

DB

7,5 kW
22 kW
45 kW

- AC-3 motor switch
- Frequent motor starts
- IP66/IP67 as standard feature
- Replace systems comprising a switch and a connector



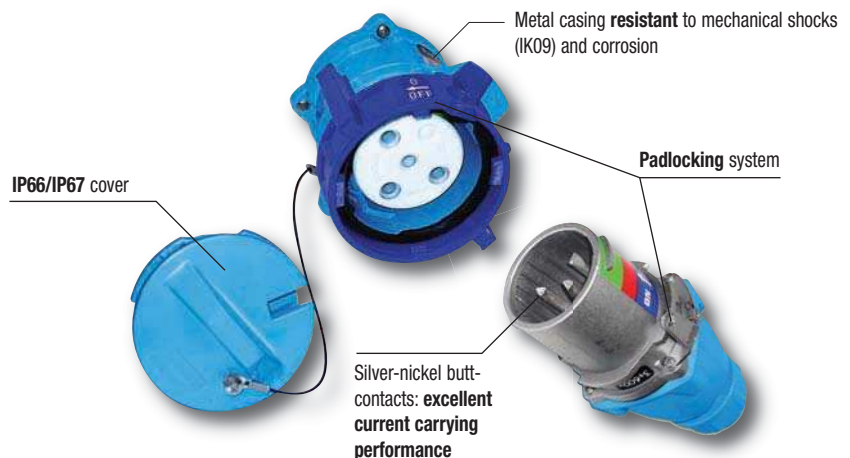
SPECIFICATION

IP 67 disconnectable motor switch - AC3 utilisation category according to IEC / EN 60947-3 standard.

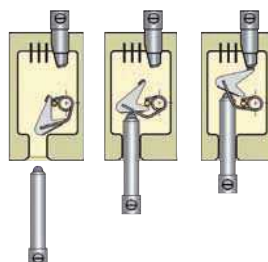
Technical data available at:
www.marechal.com

DB disconnectable motor switches combine the functions of switch-engine cutoff switch and plug and socket-outlet. They guarantee the safety of persons during an operation on the load (motor load or highly inductive).

Mechanical features

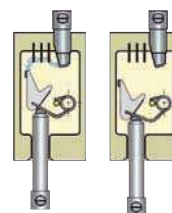


Connection:



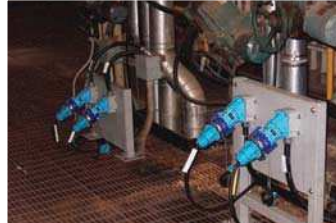
Under spring pressure, the intermediate part escapes from the stop (yellow) and rocks to the live socket contact and produce independent making. The padlock system prevents accidental pull-out of the plug.

Disconnection:



When the padlock is freed it is possible to pull out the plug. Under spring pressure, the intermediate part rocks from the live socket contact and the arc is split by the three blades. Arcing is thus reduced by this independent break.

LOAD-BREAK SEPARABLE MOTOR SWITCH



Pumps connection



Pumps in wet atmosphere



Military application



External power supply for water treatment

Electrical features

AC-3 motor switch

	DB3	DB6	DB9
AC-3 load-break capability	7,5 kW	22 kW	45 kW
I _{max}	40 A	75 A	125 A
U _{max}	690 V	690 V	690 V
Casing material	metal	metal	metal
Keying positions (°)	24	24	24
Ambient temperature	-40 °C to +60 °C	-40 °C to +60 °C	-40 °C to +60 °C
Short-circuit current I _{cc}	200 kA	200 kA	200 kA

(°) To discriminate between different power supplies and applications

Regulatory features

DB decontactors comply with:

- The European Low Voltage Directive 2006/95/CE,
- The European 'Machine Directive' regarding equipment isolation,
- The French decree n°88-1056 dated 14th November 1988,
- The French NF C 15-100 standard,
- The decrees relating to workers' protection in Belgium, Spain and Italy,
- CEI 60309-1 & CEI 60309-4 European and International standards (plugs and socket-outlets for industrial purposes)
- The UL 1682, UL 2682 and UL 98/508 standards
- The load breaking capacity according to utilisation category AC-3 of EN 60947-3 switch rated standard.

Also certified by VERITAS LCIE, UL, AS, VDE and CSA (French, Us, Australian, German & Canadian) and by BUREAU VERITAS MARINE inspection laboratories.



UNDERWRITERS
LABORATORIES
INC.



STANDARDS
AUSTRALIA

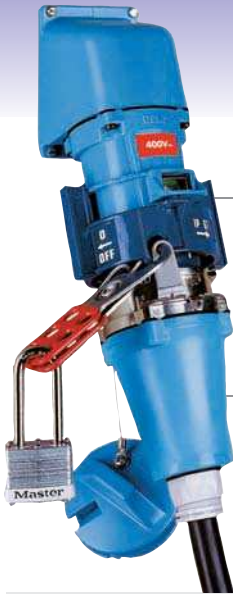
DB3

DECONTACTOR™ for motors

METAL CASING

up to 40 A & 7,5 kW

IP66 IP67



AC-3 motor switch according to EN 60947-3 switch standard

Typical configuration

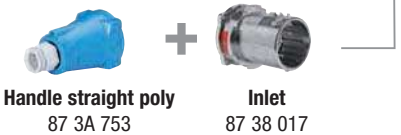
Inclined socket



Sleeve metal 70°
87 3A 087

Socket-outlet
87 34 017

Plug



Handle straight poly
87 3A 753

Inlet
87 38 017

Main features:

Rated current (with wiring according to standard)	40 A	Flexible wiring (min-max)	2,5 - 6 mm ²
Maximum voltage	690 V	Stranded wiring (min-max)	2,5 - 10 mm ²
IP protection lid closed	IP66 / IP67	Pre-wired auxiliary contacts (5A)	1,5 mm ²
IP protection connected plug	IP66 / IP67	Keying positions	24
Resistance to shocks	IK09		
Ambient temperature	-40 °C to +60 °C		

Load-break capability of the DECONTACTOR™:

Comply with EN 60309-1 40 A / 690 V

Rated powers (AC-3 load-breaking capacity according to EN 60947-3):

- 3 kW up to 230 V - 1P
- 5,5 kW up to 230 V - 3P
- 7,5 kW up to 400 V - 3P
- 7,5 kW up to 500 V - 3P
- 7,5 kW up to 690 V - 3P

Short-circuit current I_{cc} 200 kA

Socket-outlet (female)



Voltage 50 Hz	Polarity	Part no.
190 - 230 V	3P+E	87 34 033
220 - 250 V	1P+N+E	87 34 015
380 - 440 V	3P+E	87 34 013
380 - 440 V	3P+N+E	87 34 017
660 - 690 V	3P+E	87 34 193
660 - 690 V	3P+N+E	87 34 197

Inlet (male)



Voltage 50 Hz	Polarity	Part no.
190 - 230 V	3P+E	87 38 033
220 - 250 V	1P+N+E	87 38 015
380 - 440 V	3P+E	87 38 013
380 - 440 V	3P+N+E	87 38 017
660 - 690 V	3P+E	87 38 193
660 - 690 V	3P+N+E	87 38 197

Other voltages and polarities are available on request
(See technical manual p. 199)

Socket-outlet with auxiliary contacts:

With 2 auxiliary contacts (5A / 400 V) Socket no. + 172

Inlet with auxiliary contacts:

With 2 auxiliary contacts (5A / 400 V) Inlet no. + 172

Boxes

Cable gland not included



Wall box + sleeve metal 70°



Wall box + sleeve metal 30°



Wall box + straight metal sleeve

Entry			
M20	87 3A 053 417	87 3A 653 417	87 3A 095 417
M25	87 3A 053	87 3A 653	87 3A 095
M32	87 3A 053 419	87 3A 653 419	87 3A 095 419
M40	87 3A 053 420	87 3A 653 420	87 3A 095 420

It is possible to drill several entries for PE to have a separate cable for the auxiliary.

Sleeves



Inclined metal 70°



Inclined metal 30°



Straight metal

87 3A 087	39 3A 027	87 3A 127
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You can find the drawing of the bold printed part-numbers on pages 80 to 81.

Handles



Straight poly



Straight poly with poly cable gland



Straight metal with metal cable gland



Straight poly without cable gland with metric threaded entry

10-30 mm	87 3A 013	5-12 mm	87 3A 253 20P	7-13 mm	87 3A 953 20M	M20	87 3A 253 417
		9-18 mm	87 3A 753	8-16 mm	87 3A 963	M25	87 3A 253 418
		14-25 mm	87 3A 253 32P	16-24 mm	87 3A 953 32M	M32	87 3A 253 419
		18-32 mm	87 3A 253 40P	22-32 mm	87 3A 953 40M	M40	87 3A 253 420

Options & accessories

	Part no.
Inlet cap	87 3A 126



Padlocking device from 1 to 6 padlocks
87 3A 541



Inlet cap
87 3A 126



Padlocking



From left to right:
 Padlocked in OFF position
 Padlocked in ON position
 Socket-outlet padlocked with closed cover
 Inlet padlocked



AC-3 motor switch according to EN 60947-3 switch standard

Typical configuration

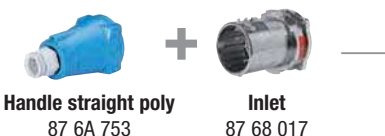
Inclined socket



Sleeve metal 70°
87 6A 087

Socket-outlet
87 64 017

Plug



Handle straight poly
87 6A 753

Inlet
87 68 017

Main features:

Rated current (with wiring according to standard)	75 A	Flexible wiring (min-max)	10 - 25 mm ²
Maximum voltage	690 V	Stranded wiring (min-max)	16 - 35 mm ²
IP protection lid closed	IP66 / IP67	Pre-wired auxiliary contacts (5A)	1,5 mm ²
IP protection connected plug	IP66 / IP67	Keying positions	24
Resistance to shocks	IK09		
Ambient temperature	-40 °C to +60 °C		

Load-break capability of the DECONTACTOR™:

Comply with EN 60309-1 75 A / 690 V

Rated powers (AC-3 load-breaking capacity according to EN 60947-3):

7,5 kW up to 230 V - 1P
11 kW up to 230 V - 3P
15 kW up to 400 V - 3P
15 kW up to 500 V - 3P
22 kW up to 690 V - 3P

Short-circuit current I_{cc} 200 kA

Socket-outlet (female)



Inlet (male)



Other voltages and polarities are available on request
(See technical manual p. 199)

Voltage 50 Hz	Polarity	Part no.	Voltage 50 Hz	Polarity	Part no.
190 - 230 V	3P+E	87 64 033	190 - 230 V	3P+E	87 68 033
220 - 250 V	1P+N+E	87 64 015	220 - 250 V	1P+N+E	87 68 015
380 - 440 V	3P+E	87 64 013	380 - 440 V	3P+E	87 68 013
380 - 440 V	3P+N+E	87 64 017	380 - 440 V	3P+N+E	87 68 017
660 - 690 V	3P+E	87 64 193	660 - 690 V	3P+E	87 68 193
660 - 690 V	3P+N+E	87 64 197	660 - 690 V	3P+N+E	87 68 197

Socket-outlet with auxiliary contacts:

With 2 auxiliary contacts (5A / 400 V) Socket no. + 172

Inlet with auxiliary contacts:

With 2 auxiliary contacts (5A / 400 V) Inlet no. + 172

Boxes

Cable gland not included



Wall box metal + metal sleeve 70°



Wall box + metal sleeve 30°



Wall box + straight metal sleeve

Entry			
M25	87 6A 053 418	87 6A 653 418	87 6A 095 418
M32	87 6A 053 419	87 6A 653 419	87 6A 095 419
M40	87 6A 053	87 6A 653	87 6A 095
M50	87 6A 053 429	87 6A 653 429	87 6A 095 429

It is possible to drill several entries for PE to have a separate cable for the auxiliary.

Sleeves



Inclined metal 70°

87 6A 087



Inclined metal 30°

39 6A 027



Straight metal

87 6A 127

You can find the drawing of the bold printed part-numbers on pages 80 to 81.

Handles



Straight poly

13-35 mm

87 6A 013



Straight poly with poly cable gland

9-18 mm

87 6A 253 25P

14-25 mm

87 6A 253 32P

18-32 mm

87 6A 753

24-38,5 mm

87 6A 253 50P



Straight metal with metal cable gland

8-16 mm

87 6A 953 25M

16-24 mm

87 6A 953 32M

22-32 mm

87 6A 963

34-44 mm

87 6A 953 50M



Straight poly without cable gland with metric threaded entry

M25

87 6A 253 418

M32

87 6A 253 419

M40

87 6A 253 420

M40

87 6A 253 429

Options & accessories

	Part no.
Inlet cap	87 6A 126



Padlocking device from 1 to 6 padlocks
87 3A 541



Inlet cap
87 6A 126



The DB's butt-contact technology

The DB's load-break capability is rated as AC-3 category motor switch and can make and break highly inductive loads. The two staged contacts are made with silver-nickel pads.



Under spring pressure, the intermediate part rocks to make the contact. The making speed is independent from plug operating speed.



When the plug is pulled out, the spring makes the intermediate part rock to separate from the contact. The three blades split the arc.

DB9

DECONTACTOR™ for motors

METAL CASING

up to 125 A & 45 kW

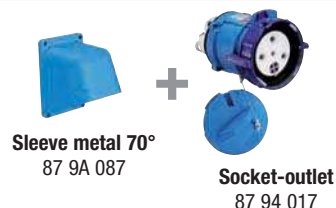
IP66 IP67



AC-3 motor switch according to EN 60947-3 switch standard

Typical configuration

Inclined socket



Sleeve metal 70°
87 9A 087

Socket-outlet
87 94 017

Plug



Handle straight elastomere
65 9A 013 D45

Inlet
87 98 017

Caractéristiques essentielles :

Rated current (with wiring according to standard)	125 A	Flexible wiring (min-max)	16 - 50 mm ²
Maximum voltage	690 V	Stranded wiring (min-max)	25 - 70 mm ²
IP protection lid closed	IP66 / IP67	Pre-wired auxiliary contacts (5A)	1,5 mm ²
IP protection connected plug	IP66 / IP67	Keying positions	24
Resistance to shocks	IK09		
Ambient temperature	-40 °C à +60 °C		

Load-break capability of the DECONTACTOR™:

Comply with EN 60309-1 125 A / 690 V

Rated powers (AC-3 load-breaking capacity according to EN 60947-3):	15 kW up to 230 V - 1P
	22 kW up to 230 V - 3P
	30 kW up to 400 V - 3P
	30 kW up to 500 V - 3P
	45 kW up to 690 V - 3P

Short-circuit current I_{cc} 200 kA

Socket-outlet (female)



Voltage 50 Hz	Polarity	Part no.
190 - 230 V	3P+E	87 94 033
220 - 250 V	1P+N+E	87 94 015
380 - 440 V	3P+E	87 94 013
380 - 440 V	3P+N+E *	87 94 017
660 - 690 V	3P+E	87 94 193
660 - 690 V	3P+N+E	87 94 197

Inlet (male)



Voltage 50 Hz	Polarity	Part no.
190 - 230 V	3P+E	87 98 033
220 - 250 V	1P+N+E	87 98 015
380 - 440 V	3P+E	87 98 013
380 - 440 V	3P+N+E *	87 98 017
660 - 690 V	3P+E	87 98 193
660 - 690 V	3P+N+E	87 98 197

Other voltages and polarities are available on request
(See technical manual p. 199)

Socket-outlet with auxiliary contacts:

With 4 auxiliary contacts (5A / 400 V) Socket no. + 264

Inlet with auxiliary contacts:

With 4 auxiliary contacts (5A / 400 V) Inlet no. + 264

** Auxiliary contacts non available for 3P+N+E configuration*

Boxes

Cable gland not included



Wall box metal + metal sleeve 70°



Wall box metal + metal sleeve 30°



Wall box metal + straight metal sleeve

Entry			
M32	87 9A 053 419	87 9A 653 419	87 9A 095 419
M40	87 9A 053 420	87 9A 653 420	87 9A 095 420
M50	87 9A 053	87 9A 653	87 9A 095
M63	87 9A 053 463	87 9A 653 463	87 9A 095 463

It is possible to drill several entries for PE to have a separate cable for the auxiliary.

Sleeves



Inclined metal 70°

87 9A 087



Inclined metal 30°

39 9A 027



Straight metal

87 9A 127

You can find the drawing of the bold printed part-numbers on pages 80 to 81.

Handles



Straight elastomere

25 - 35 mm	65 9A 013 D35
35 - 45 mm	65 9A 013 D45
45 - 49 mm	65 9A 013 D49



Straight poly with poly cable gland

35 - 48,5 mm	61 9A 253 63M
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Straight metal with metal cable gland

22 - 32 mm	87 9A 953 40M
34 - 44 mm	87 9A 963
35 - 48,5 mm	87 9A 953 63M



Straight Poly without cable gland with metric threaded entry

M63	61 9A 253 463
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Options & accessories

	Part no.
Inlet cap	87 9A 126



Padlocking device from 1 to 6 padlocks
87 3A 541



Inlet cap
87 9A 126



Breaking direct current at 125 A / 500 V

For applications in back-up circuit, **DB9** can safely break high power direct currents: **125 A / 500 V d.c.**

DB disconnectable switches have very high load break capability and offer an attractive solution to break under load and disconnect equipment.

Please feel free to contact us for any special applications that require breaking under load.

ZOOM



Motor-switch + plug and socket

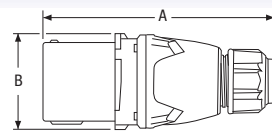
The DB is especially designed to supply power to motors and any highly inductive loads. Its **AC-3** load-break capability guarantees user safety during intervention on equipment. The colour window and isolator function (physical separation) further enhance safety. The product complies with the European **'Machine Directive'** and save installation cost by combining motor switch, isolator and connector.

ZOOM

Dimensions DB

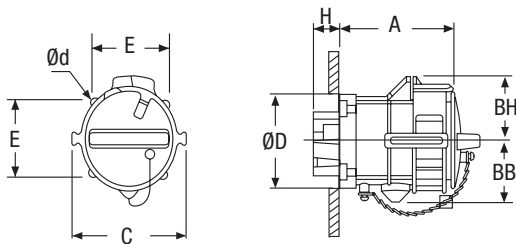
Socket-outlet + Plug

• ØD = Maximum bore diameter



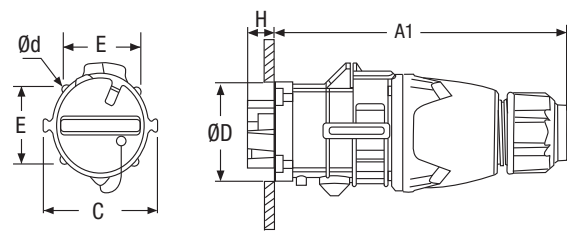
Plug

	A	B
DB3	193	79
DB6	202	99
DB9	310	110



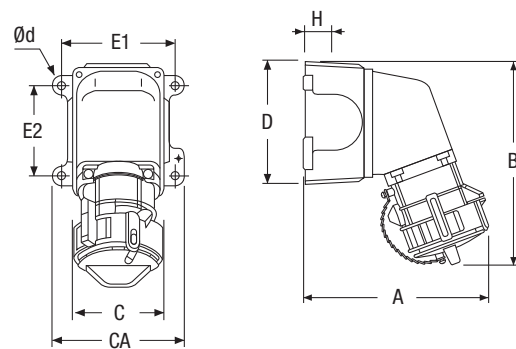
Socket-outlet

	A	BB	BH	C	E	H	Ød	ØD max.
DB3	107	45	110	55	26	4,5	54	
DB6	121	51	123	66	32	5,5	67	
DB9	134	63	146	81	42	5,5	84	



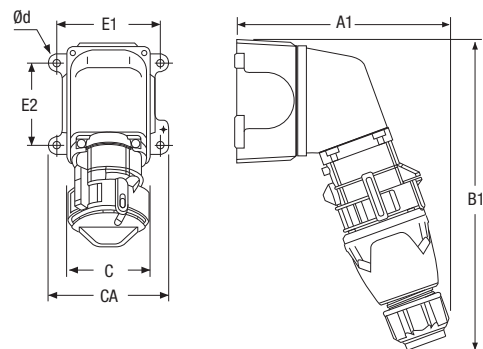
Plug connected in a socket-outlet

	A1	C	E	H	Ød	ØD max.
DB3	213	110	55	26	4,5	54
DB6	229	123	66	32	5,5	67
DB9	341	146	81	42	5,5	84



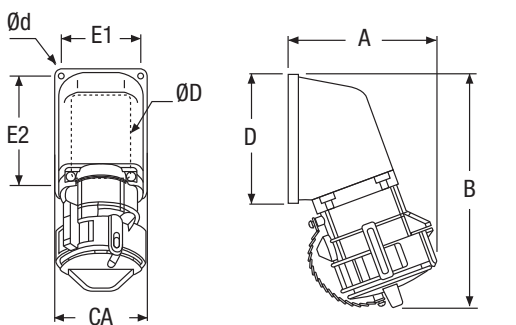
70° wall mounting socket

	A	B	C	CA	D	E1	E2	H	Ød
DB3	196	202	84	110	114	94	70	30	6,5
DB6	234	252	114	145	145	125	97	40	8,5
DB9	273	268	140	190	140	170	108	49	9



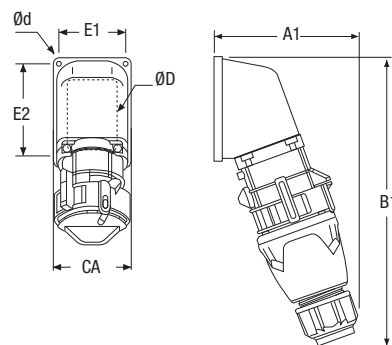
Plug connected in a 70° wall mounting socket

	A1	B1	C	CA	D	E1	E2	H	Ød
DB3	230	296	84	110	114	94	70	30	6,5
DB6	266	347	114	145	145	125	97	40	8,5
DB9	335	452	140	190	140	170	108	49	9



70° inclined socket

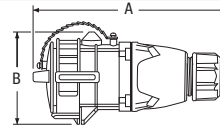
	A	B	CA	D	E1	E2	F	Ød	ØD max.
DB3	133	199	77	106	63	95	40	5,5	60
DB6	155	247	102	136	87	122	50	6,5	70
DB9	181	268	140	140	124	124	61,5	6,5	120



Plug connected in a 70° inclined socket

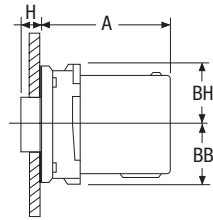
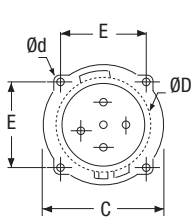
	A1	B1	CA	D	E1	E2	F	Ød	ØD max.
DB3	167	293	77	106	63	95	40	5,5	60
DB6	187	342	102	136	87	122	50	6,5	70
DB9	243	452	140	140	124	124	61,5	6,5	120

Coupler socket + inlet



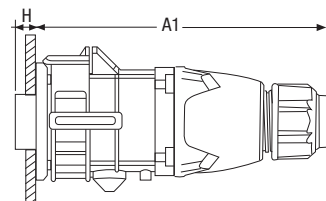
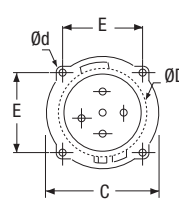
Coupler socket

	A	B
DB3	203	90
DB6	224	102
DB9	324	125



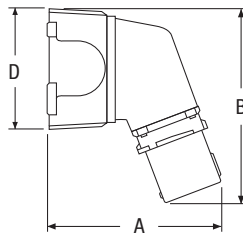
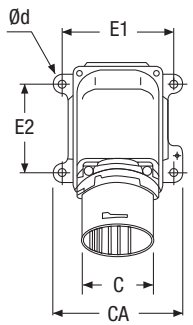
Inlet

	A	BB	BH	C	E	H	Ød	ØD max.
DB3	97	38	41	80	55	18	4,5	54
DB6	99	45	54	93	66	21	5,5	67
DB9	120	53	57	116	81	41	5,5	84



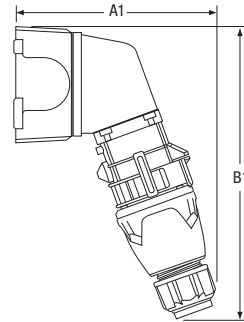
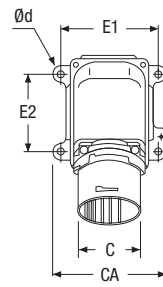
Coupler-socket connected in an inlet

	A1	C	E	H	Ød	ØD max.
DB3	213	80	55	18	4,5	54
DB6	229	93	66	21	5,5	67
DB9	341	116	81	41	5,5	84



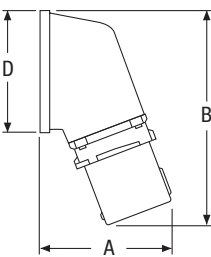
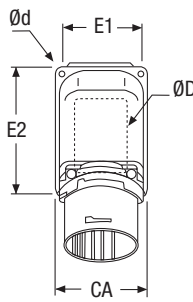
70° wall mounting appliance inlet

	A	B	CA	C	D	E1	E2	Ød
DB3	180	188	110	78	114	94	70	6,5
DB6	214	227	145	91	145	125	97	8,5
DB9	255	251	190	146	140	170	108	9



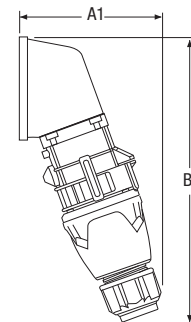
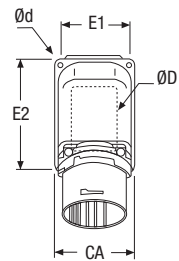
Coupler-socket connected in a 70° wall mounting appliance inlet

	A1	B1	CA	C	D	E1	E2	Ød
DB3	230	296	110	78	114	94	70	6,5
DB6	266	347	145	91	145	125	97	8,5
DB9	345	452	190	146	140	170	108	9



70° inclined appliance inlet

	A	B	CA	D	E1	E2	F	Ød	ØD max.
DB3	117	185	77	106	63	95	40	5,5	60
DB6	136	222	102	136	87	122	50	6,5	70
DB9	163	251	140	140	124	124	61,5	6,5	120



Coupler-socket connected in a 70° inclined appliance inlet

	A1	B1	CA	D	E1	E2	F	Ød	ØD max.
DB3	167	293	77	106	63	95	40	5,5	60
DB6	187	342	102	136	87	122	50	6,5	70
DB9	243	452	140	140	124	124	61,5	6,5	120