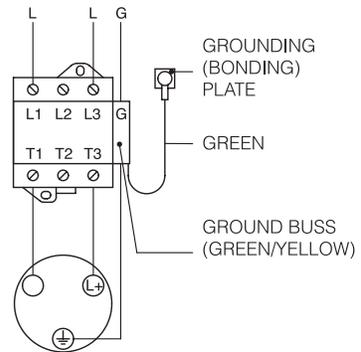
Reinstall  
the cover



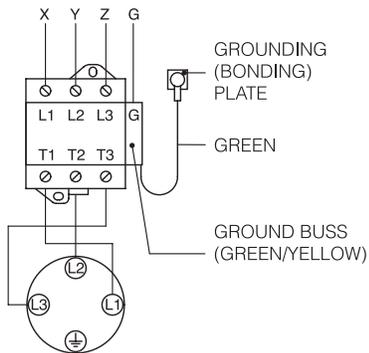
Wiring diagram



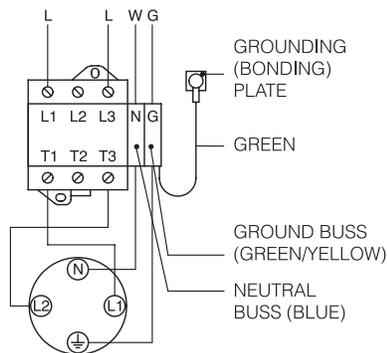
**2 POLES 3 WIRES**  
Single phase



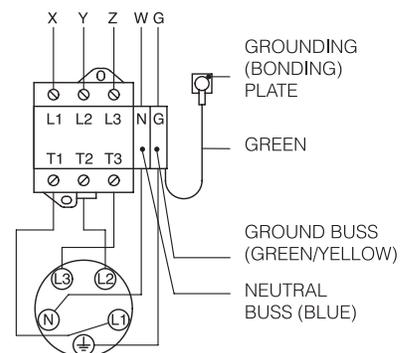
**2 POLES 3 WIRES**  
Single phase (no neutral)



**3 POLES 4 WIRES**  
3 phase



**3 POLES 4 WIRES**  
Edison system



**4 POLES 5 WIRES**  
3 phase

**Amphenol®**



THORNE &  

---

DERRICK  
INTERNATIONAL

Thorne & Derrick

+44 (0) 191 410 4292

[www.heatingandprocess.com](http://www.heatingandprocess.com)