BS IEC 62613-2:2016

BSI Standards Publication

Plugs, socket-outlets and ship couplers for high-voltage shore connection systems (HVSC-systems)

Part 2: Dimensional compatibility and interchangeability requirements for accessories to be used by various types of ships

bsi.

National foreword

This British Standard is the UK implementation of IEC 62613-2:2016. It supersedes BS IEC 62613-2:2011 which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee PEL/23, Electrical accessories, to Subcommittee PEL/23/4, Protected type plugs and sockets.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Amendments/corrigenda issued since publication

Date	Text affected

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Edition 2.0 2016-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Plugs, socket-outlets and ship couplers for high-voltage shore connection systems (HVSC-systems) – Part 2: Dimensional compatibility and interchangeability requirements for accessories to be used by various types of ships

Prises de courant et connecteurs de navires pour les systèmes haute tension de raccordement des navires à quai – Partie 2: Règles dimensionnelles de compatibilité et d'interchangeabilité pour les appareils destinés à être utilisés par divers types de navires

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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PLUGS, SOCKET-OUTLETS AND SHIP COUPLERS FOR HIGH-VOLTAGE SHORE CONNECTION SYSTEMS (HVSC-SYSTEMS) –

Part 2: Dimensional compatibility and interchangeability requirements for accessories to be used by various types of ships

FOREWORD

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International Standard IEC 62613-2 has been prepared by subcommittee 23H: Plugs, Socket-outlets and Couplers for industrial and similar applications, and for Electric Vehicles of IEC technical committee 23: Electrical accessories.

This second edition cancels and replaces the first edition published in 2011. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) addition of configuration I: 7,2 kV 350 A three-phase accessories with three IP0 pilot contacts;
b) addition of configuration J: 12 kV 500 A three-phase accessories with seven pilot contacts;
c) improvement of drawings in standard sheets and addition of missing dimensions.

The text of this standard is based on the following documents:

CDV	Report on voting
23H/352/CDV	23H/362/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

This part of IEC 62613 shall be read in conjunction with IEC 62613-1:2011.

The clauses of these particular requirements supplement or modify the corresponding clauses in Part 1. Where the text of subsequent parts indicates an "addition" to or a "replacement" of the relevant requirement, test specification or explanation of Part 1, these changes are made to the relevant text of Part 1, which then becomes part of the standard. Where no change is necessary, the words "Clause X of IEC 62613-1:2011 applies" are used. Standard sheets are in Annexes A, B, etc.

A list of all the parts in the IEC 62613 series, under the general title *Plugs, socket-outlets and ship couplers for high-voltage shore connection systems (HVSC-systems)*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

International Standard series IEC 62613 has been developed to address the needs in terms of plugs, socket-outlets and ship couplers (ship connectors and ship inlets), herein referred to as “accessories”, of IEC/ISO/IEEE 80005-1:2012, *Utility connections in port – Part 1: High Voltage Shore Connection (HVSC) Systems – General requirements*. The purpose of IEC/ISO/IEEE 80005-1 is to define requirements that allow compliant ships to connect to compliant high-voltage shore power supplies through standardized shore-to-ship connection accessories.

Ships that do not require connecting with standardized high-voltage shore power supplies as above may use accessories that are not covered by the standard sheets of IEC 62613-2 but they may find it impossible to connect to these shore supplies.

Other low voltage plugs, socket-outlets, connectors and inlets used for the connection of certain ship types to low-voltage shore power supplies can be found in the IEC 60309 series.

The IEC 62613 series is divided into the following parts:

– *Part 1: General requirements*, comprising clauses of a general character
– *Part 2: Dimensional compatibility and interchangeability requirements for accessories to be used by various types of ships*

These ships are described in IEC/ISO/IEEE 80005-1.

PLUGS, SOCKET-OUTLETS AND SHIP COUPLERS FOR HIGH-VOLTAGE SHORE CONNECTION SYSTEMS (HVSC-SYSTEMS) –

Part 2: Dimensional compatibility and interchangeability requirements for accessories to be used by various types of ships

1 Scope

This part of IEC 62613 contains standard sheets for different configurations of (shore) socket-outlets, (shore) plugs, ship connectors and ship inlets, hereinafter referred to as accessories, up to 12 kV, 500 A, 50/60 Hz and with up to seven pilot/auxiliary contacts.

General requirements are given in IEC 62613-1.

2 Normative references

Clause 2 of IEC 62613-1:2011 applies, with the following exception:

Addition:

IEC 62613-1:2011, *Plugs, socket-outlets and ship couplers for high-voltage shore connection systems (HVSC-systems) – Part 1: General requirements*

3 Terms and definitions

Clause 3 of IEC 62613-1:2011 applies.

4 General

Clause 4 of IEC 62613-1:2011 applies.

5 Standard ratings

Clause 5 of IEC 62613-1:2011 applies.

6 Classification

Clause 6 of IEC 62613-1:2011 applies.

7 Marking

Clause 7 of IEC 62613-1:2011 applies.

8 Dimensions

Clause 8 of IEC 62613-1:2011 applies except as follows:

8.1 *Replacement:*

Accessories shall comply with the appropriate standard sheets given in Annexes A to J.

9 Protection against electric shock

Clause 9 of IEC 62613-1:2011 applies.

10 Provision for Earthing

Clause 10 of IEC 62613-1:2011 applies.

11 Terminals and terminations

Clause 11 of IEC 62613-1:2011 applies.

12 Locking devices and interlocks

Clause 12 of IEC 62613-1:2011 applies.

13 Resistance to ageing of rubber and thermoplastic material

Clause 13 of IEC 62613-1:2011 applies.

14 General construction

Clause 14 of IEC 62613-1:2011 applies.

15 Construction of socket-outlets and ship inlets

Clause 15 of IEC 62613-1:2011 applies.

16 Construction of ship connectors

Clause 16 of IEC 62613-1:2011 applies.

17 Construction of plugs

Clause 17 of IEC 62613-1:2011 applies.

18 Degrees of protection

Clause 18 of IEC 62613-1:2011 applies.

19 Insulation resistance, dielectric withstand and partial discharge tests

Clause 19 of IEC 62613-1:2011 applies.

20 Normal operation

Clause 20 of IEC 62613-1:2011 applies.

21 Temperature rise

Clause 21 of IEC 62613-1:2011 applies.

22 Flexible cables and their connection

Clause 22 of IEC 62613-1:2011 applies.

23 Mechanical strength

Clause 23 of IEC 62613-1:2011 applies.

24 Screws, current-carrying parts and connections

Clause 24 of IEC 62613-1:2011 applies.

25 Resistance to heat, to fire and to tracking

Clause 25 of IEC 62613-1:2011 applies.

26 Corrosion and resistance to rusting

Clause 26 of IEC 62613-1:2011 applies.

27 Conditional short-circuit current withstand test

Clause 27 of IEC 62613-1:2011 applies.

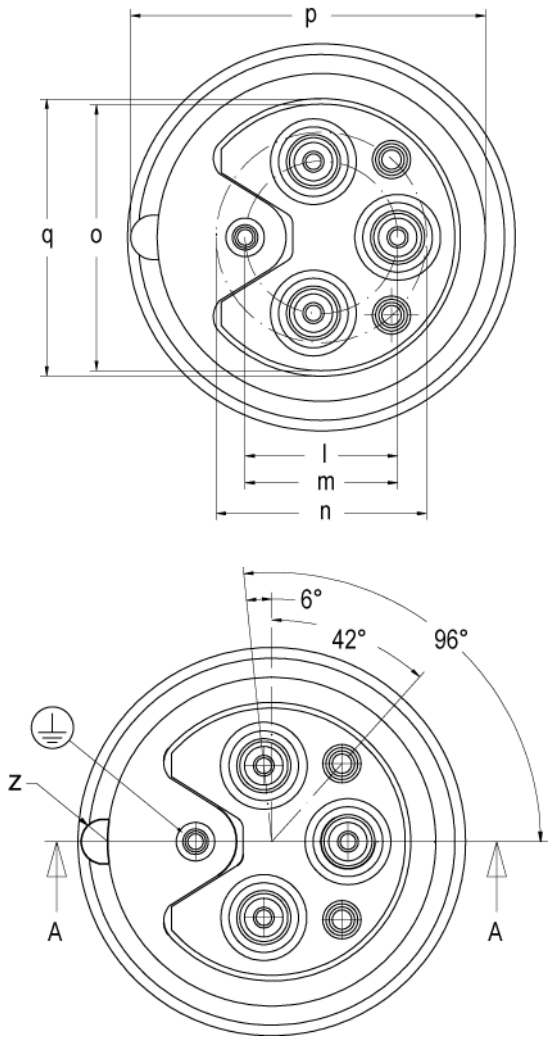
28 Electromagnetic compatibility

Clause 28 of IEC 62613-1:2011 applies.

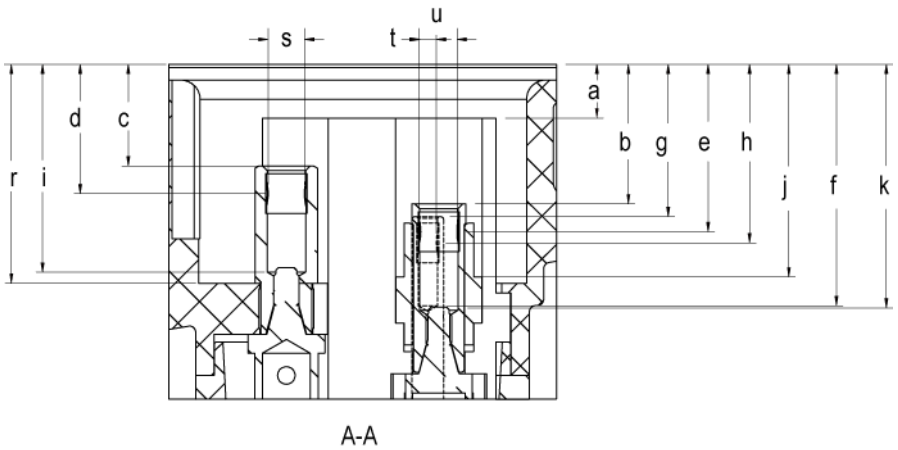
Annex A
(normative)

Standard sheets A:
7,2 kV 350 A three-phase accessories with two IP0 pilot contacts

A.1 Socket-outlet



Key	Description	Dimension mm	
a	Top, insulator	17,0	±0,25
b	Top, phase contact	44,0	±0,25
c	Top, earth contact	32,0	±0,25
d	Earth contact	37,6	±0,25
e	Phase contact	50,1	±0,25
f	Bottom, pilot contact	76,0	±0,25
g	Top, pilot contact	48,0	±0,25
h	Pilot contact	53,4	±0,25
i	Bottom, earth contact	64,0	±0,25
j	Bottom, insulator	66,0	±0,25
k	Bottom, phase contact	76,5	±0,25
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator diameter	84,0	±0,10
p	Diameter + nose	111,6	±0,25
q	Diameter	87,5	±0,25
r	Tongue depth	69,0	±0,25
s	Diameter, earth contact	12,0	+0,10 0
t	Diameter, pilot contact	6,0	+0,10 0
u	Diameter, phase contact	12,0	+0,10 0
z	Nose radius	7,0	±0,25



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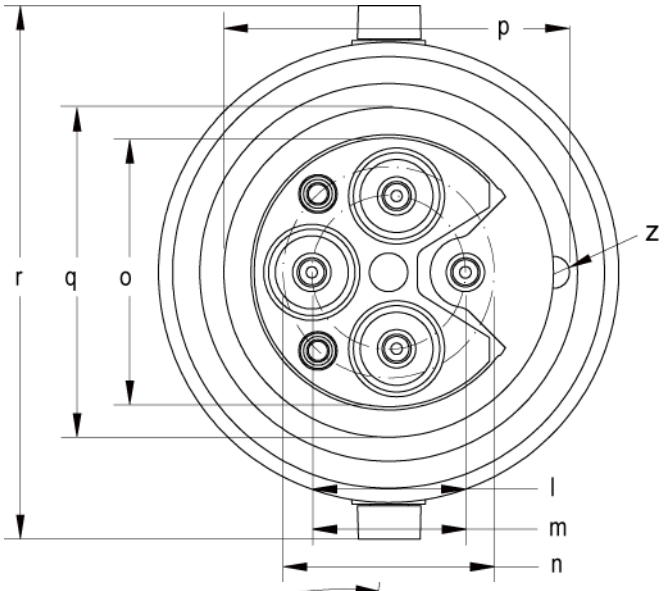
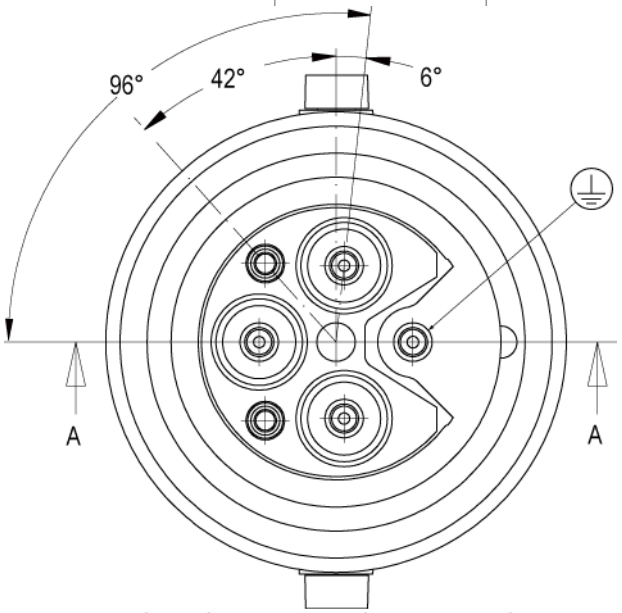
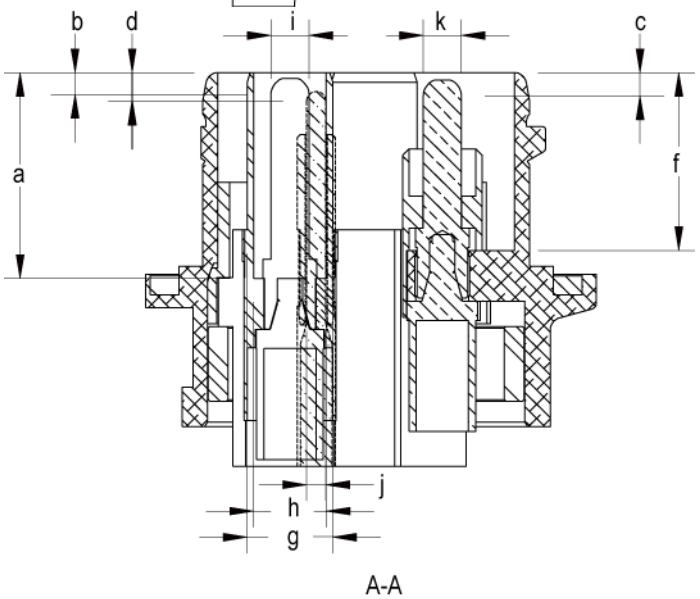
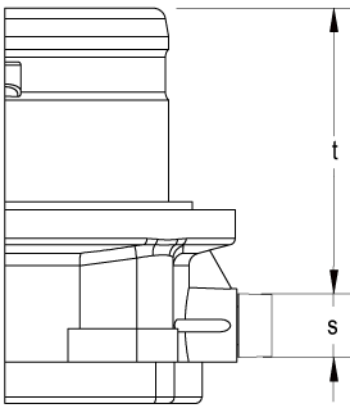
A.2 Plug top







A-A



Key	Description	Dimension mm	
a	Insulator depth	64,8	±0,25
b	Top, phase contact	6,9	±0,25
c	Top, earth contact	7,3	±0,25
d	Top, pilot contact	9,0	±0,25
f	Tongue depth	56,0	±0,25
g	Insulator outer diameter	27,0	±0,25
h	Insulator inner diameter	22,8	±0,25
i	Diameter, phase contact	12,0	0 -0,05
j	Diameter, pilot contact	6,0	0 -0,05
k	Diameter, earth contact	12,0	0 -0,05
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator width	84,0	±0,10
p	Diameter + nose	108,9	±0,25
q	Diameter	103,0	±0,25
r	Roller width	168,0	±0,25
s	Roller diameter	20,0	±0,10
t	Roller height	90,0	±0,25
z	Nose radius	5,0	±0,25

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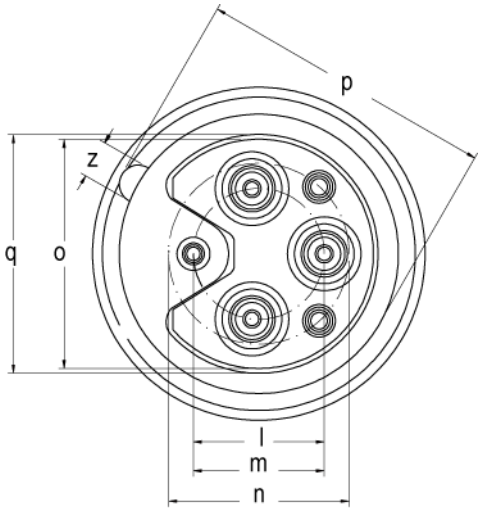
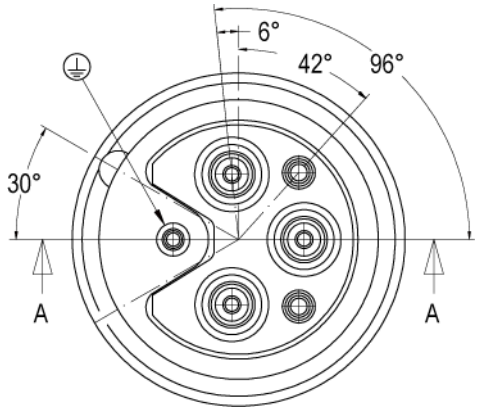
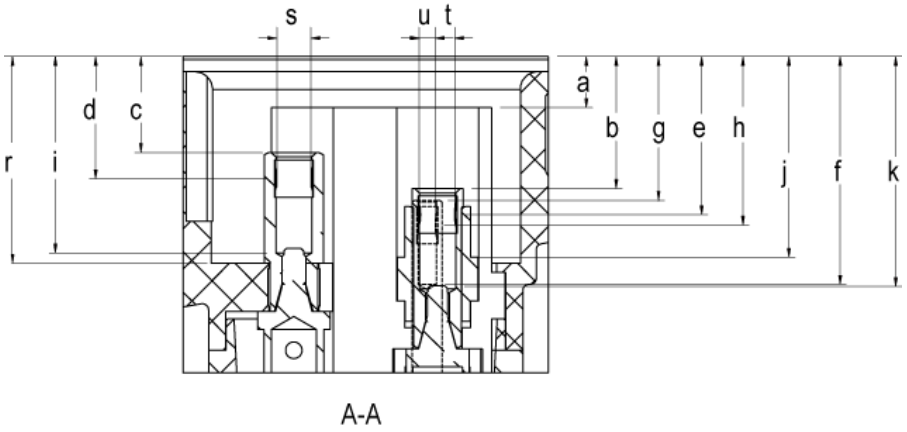
A.3 Ship connector top





Key	Description	Dimension mm	
a	Top, insulator	17,0	±0,25
b	Top, phase contacts	44,0	±0,25
c	Top, earth contact	32,0	±0,25
d	Earth contact	37,6	±0,25
e	Phase contact	50,1	±0,25
f	Bottom, pilot contact	76,0	±0,25
g	Top, pilot contact	48,0	±0,25
h	Pilot contact	53,4	±0,25
i	Bottom, earth contact	64,0	±0,25
j	Bottom, insulator	66,0	±0,25
k	Bottom, phase contact	76,5	±0,25
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contacts	48,0	±0,25
n	Pitch, pilot contact	66,6	±0,25
o	Insulator width	84,0	±0,10
p	Diameter + nose	111,6	±0,25
q	Diameter	87,5	±0,25
r	Tongue depth	69,0	±0,25
s	Diameter, earth contact	12,0	+0,10 0
t	Diameter, pilot contact	6,0	+0,10 0
u	Diameter, phase contact	12,0	+0,10 0
z	Nose diameter	14,0	±0,25



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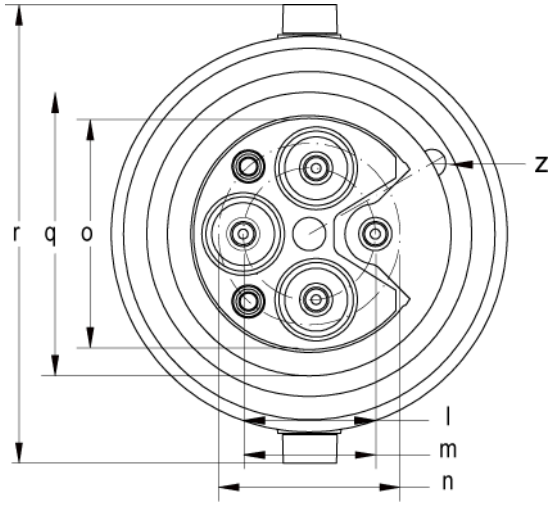
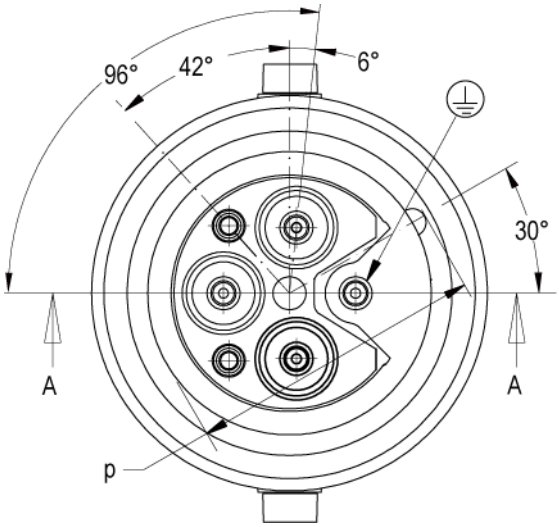
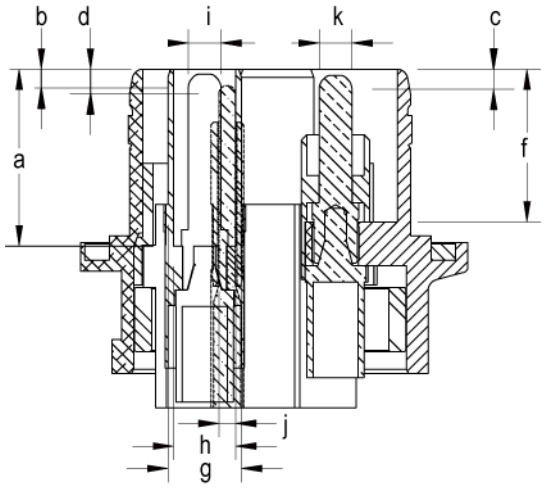
A.4 Ship inlet



Key	Description	Dimension mm	
a	Insulator depth	64,8	±0,25
b	Top, phase contact	6,9	±0,25
c	Top, earth contact	7,3	±0,25
d	Top, pilot contact	9,0	±0,25
f	Tongue depth	56,0	±0,25
g	Insulator outer diameter	27,0	±0,25
h	Insulator inner diameter	22,8	±0,25
i	Diameter, phase contact	12,0	0 -0,05
j	Diameter, pilot contact	6,0	0 -0,05
k	Diameter, earth contact	12,0	0 -0,05
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator width	84,0	±0,10
p	Diameter + nose	108,9	±0,25
q	Diameter	103,0	±0,25
r	Roller width	168,0	±0,25
s	Roller diameter	20,0	±0,10
t	Roller height	90,0	±0,25
z	Nose radius	5,0	±0,25





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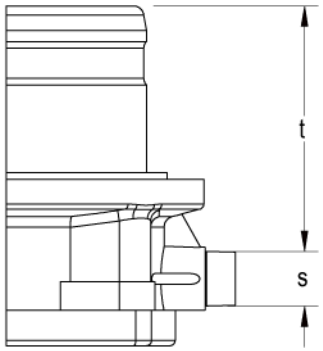

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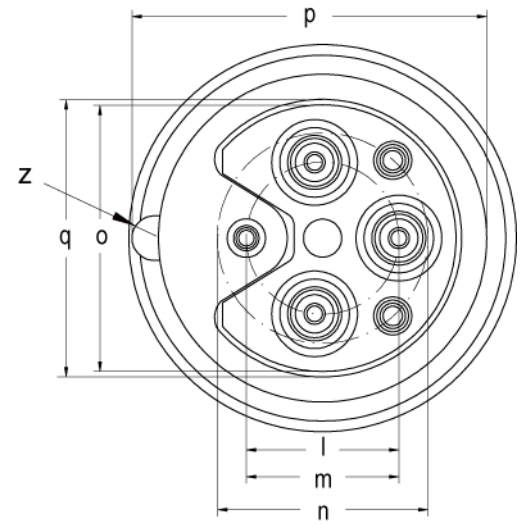
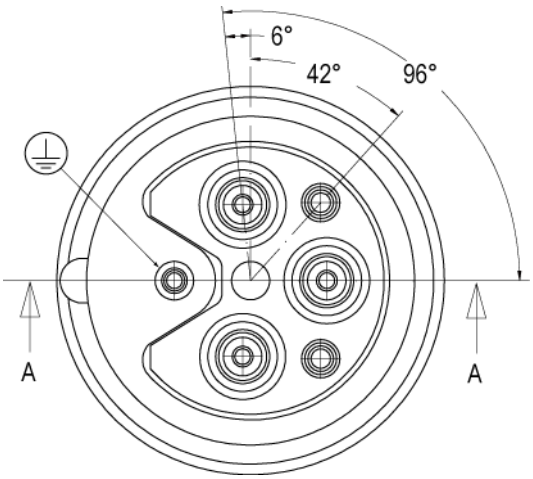
Annex B
(normative)

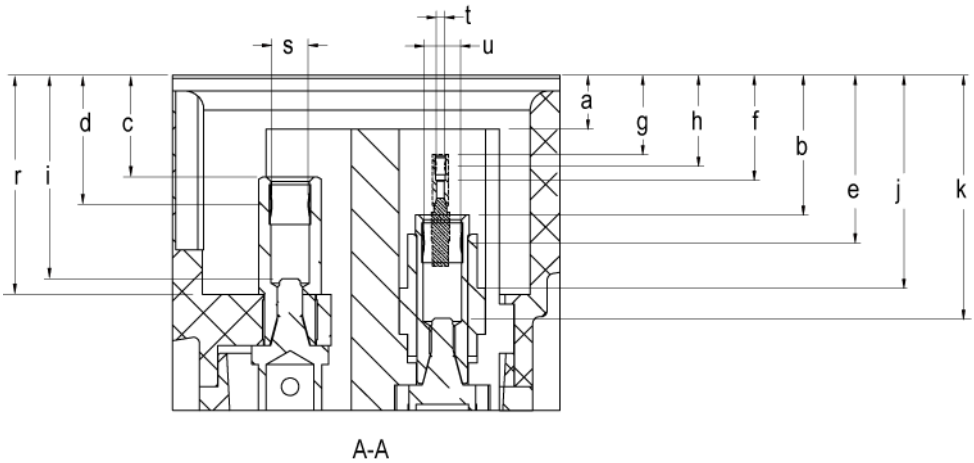
Standard sheets B:
7,2 kV 350 A three-phase accessories with two IP2X pilot contacts

B.1 Socket-outlet





Key	Description	Dimension mm	
a	Top, insulator	17,0	±0,25
b	Top, phase contacts	44,0	±0,25
c	Top, earth contact	32,0	±0,25
d	Earth contact	38,0	±0,25
e	Phase contact	50,1	±0,25
f	Bottom, pilot contact	33,0	±0,25
g	Top, pilot contact	25,0	±0,25
h	Pilot contact	27,2	±0,25
i	Bottom, earth contact	64,0	±0,25
j	Bottom, insulator	66,0	±0,25
k	Bottom, phase contacts	76,5	±0,25
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator width	84,0	±0,10
p	Diameter + nose	111,6	±0,25
q	Diameter	87,5	±0,25
r	Tongue depth	69,0	±0,25
s	Diameter, earth contact	12,0	+0,10 0
t	Diameter, pilot contact	3,0	+0,10 0
u	Diameter, phase contact	12,0	+0,100
z	Nose radius	7,0	±0,25



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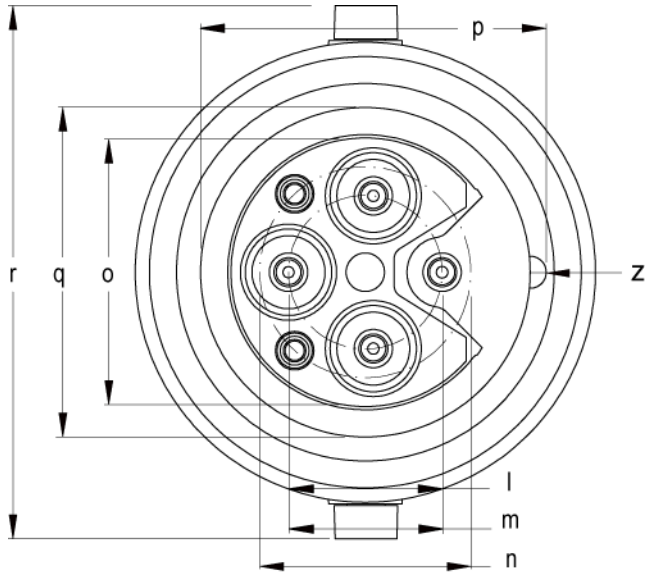
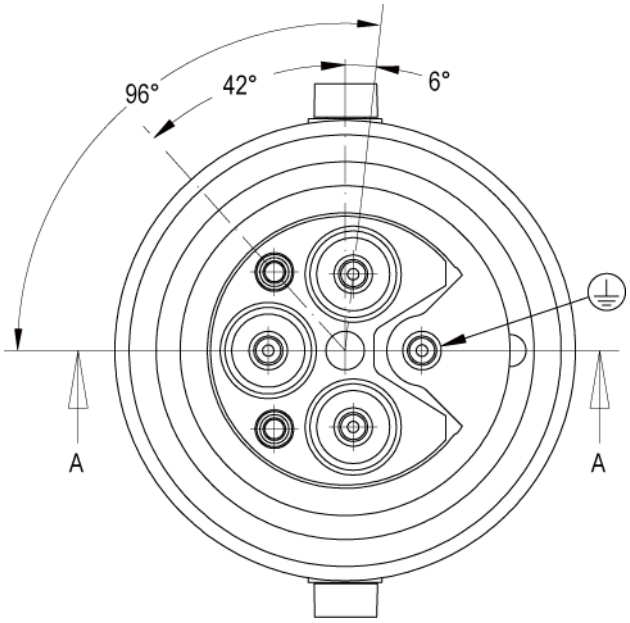
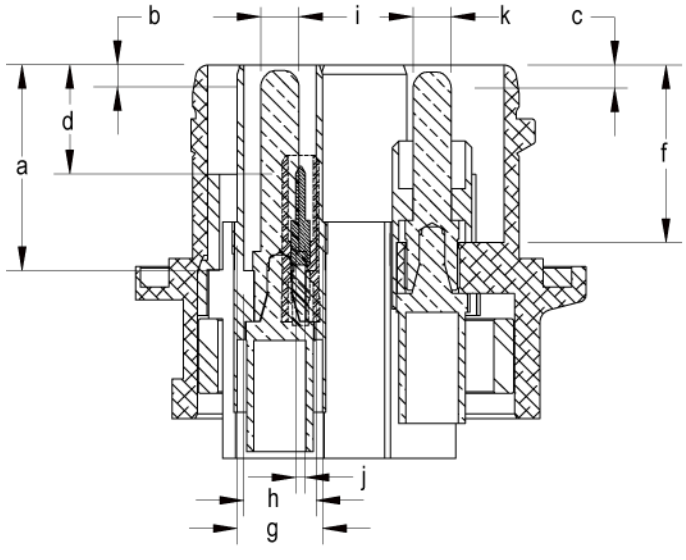
B.2 Plug top







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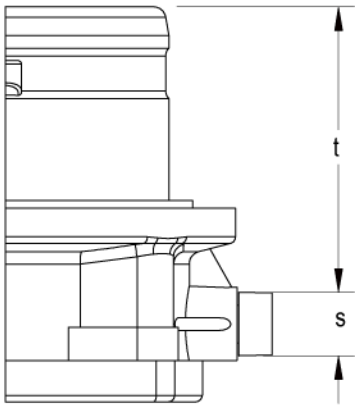
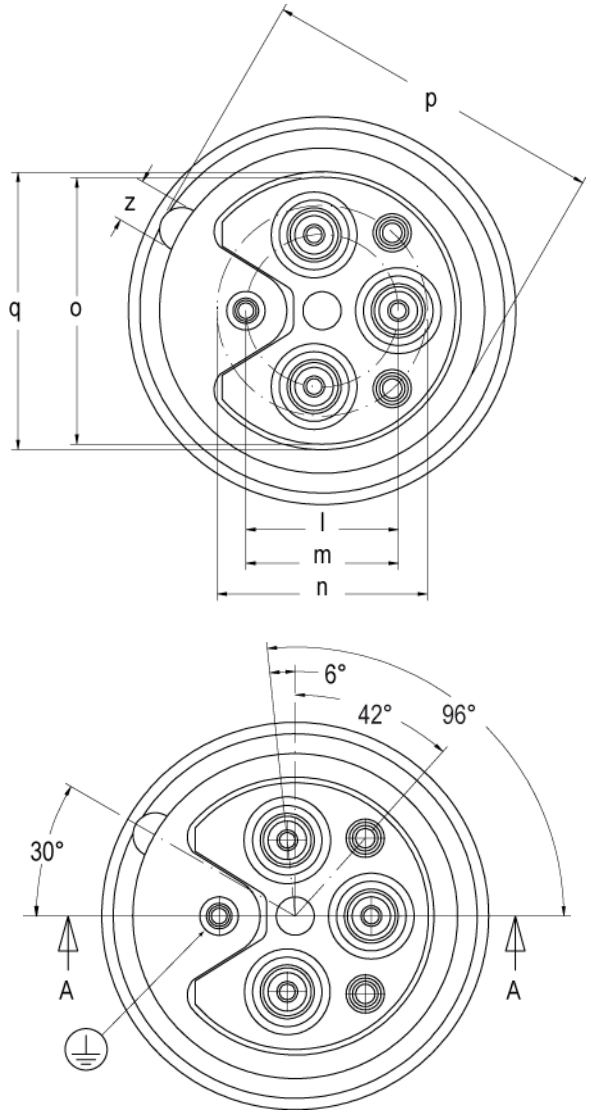
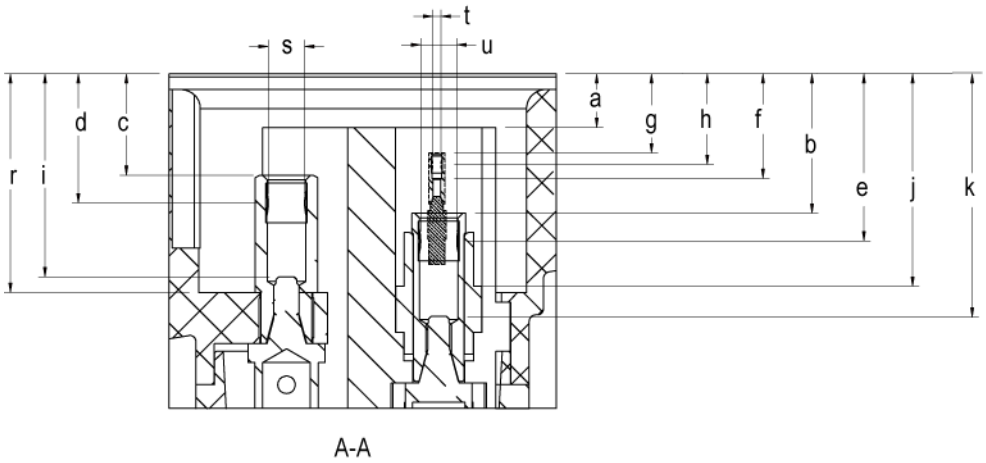


Key	Description	Dimension mm	
a	Insulator depth	64,8	±0,25
b	Top, phase contact	6,9	±0,25
c	Top, earth contact	7,3	±0,25
d	Top, pilot contact	34,3	±0,25
f	Tongue depth	56,0	±0,25
g	Insulator outer diameter	27,0	±0,25
h	Insulator inner diameter	22,8	±0,25
i	Diameter, phase contact	12,0	0 -0,05
j	Diameter, pilot contact	3,0	0 -0,05
k	Diameter, earth contact	12,0	0 -0,05
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator width	84,0	±0,10
p	Diameter + nose	108,9	±0,25
q	Diameter	103,0	±0,25
r	Roller width	168,0	±0,25
s	Roller diameter	20,0	±0,10
t	Roller height	90,0	±0,25
z	Nose radius	5,0	±0,25

IEC

B.3 Ship connector top





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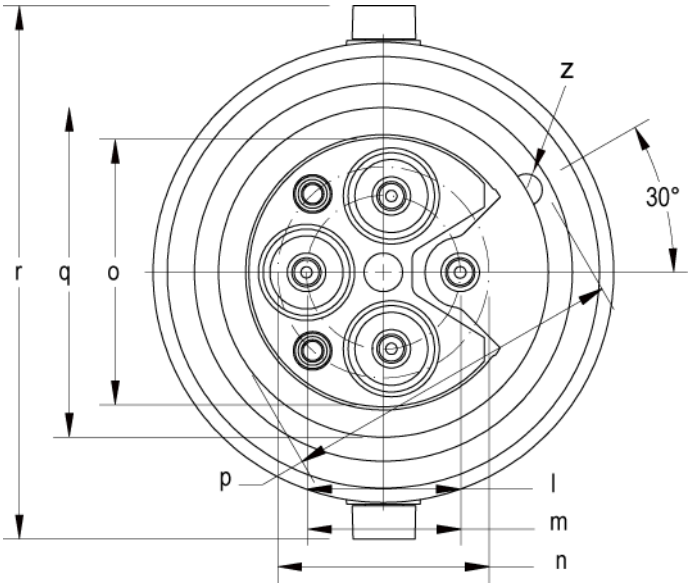
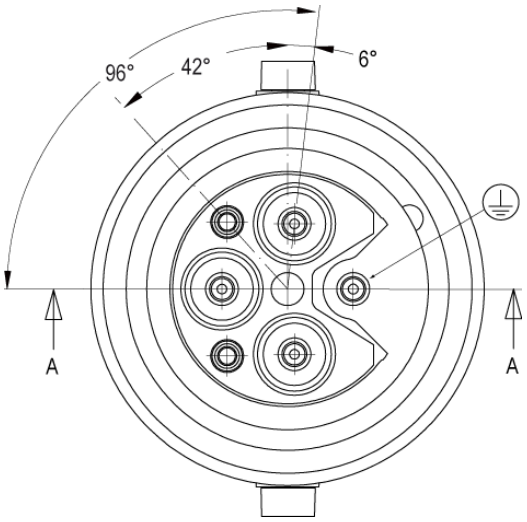
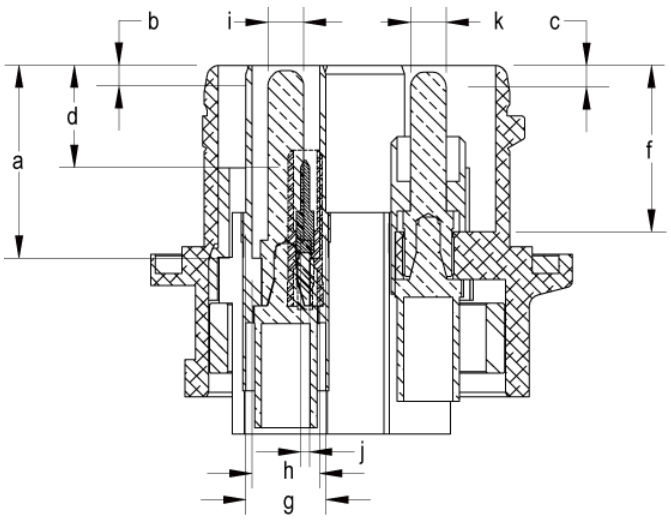
c	Top, earth contact	32,0	±0,25
d	Earth contact	38,0	±0,25
e	Phase contact	50,1	±0,25
f	Bottom, pilot contact	33,0	±0,25
g	Top, pilot contact	25,0	±0,25
h	Pilot contact	27,2	±0,25
i	Bottom, earth contact	64,0	±0,25
j	Bottom, insulator	66,0	±0,25
k	Bottom, phase contact	76,5	±0,25
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator diameter	84,0	±0,10
p	Diameter + nose	111,6	±0,25
q	Diameter	87,5	±0,25
r	Tongue depth	69,0	±0,25
s	Diameter, earth contact	12,0	+0,10 0
t	Diameter, pilot contacts	3,0	+0,10 0
u	Diameter phase contact	12,0	+0,10 0
z	Nose diameter	14,0	±0,25

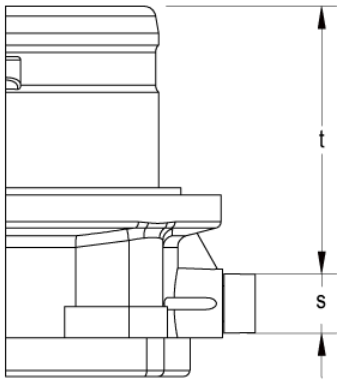
B.4 Ship inlet







A-A



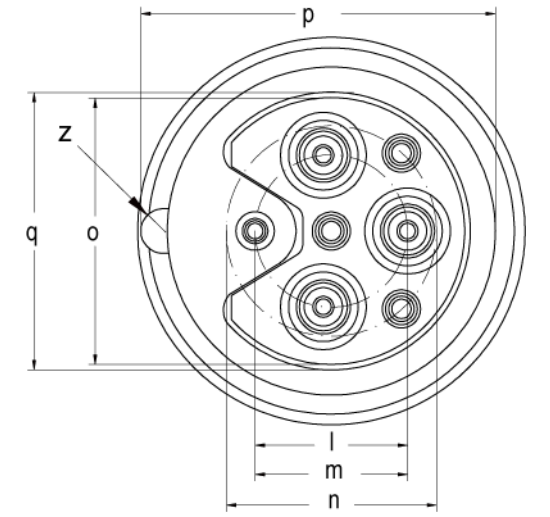
Key	Description	Dimension mm	
a	Insulator depth	64,8	±0,25
b	Top, phase contact	6,9	±0,25
c	Top, earth contact	7,3	±0,25
d	Top, pilot contact	34,3	±0,25
f	Tongue depth	56,0	±0,25
g	Insulator outer diameter	27,0	±0,25
h	Insulator inner diameter	22,8	±0,25
i	Diameter, phase contact	12,0	0 -0,05
j	Diameter, pilot contact	3,0	0 -0,05
k	Diameter, earth contact	12,0	0 -0,05
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator width	84,0	±0,10
p	Diameter + nose	108,9	±0,25
q	Diameter	103,0	±0,25
r	Roller width	168,0	±0,25
s	Roller diameter	20,0	±0,10
t	Roller height	90,0	±0,25
z	Nose radius	5,0	±0,25

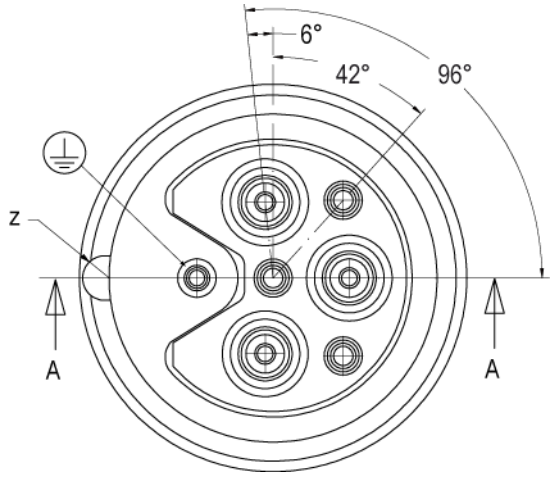
IEC

Annex C
(normative)

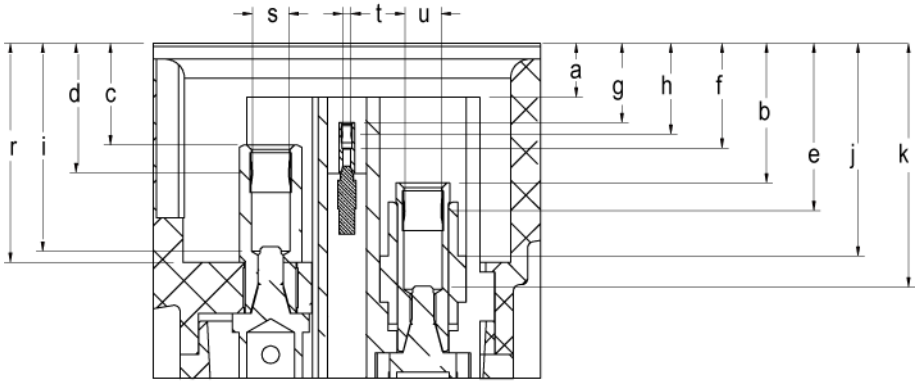
Standard sheets C:
7,2 kV 350 A three-phase accessories with three IP2X pilot contacts

C.1 Socket-outlet



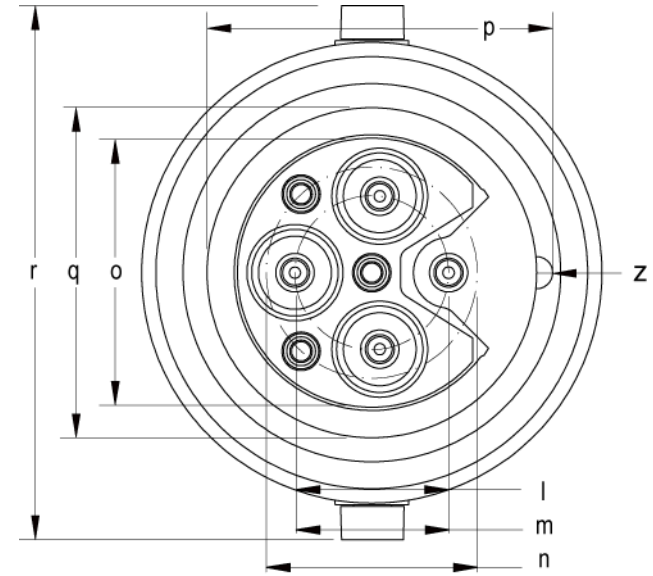


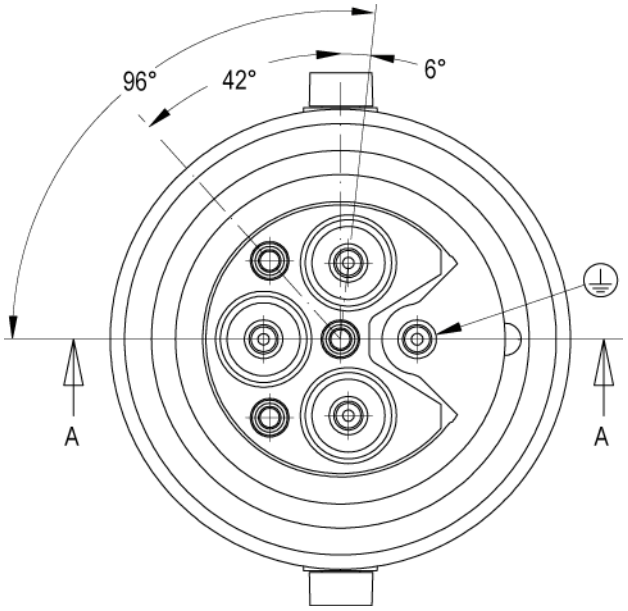
Key	Description	Dimension mm	
a	Top, insulator	17,0	±0,25
b	Top, phase contacts	44,0	±0,25
c	Top, earth contact	32,0	±0,25
d	Earth contact	38,0	±0,25
e	Phase contact	50,1	±0,25
f	Bottom, pilot contact	33,0	±0,25
g	Top, pilot contact	25,0	±0,25
h	Pilot contact	27,2	±0,25
i	Bottom, earth contact	64,0	±0,25
j	Bottom, insulator	66,0	±0,25
k	Bottom, phase contact	76,5	±0,25
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator width	84,0	±0,10
p	Diameter + nose	111,6	±0,25
q	Diameter	87,5	±0,25
r	Tongue depth	69,0	±0,25
s	Diameter, earth contact	12,0	+0,10 0
t	Diameter, pilot contact	3,0	+0,10 0
u	Diameter, phase contact	12,0	+0,10 0
z	Nose radius	7,0	±0,25

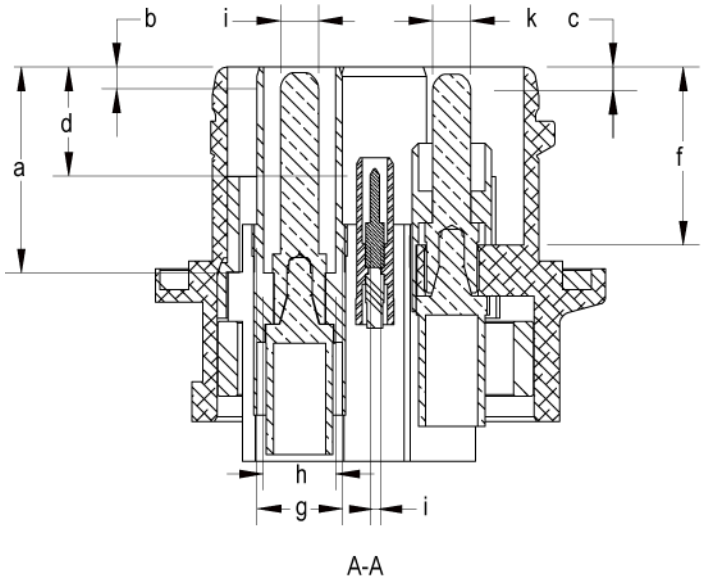


A-A

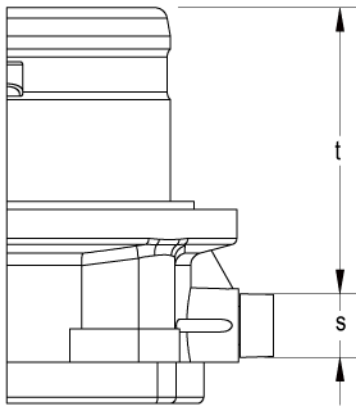
C.2 Plug top





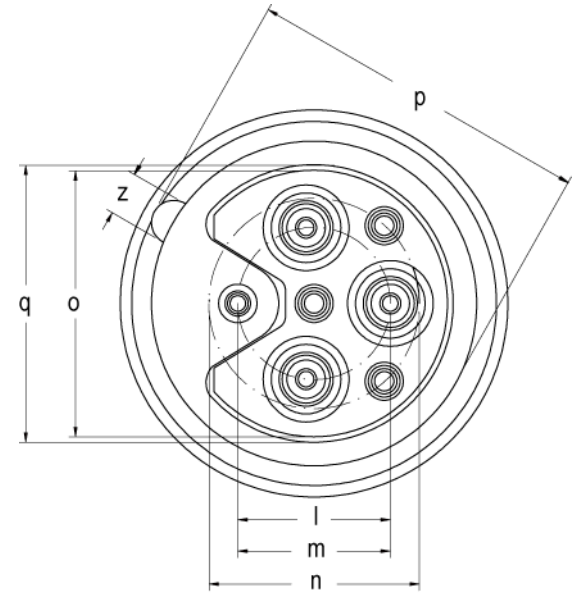


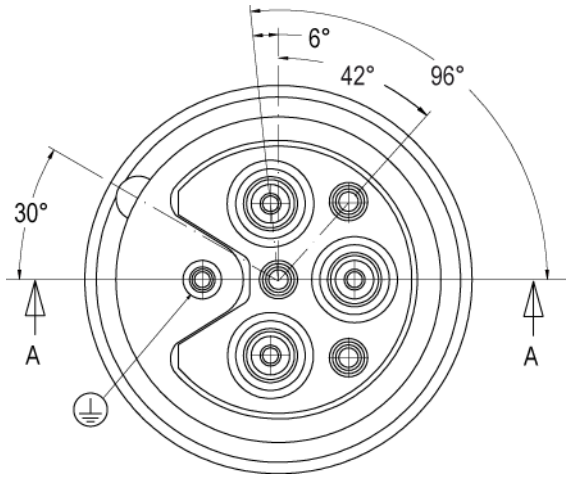
A-A

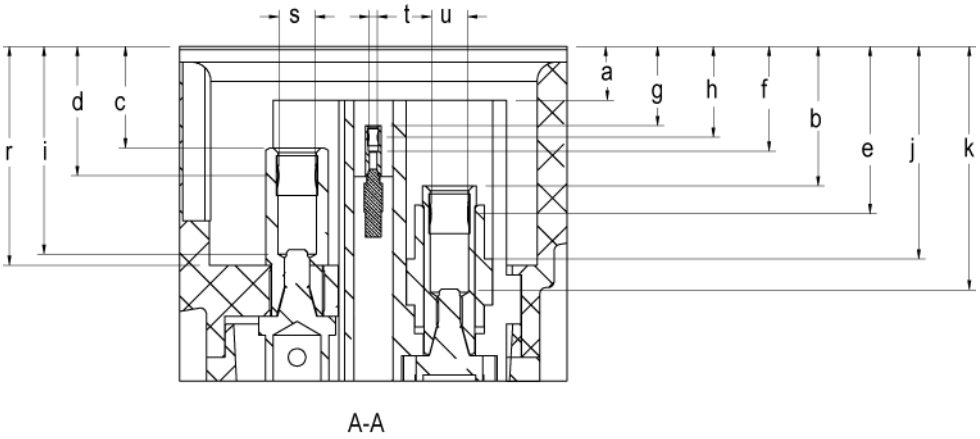


Key	Description	Dimension mm	
a	Insulator depth	64,8	±0,25
b	Top, phase contacts	6,9	±0,25
c	Top, earth contact	7,3	±0,25
d	Top, pilot contact	34,3	±0,25
f	Tongue depth	56,0	±0,25
g	Insulator outer diameter	27,0	±0,25
h	Insulator inner diameter	22,8	±0,25
i	Diameter, phase contact	12,0	0 -0,05
j	Diameter, pilot contact	3,0	0 -0,05
k	Diameter, earth contact	12,0	0 -0,05
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator width	84,0	±0,10
p	Diameter + nose	108,9	±0,25
q	Diameter	103,0	±0,25
r	Roller width	168,0	±0,25
s	Roller diameter	20,0	±0,10
t	Roller height	90,0	±0,25
z	Nose radius	5,0	±0,25

Ship connector top





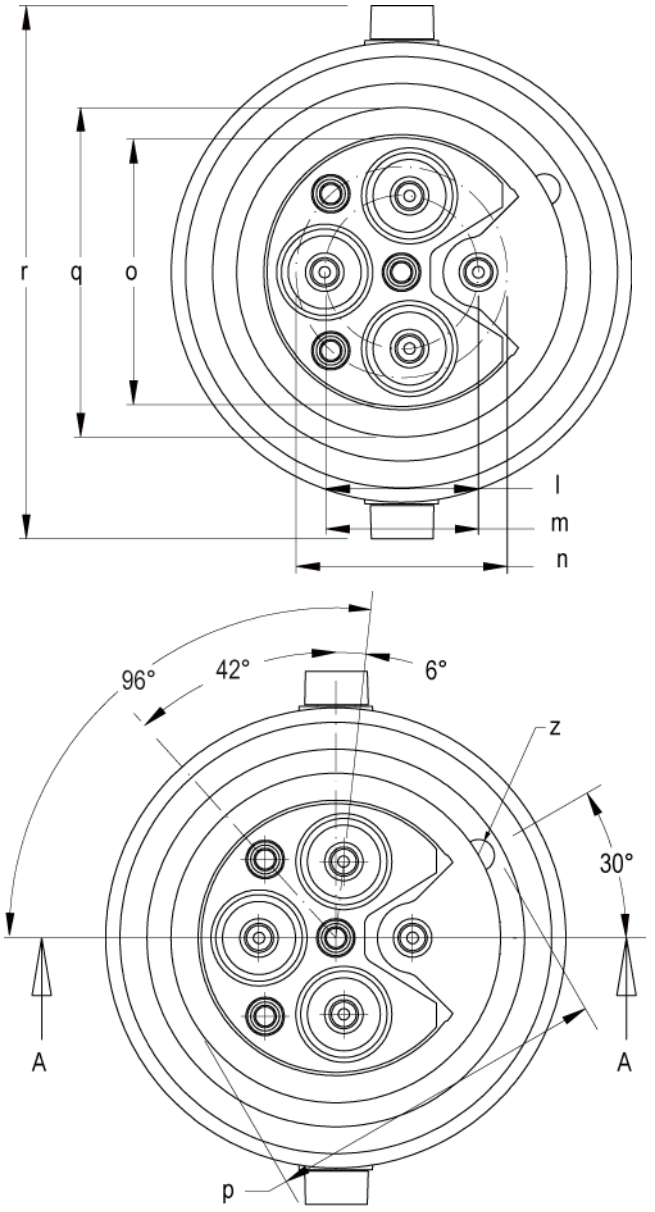


A-A

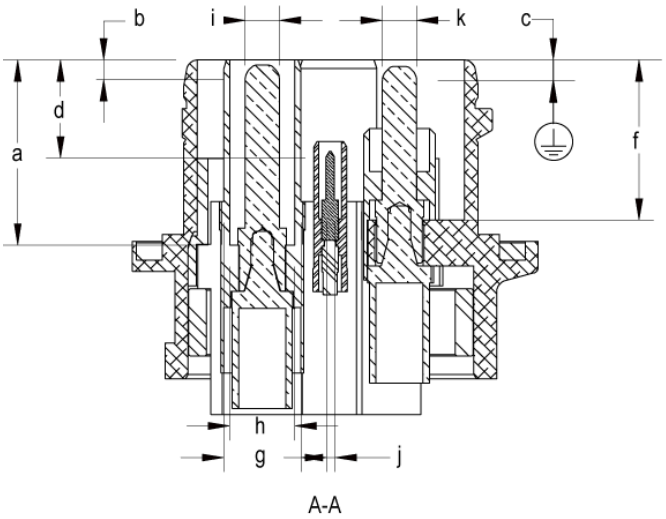
Key	Description	Dimension mm	
a	Top, insulator	17,0	±0,25
b	Top, phase contacts	44,0	±0,25
c	Top, earth contact	32,0	±0,25
d	Earth contact	38,0	±0,25
e	Phase contact	50,1	±0,25
f	Bottom, pilot contact	33,0	±0,25
g	Top, pilot contact	25,0	±0,25
h	Pilot contact	27,2	±0,25
i	Bottom, earth contact	64,0	±0,25
j	Bottom, insulator	66,0	±0,25
k	Bottom, phase contact	76,5	±0,25
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator diameter	84,0	±0,10
p	Diameter + nose	111,6	±0,25
q	Diameter	87,5	±0,25
r	Tongue depth	69,0	±0,25
s	Diameter, earth contact	12,0	+0,10 0
t	Diameter, pilot contact	3,0	+0,10 0
u	Diameter, phase contact	12,0	+0,10 0
z	Nose diameter	14,0	±0,25

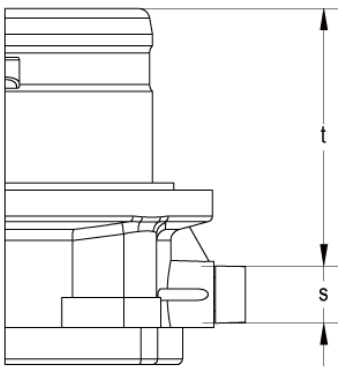
IEC

C.3 Ship inlet



Key	Description	Dimension mm	
a	Insulator depth	64,8	±0,25
b	Top, phase contact	6,9	±0,25
c	Top, earth contact	7,3	±0,25
d	Top, pilot contact	34,3	±0,25
f	Tongue depth	56,0	±0,25
g	Insulator outer diameter	27,0	±0,25
h	Insulator inner diameter	22,8	±0,25
i	Diameter, phase contact	12,0	0 -0,05
j	Diameter, pilot contact	3,0	0 -0,05
k	Diameter, earth contact	12,0	0 -0,05
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator width	84,0	±0,10
p	Diameter + nose	108,9	±0,25
q	Diameter	103,0	±0,25
r	Roller width	168,0	±0,25
s	Roller diameter	20,0	±0,10
t	Roller height	90,0	±0,25
z	Nose radius	5,0	±0,25

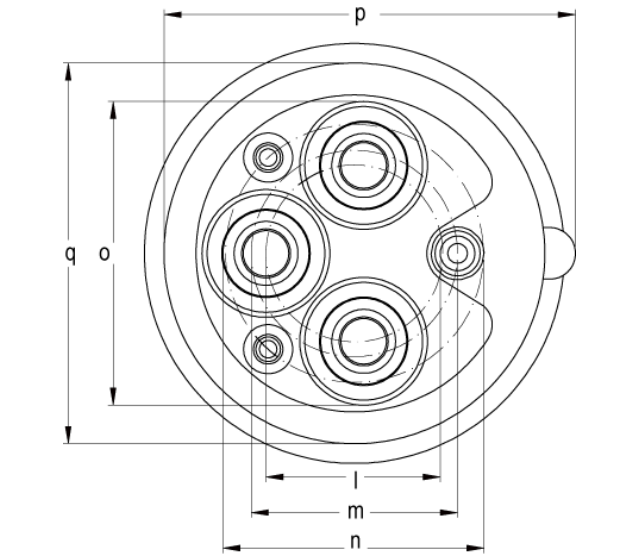


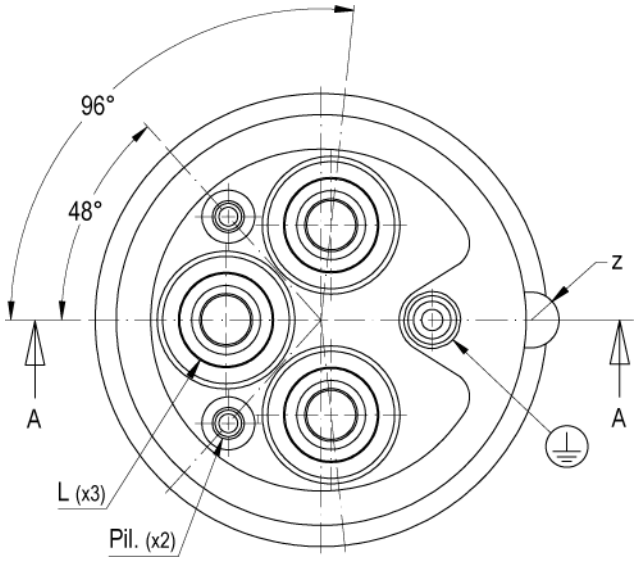


Annex D
(normative)

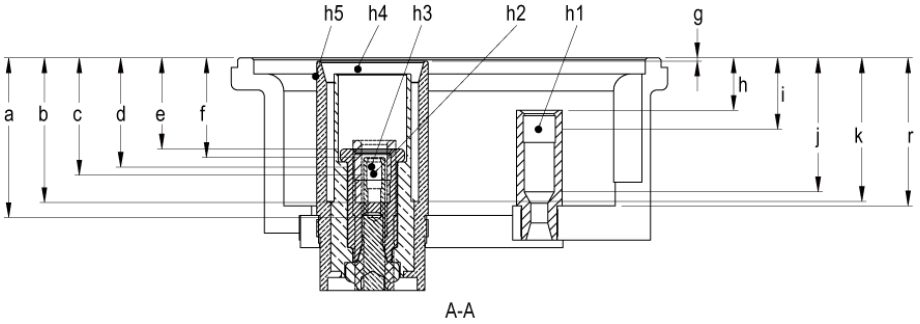
Standard sheets D:
12 kV 500 A three-phase accessories with two IP0 pilot contacts

D.1 Socket-outlet



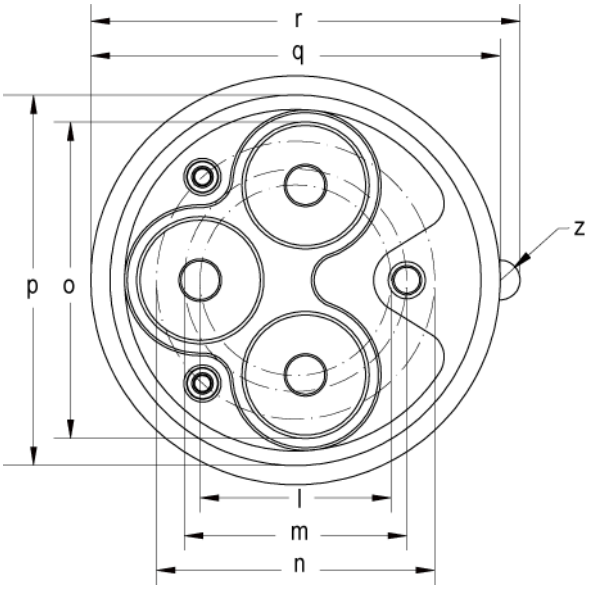


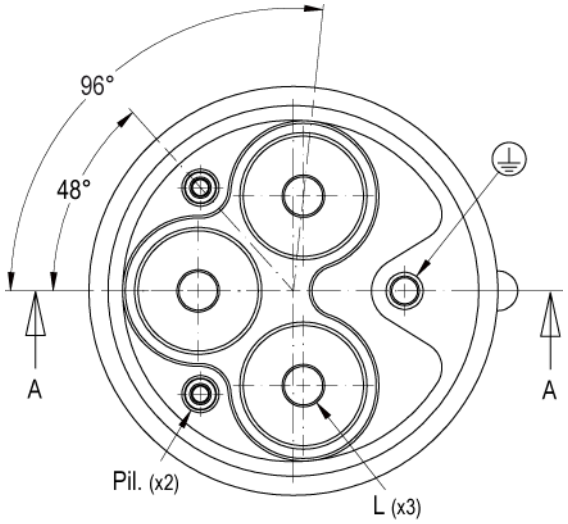
Key	Description	Dimension mm	
a	Bottom, pilot contact	74,5	+0,10 0
b	Bottom, phase contact	67,5	+0,10 0
c	Pilot contact	52,0	±0,25
d	Phase contact	48,3	±0,25
e	Top, phase contacts	42,5	±0,25
f	Top, pilot contact	46,5	±0,25
g	Top, insulator	1,5	±0,25
h	Top, earth contact	24,5	±0,25
i	Earth contact	30,5	±0,25
j	Bottom, earth contact	62,5	+0,10 0
k	Bottom, insulator	67,0	+0,10 0
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, earth contact	84,0	±0,25
n	Pitch, pilot contacts	106,0	±0,25
o	Insulator diameter	123,6	±0,25
p	Diameter+ nose	167,5	±0,25
q	Diameter	155,0	±0,25
r	Tongue depth	69,0	±0,25
h1	Earth contact inner diameter	14,0	+0,10 0
h2	Pilot contacts inner diameter	6,0	+0,10 0
h3	Phase contacts inner diameter	16,0	+0,10 0
h4	Insulator inner diameter	43,0	+0,10 0
h5	Insulator outer diameter	52,0	±0,25
z	Nose radius	10,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		



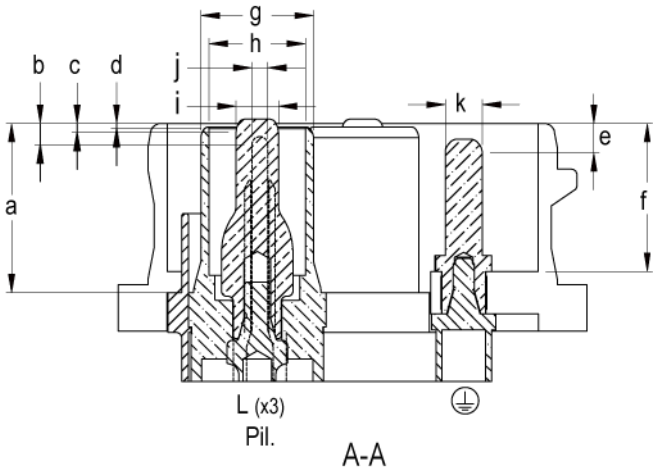
A-A

D.2 Plug top



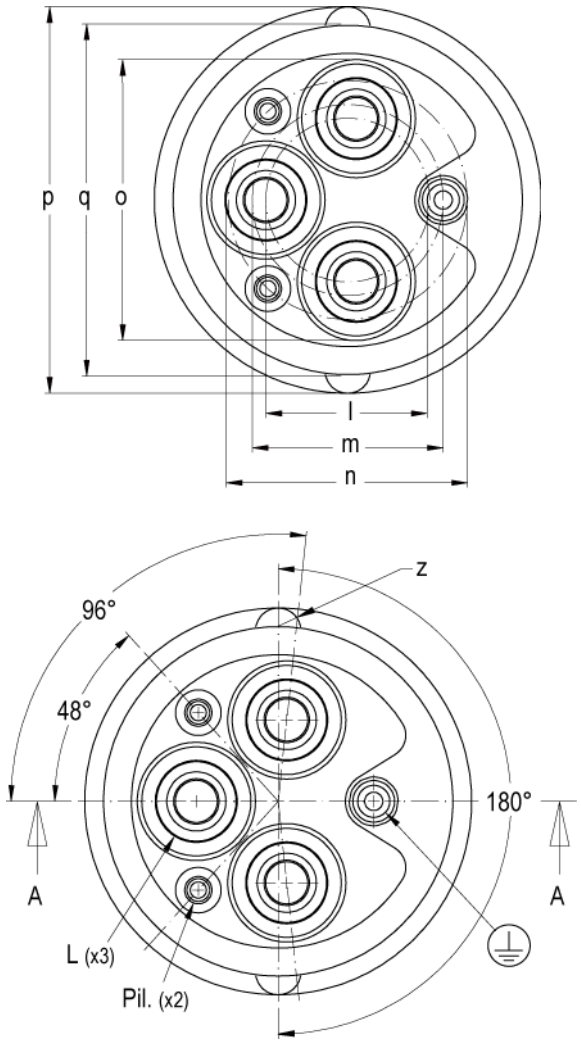


Key	Description	Dimension mm	
a	Insulator depth	64,0	0 -0,25
b	Pilot contact	8,0	0 -0,25
c	Phase contact	3,4	0 -0,10
d	Top, insulator	1,9	0 -0,10
e	Earth contact	11,1	0 -0,10
f	Tongue depth	56,0	±0,25
g	Insulator outside diameter	42,5	+0,10 0
h	Insulator inside diameter	36,5	±0,10
i	Diameter, phase contact	16,0	0 -0,05
j	Diameter, pilot contact	6,0	0 -0,05
k	Diameter, earth contact	14,0	0 -0,05
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, earth contact	84,0	±0,25
n	Pitch, pilot contacts	105,0	±0,25
o	Insulator diameter	119,6	±0,25
p	Inner diameter	140,0	+0,10 0
q	Outer diameter	154,5	0 -0,10
r	Diameter + nose	162,0	±0,25
z	Nose radius	7,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		

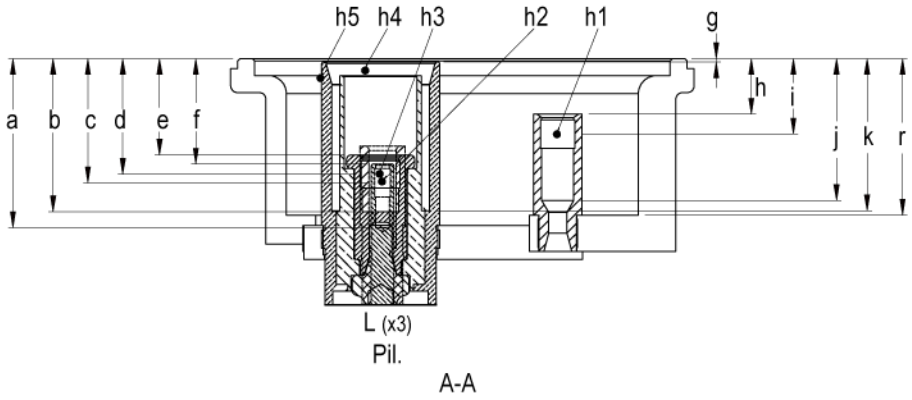


IEC

D.3 Ship connector top

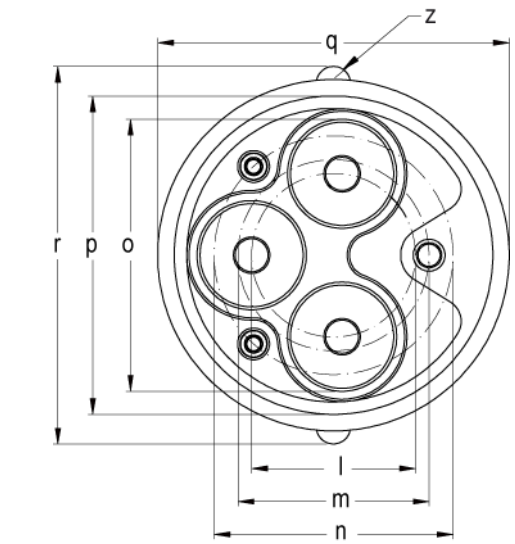


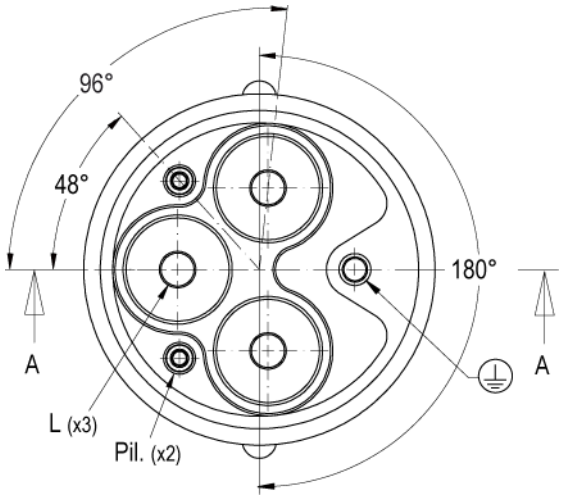
Key	Description	Dimension mm	
a	Bottom, pilot contact	74,5	+0,10 0
b	Bottom, phase contact	67,5	+0,10 0
c	Pilot contact	52,0	±0,25
d	Phase contact	48,3	±0,25
e	Top, phase contacts	42,5	±0,25
f	Top, pilot contact	46,5	±0,25
g	Top, insulator	1,5	±0,25
h	Top, earth contact	24,5	±0,25
i	Earth contact	30,5	±0,25
j	Bottom, earth contact	62,5	+0,10 0
k	Bottom, insulator	67,0	+0,10 0
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, earth contact	84,0	±0,25
n	Pitch, pilot contacts	106,0	±0,25
o	Insulator diameter	123,6	±0,25
p	Diameter + nose	170,0	±0,25
q	Diameter	155,0	±0,25
r	Tongue depth	69,0	±0,25
h1	Diameter, earth contact	14,0	+0,10 0
h2	Diameter, pilot contact	6,0	+0,10 0
h3	Diameter, phase contact	16,0	+0,10 0
h4	Insulator inside diameter	43,0	+0,10 0
h5	Insulator outside diameter	52,0	±0,25
z	Nose radius	10,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		



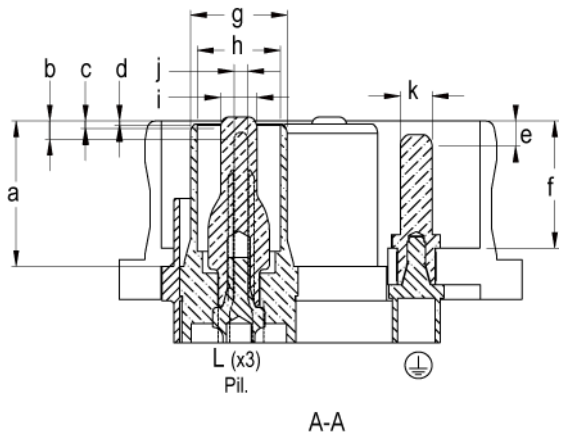
IEC

D.4 Ship inlet





Key	Description	Dimension mm	
a	Insulator depth	64,0	0 -0,25
b	Pilot contact	8,0	0 -0,25
c	Phase contact	3,4	0 -0,10
d	Top, insulator	1,9	0 -0,10
e	Earth contact	11,1	0 -0,10
f	Tongue depth	56,0	±0,25
g	Insulator outside diameter	42,5	+0,10 0
h	Insulator inside diameter	36,5	±0,10
i	Phase contacts diameter	16,0	0 -0,05
j	Pilot contacts diameter	6,0	0 -0,05
k	Diameter, earth contact	14,0	0 -0,05
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, pilot contacts	84,0	±0,25
n	Pitch, earth contact	105,0	±0,25
o	Insulator diameter	119,6	±0,25
p	Inner diameter	140,0	+0,10 0
q	Outer diameter	154,5	0 -0,10
r	Diameter + nose	166,0	±0,25
z	Nose radius (x2)	7,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		



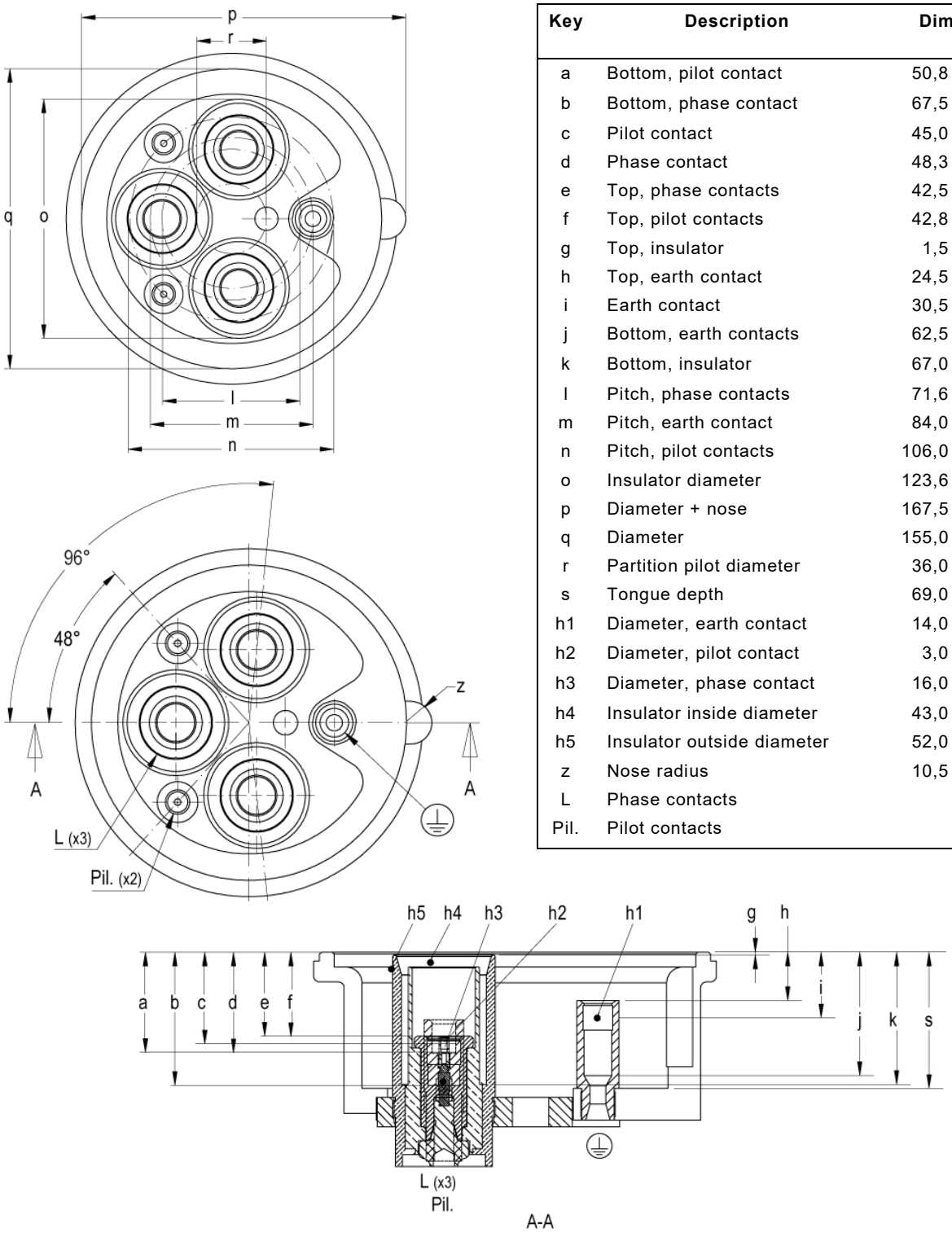
A-A

IEC

Annex E
(normative)

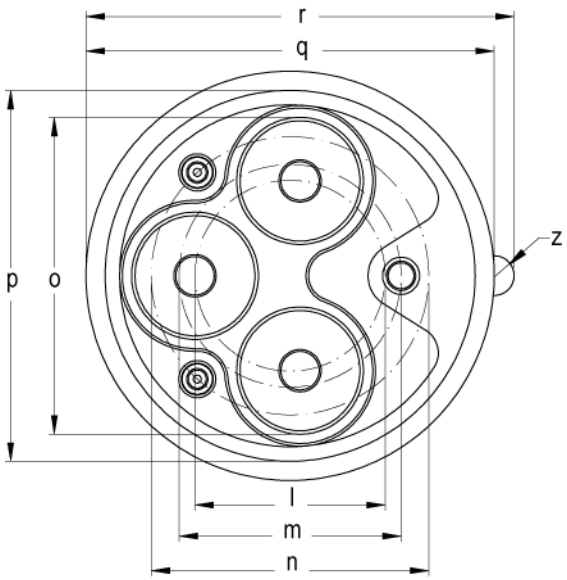
Standard sheets E:
12 kV 500 A three-phase accessories with two IP2X pilot contacts

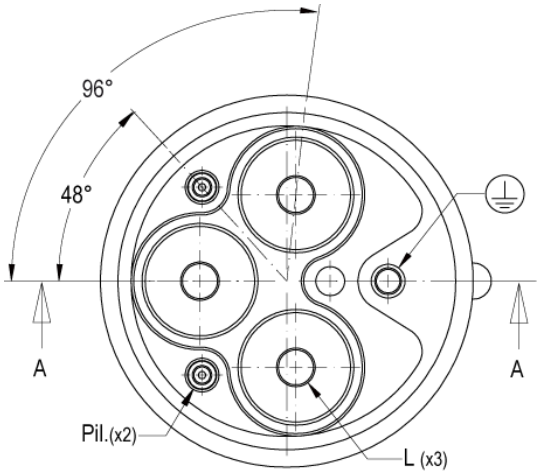
E.1 Socket-outlet



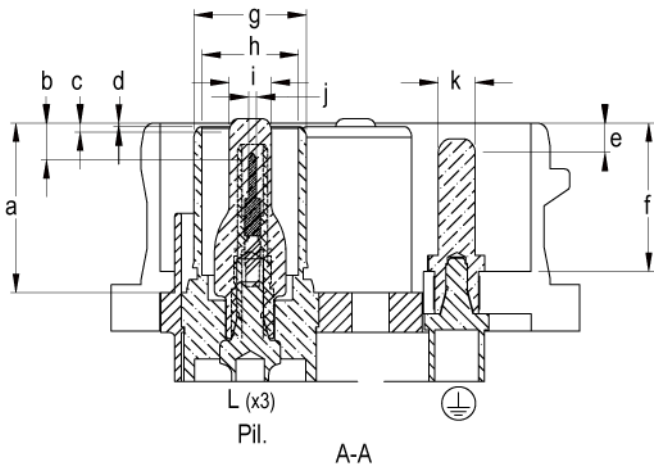
Key	Description	Dimension mm	
a	Bottom, pilot contact	50,8	+0,10 0
b	Bottom, phase contact	67,5	+0,10 0
c	Pilot contact	45,0	±0,25
d	Phase contact	48,3	±0,25
e	Top, phase contacts	42,5	±0,25
f	Top, pilot contacts	42,8	±0,25
g	Top, insulator	1,5	±0,25
h	Top, earth contact	24,5	±0,25
i	Earth contact	30,5	±0,25
j	Bottom, earth contacts	62,5	+0,10 0
k	Bottom, insulator	67,0	+0,10 0
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, earth contact	84,0	±0,25
n	Pitch, pilot contacts	106,0	±0,25
o	Insulator diameter	123,6	±0,25
p	Diameter + nose	167,5	±0,25
q	Diameter	155,0	±0,25
r	Partition pilot diameter	36,0	±0,25
s	Tongue depth	69,0	±0,25
h1	Diameter, earth contact	14,0	+0,10 0
h2	Diameter, pilot contact	3,0	+0,10 0
h3	Diameter, phase contact	16,0	+0,10 0
h4	Insulator inside diameter	43,0	±0,25
h5	Insulator outside diameter	52,0	±0,25
z	Nose radius	10,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		

E.2 Plug top



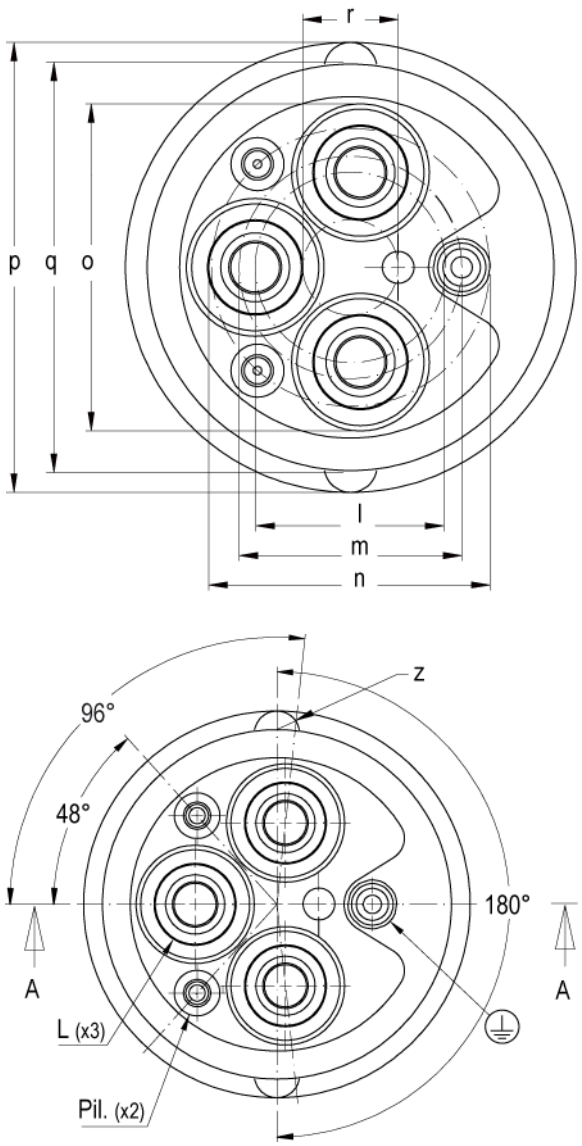


Key	Description	Dimension mm	
a	Insulator depth	64,0	0 -0,25
b	Pilot contact	13,8	0 -0,25
c	Phase contact	3,4	0 -0,10
d	Top, insulator	1,4	0 -0,10
e	Earth contact	11,1	0 -0,10
f	Tongue depth	56,0	±0,25
g	Insulator outside diameter	42,5	+0,10 0
h	Insulator inside diameter	36,5	±0,10
i	Diameter, phase contact	16,0	0 -0,05
j	Diameter, pilot contact	3,0	0 -0,05
k	Diameter, earth contact	14,0	0 -0,05
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, pilot contacts	84,0	±0,25
n	Pitch, earth contact	105,0	±0,25
o	Insulator diameter	119,6	±0,25
p	Inner diameter	140,0	+0,10 0
q	Outer diameter	154,5	0 -0,10
r	Diameter + nose	162,0	±0,25
z	Nose radius	7,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		

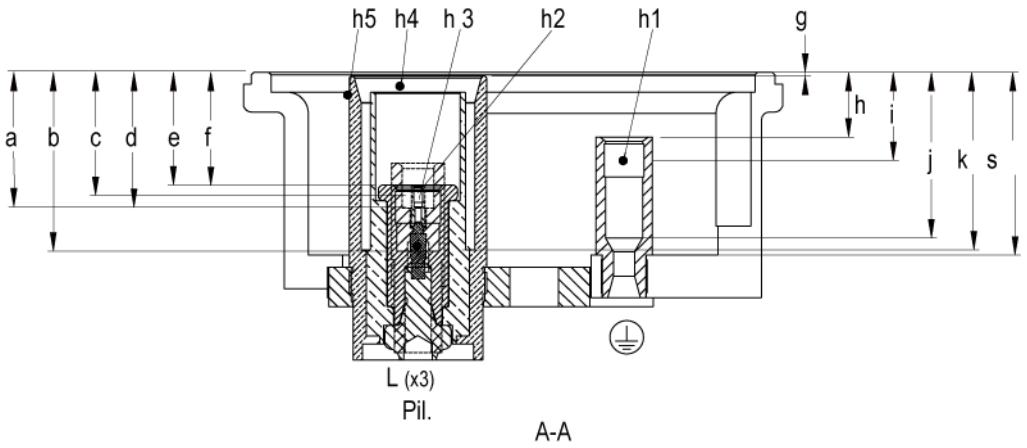


IEC

E.3 Ship connector top

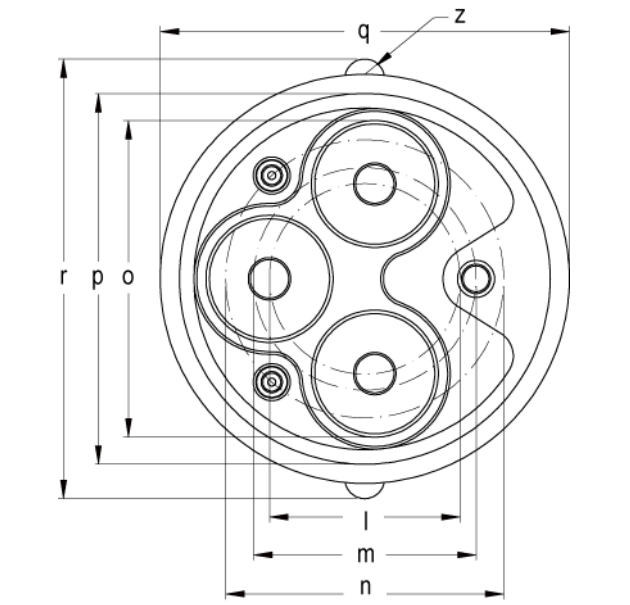


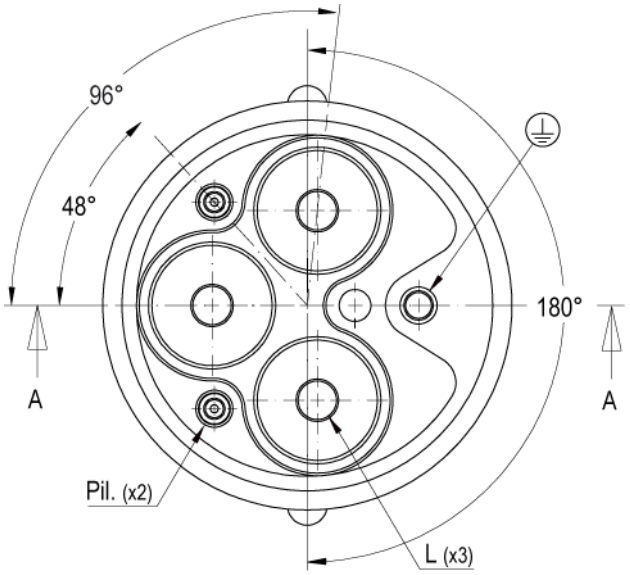
Key	Description	Dimension mm	
a	Bottom, pilot contact	50,8	+0,10 0
b	Bottom, phase contact	67,5	+0,10 0
c	Pilot contact	45,0	±0,25
d	Phase contact	48,3	±0,25
e	Top, phase contacts	42,5	±0,25
f	Top, pilot contact	42,8	±0,25
g	Top, insulator	1,5	±0,25
h	Top, earth contact	24,5	±0,25
i	Earth contact	30,5	±0,25
j	Bottom, earth contact	62,5	+0,10 0
k	Bottom, insulator	67,0	+0,10 0
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, earth contact	84,0	±0,25
n	Pitch, pilot contacts	106,0	±0,25
o	Insulator diameter	123,6	±0,25
p	Diameter + nose	170,0	±0,25
q	Diameter	155,0	±0,25
r	Pitch pilot contact	36,0	±0,25
s	Tongue depth	69,0	+0,10 0
h1	Diameter, earth contact	14,0	+0,10 0
h2	Diameter, pilot contact	3,0	+0,10 0
h3	Diameter, phase contact	16,0	+0,10 0
h4	Insulator inside diameter	43,0	+0,10 0
h5	Insulator outside diameter	52,0	±0,25
z	Nose radius	10,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		

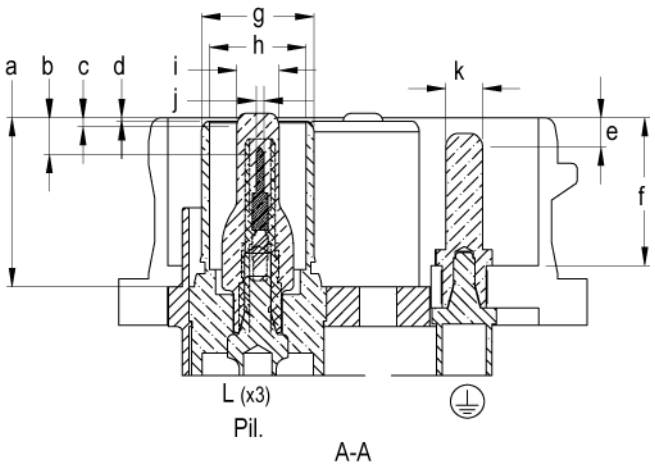


IEC

E.4 Ship inlet







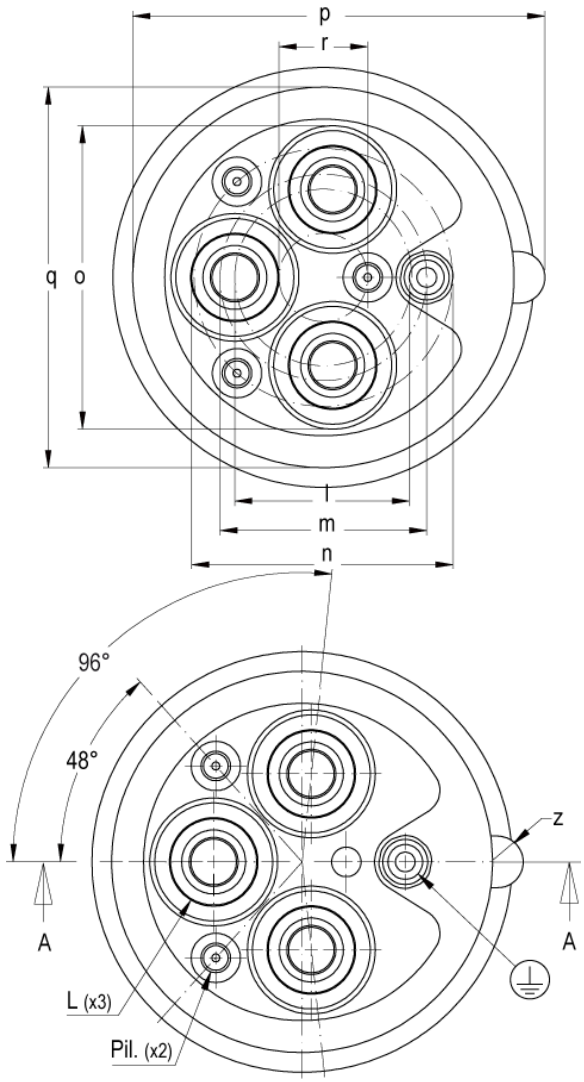
A-A

Key	Description	Dimension mm	
a	Insulator depth	64,0	0 -0,25
b	Pilot contact	13,8	0 -0,25
c	Phase contact	3,4	0 -0,10
d	Top, insulator	1,4	0 -0,10
e	Earth contact	11,1	0 -0,10
f	Tongue depth	56,0	±0,25
g	Insulator outer diameter	42,5	+0,10 0
h	Insulator inner diameter	36,5	±0,10
i	Diameter, phase contact	16,0	0 -0,05
j	Diameter, pilot contact	3,0	0 -0,05
k	Diameter, earth contact	14,0	0 -0,05
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, pilot contacts	84,0	±0,25
n	Pitch, earth contact	105,0	±0,25
o	Insulator diameter	119,6	±0,25
p	Inner diameter	140,0	+0,10 0
q	Outer diameter	154,5	0 -0,10
r	Outer diameter + noses	166,0	±0,25
z	Nose radius	7,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		

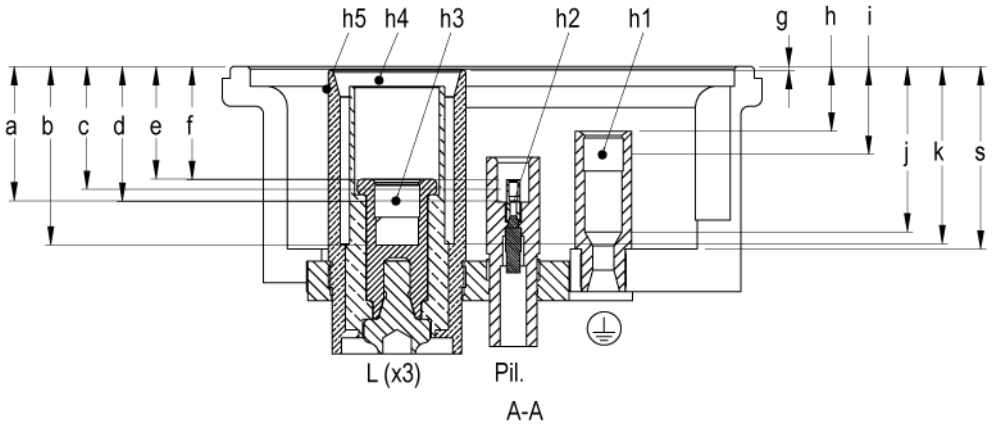
Annex F
(normative)

Standard sheets F:
12 kV 500 A three-phase accessories with three IP2X pilot contacts

F.1 Socket-outlet



Key	Description	Dimension mm	
a	Bottom, pilot contact	50,8	$^{+0,10}_{0}$
b	Bottom, phase contact	67,5	$^{+0,10}_{0}$
c	Pilot contact	45,0	±0,25
d	Phase contact	48,3	±0,25
e	Top, phase contacts	42,5	±0,25
f	Top, pilot contact	42,8	±0,25
g	Top, insulator	1,5	±0,25
h	Top, earth contact	24,5	±0,25
i	Earth contact	30,5	±0,25
j	Bottom, earth contact	62,5	$^{+0,10}_{0}$
k	Bottom, insulator	67,0	$^{+0,10}_{0}$
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, earth contact	84,0	±0,25
n	Pitch, pilot contacts	106,0	±0,25
o	Insulator diameter	123,6	±0,25
p	Socket + guide	167,5	±0,25
q	Diameter	155,0	±0,25
r	Pitch, pilot contacts	36,0	±0,25
s	Tongue depth	69,0	±0,25
h1	Diameter, earth contact	14,0	$^{+0,10}_{0}$
h2	Diameter, pilot contact	3,0	$^{+0,10}_{0}$
h3	Diameter, phase contact	16,0	$^{+0,10}_{0}$
h4	Insulator inside diameter	43,0	$^{+0,10}_{0}$
h5	Insulator outside diameter	52,0	±0,25
z	Nose radius	10,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		



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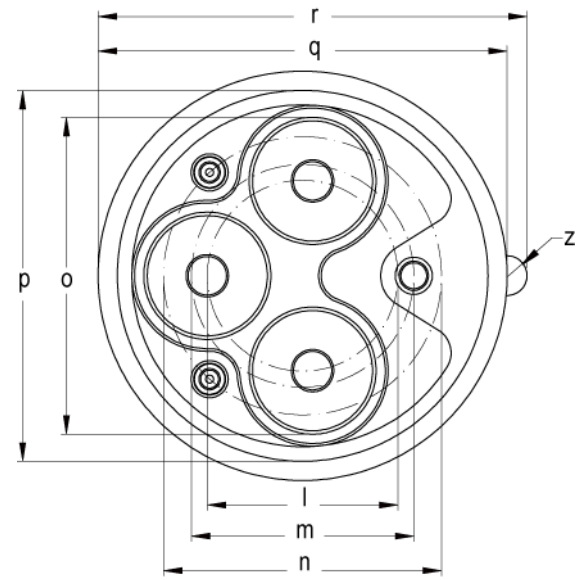
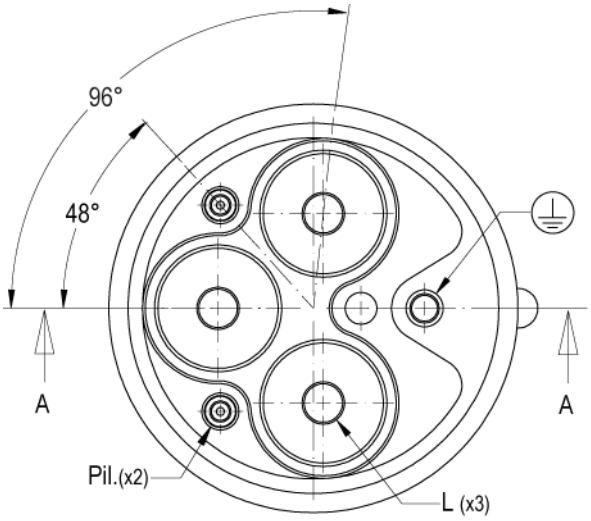
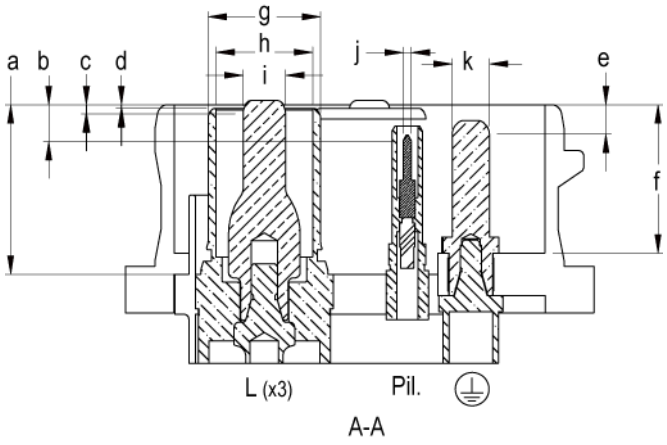
F.2 Plug top



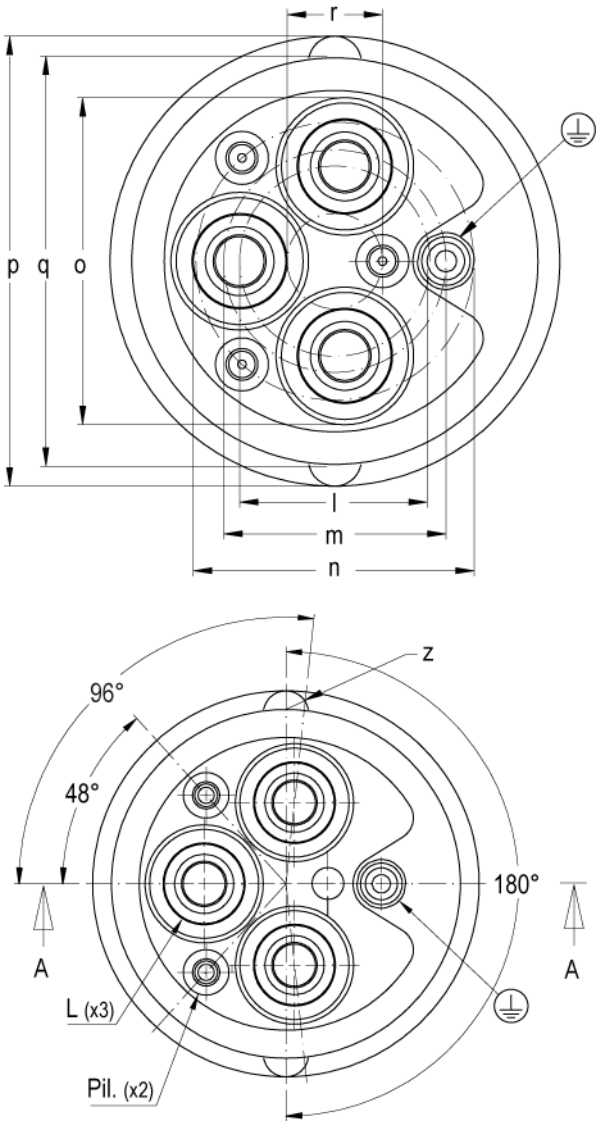




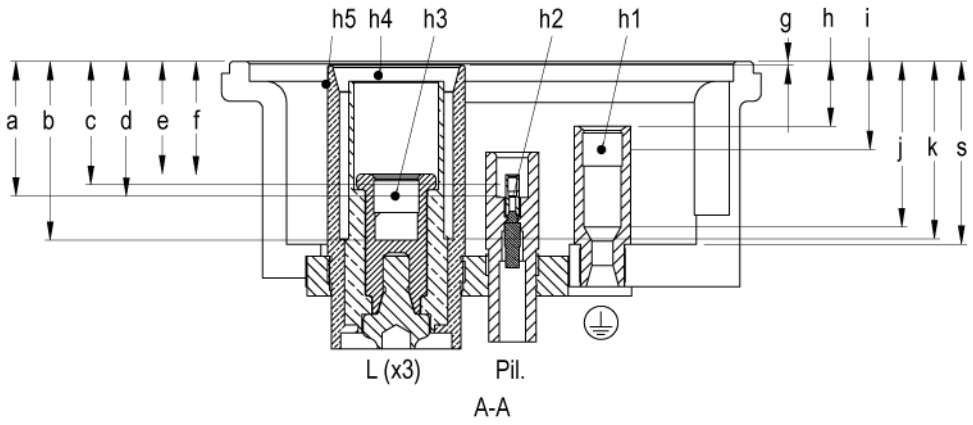
Key	Description	Dimension mm	
a	Insulator depth	64,0	0 -0,25
b	Pilot contact	13,8	0 -0,25
c	Phase contact	3,4	0 -0,10
d	Top, insulator	1,4	0 -0,10
e	Earth contact	11,1	0 -0,10
f	Tongue depth	56,0	±0,25
g	Insulator outer diameter	42,5	+0,10 0
h	Insulator inner diameter	36,5	±0,10
i	Diameter, phase contact	16,0	0 -0,05
j	Diameter, pilot contact	3,0	0 -0,05
k	Diameter, earth contact	14,0	0 -0,05
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, earth contact	84,0	±0,25
n	Pitch, pilots contacts	105,0	±0,25
o	Insulator diameter	119,6	±0,25
p	Inner diameter	140,0	+0,10 0
q	Outer diameter	154,5	0 -0,10
r	Outer diameter + nose	162,0	0 -0,10
z	Nose radius	7,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		

IEC

F.3 Ship connector top

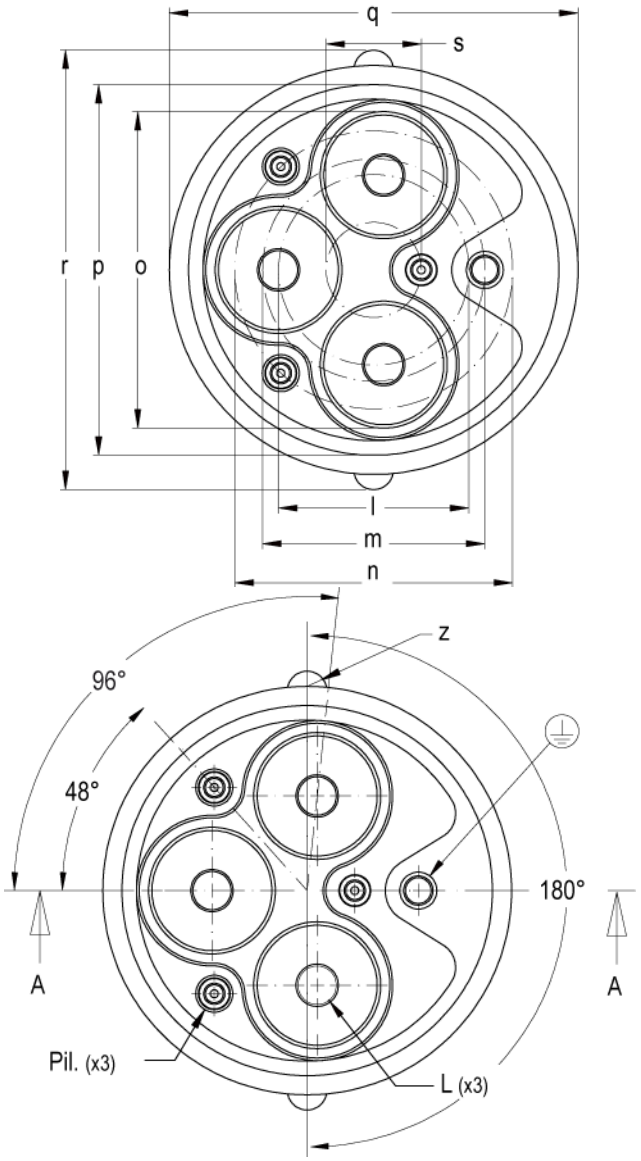


Key	Description	Dimension mm	
a	Bottom, pilot contacts	50,8	+0,10 0
b	Bottom, phase contact	67,5	+0,10 0
c	Pilot contact	45,0	±0,25
d	Phase contact	48,3	±0,25
e	Top, phase contacts	42,5	±0,25
f	Top, pilot contact	42,8	±0,25
g	Top, insulator	1,5	±0,25
h	Top, earth contact	24,5	±0,25
i	Earth contact	30,5	±0,25
j	Bottom, earth contact	62,5	+0,10 0
k	Bottom, insulator	67,0	+0,10 0
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, earth contact	84,0	±0,25
n	Pitch, pilot contacts	106,0	±0,25
o	Insulator diameter	123,6	±0,25
p	Diameter + nose	170,0	±0,25
q	Diameter	155,0	±0,25
r	Pitch, pilot contact	36,0	±0,25
s	Tongue depth	69,0	±0,25
h1	Diameter, earth contact	14,0	+0,10 0
h2	Diameter, pilot contact	3,0	+0,10 0
h3	Diameter, phase contact	16,0	+0,10 0
h4	Insulator inside diameter	43,0	+0,10 0
h5	Insulator outside diameter	52,0	±0,25
z	Nose radius	10,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		

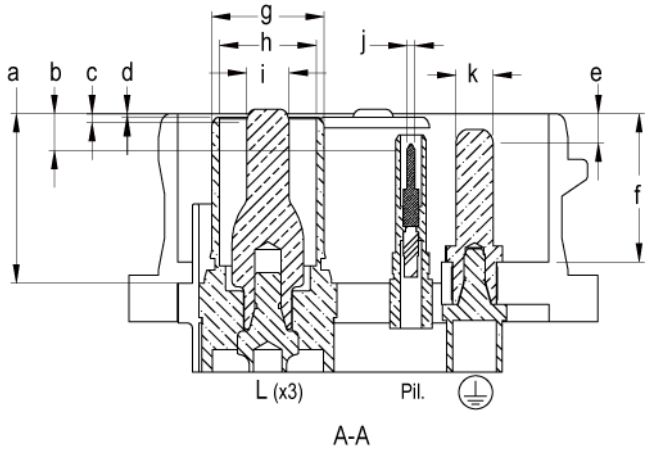


IEC

F.4 Ship inlet



Symbol	Description	Dimension mm	
a	Insulator depth	64,0	0 -0,25
b	Pilot contact	13,8	0 -0,25
c	Phase contact	3,4	0 -0,10
d	Top, insulator	1,4	0 -0,10
e	Earth contact	11,1	0 -0,10
f	Tongue depth	56,0	±0,25
g	Insulator outer diameter	42,5	+0,10 0
h	Insulator inner diameter	36,5	±0,10
i	Diameter, phase contact	16,0	0 -0,05
j	Diameter, pilot contact	3,0	0 -0,05
k	Diameter, earth contact	14,0	0 -0,05
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, earth contact	84,0	±0,25
n	Pitch, pilot contacts	105,0	±0,25
o	Insulator diameter	119,6	±0,25
p	Inner diameter	140,0	+0,10 0
q	Outer diameter	154,5	+0,10 0
r	Outer diameter + noses	166,0	+0,10 0
s	Pitch, pilot contacts	36,0	±0,25
z	Nose radius	7,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		



A-A

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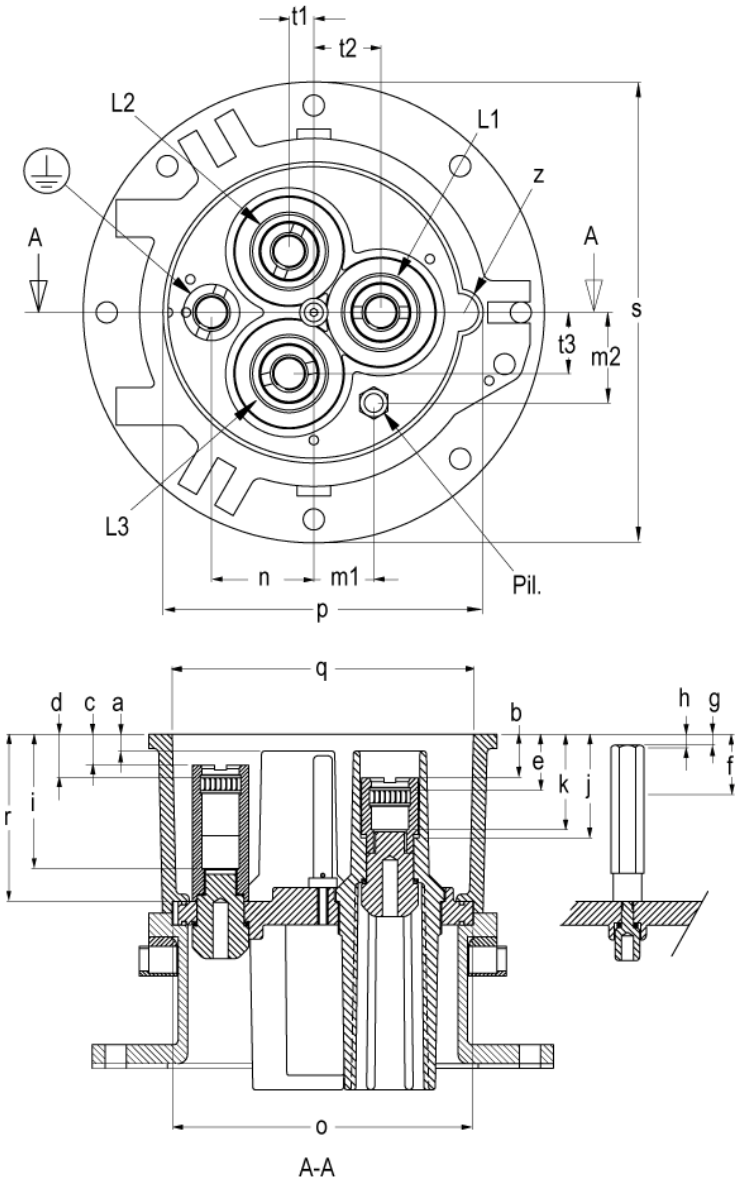
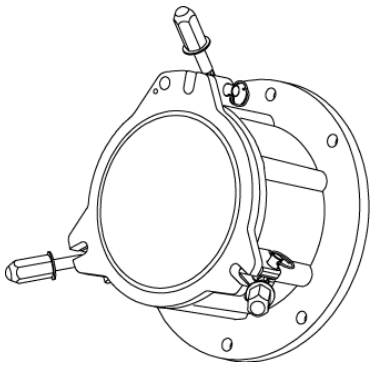
Annex G
(normative)

Standard sheets G:
12 kV 500 A three-phase accessories with two pilot contacts

G.1 Socket-outlet

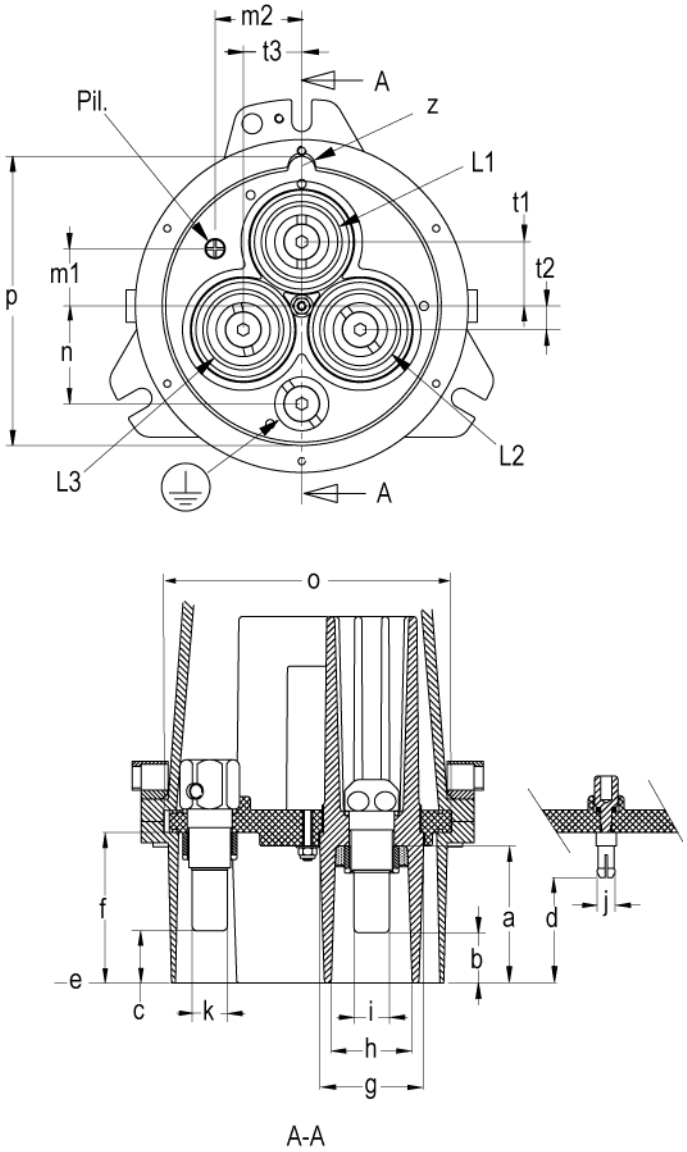


Key	Description	Dimensions mm	
a	Top, insulator	10,5	±0,50
b	Top, phase contacts	31,0	±0,50
c	Top, earth contact	19,5	±0,50
d	Earth contact	27,1	±0,50
e	Phase contact	39,0	±0,50
f	Bottom, pilot contact	43,9	±0,50
g	Top, pilot contact	5,7	±0,50
h	Pilot contact	9,0	±0,50
i	Bottom, earth contact	88,6	±0,50
j	Bottom, insulator	69,6	±0,50
k	Bottom, phase contact	64,2	±0,50
m1	Pitch, pilot contact	40,4	±0,50
m2	Pitch, pilot contact	61,1	±0,50
n	Pitch, earth contact	69,0	±0,50
o	Insulator width	202,2	±0,50
p	Inner diameter + nose	214,3	±0,50
q	Inner diameter	204,0	±1,50
r	Tongue depth	111,7	±0,50
s	Flange diameter	311,0	±0,50
t1	Pitch, phase contact	16,7	±0,50
t2	Pitch, phase contact	45,2	±0,50
t3	Pitch, phase contact	41,3	±0,50
z	Nose radius	12,0	±0,10
L1/L2/L3	Phase contacts	-	
Pil.	Ground check contact		

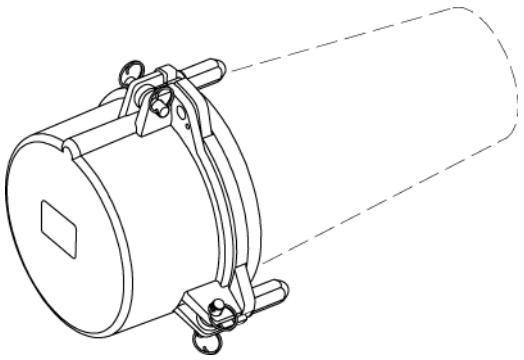


IEC

G.2 Plug top

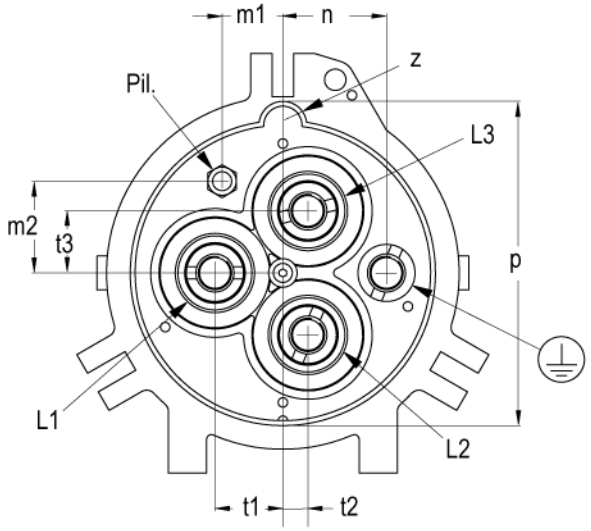


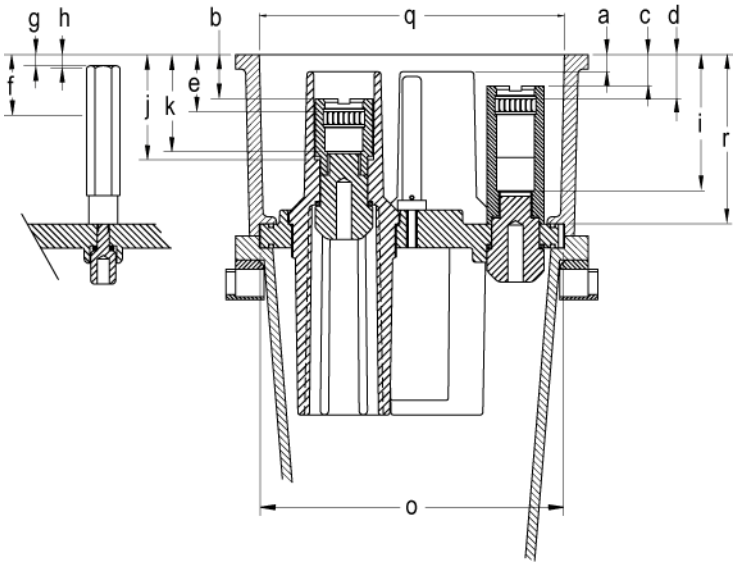
Key	Description	Dimension mm	
a	Insulator depth	96,4	±1,50
b	Top, phase contacts	34,2	±1,50
c	Top, earth contact	35,6	±1,50
d	Top, pilot contact	73,7	±1,50
e	Top, insulator	0,0	
f	Tongue depth	105,4	±1,50
g	Insulator outside diameter	72,0	±0,50
h	Insulator inside diameter	56,6	±0,50
i	Diameter, phase contact	24,9	0 -0,05
j	Diameter, pilot contact	12,8	±0,60
k	Diameter, earth contact	24,9	0 -0,05
m1	Pitch, pilot contact	40,4	±0,50
m2	Pitch, pilot contact	61,1	±0,50
n	Pitch, earth contact	69,0	±0,50
o	Insulator width	202,2	±0,50
p	Outer diameter + nose	203,0	±1,50
t1	Pitch, phase contact	45,2	±0,50
t2	Pitch, phase contact	16,7	±0,50
t3	Pitch, phase contact	41,3	±0,50
z	Nose radius	9,5	±0,10
L1/L2/L3	Phase contacts	-	
Pil.	Ground check contact		



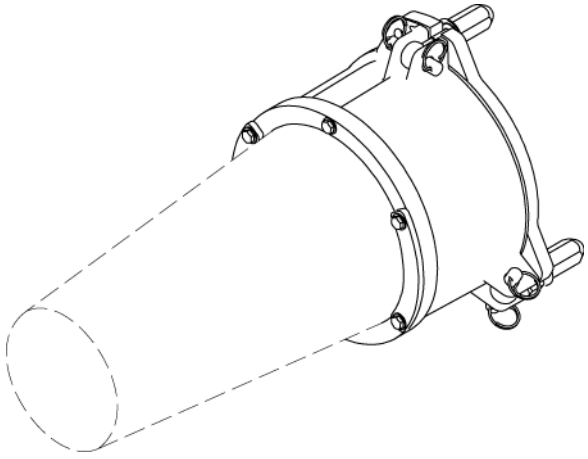
IEC

G.3 Ship connector top



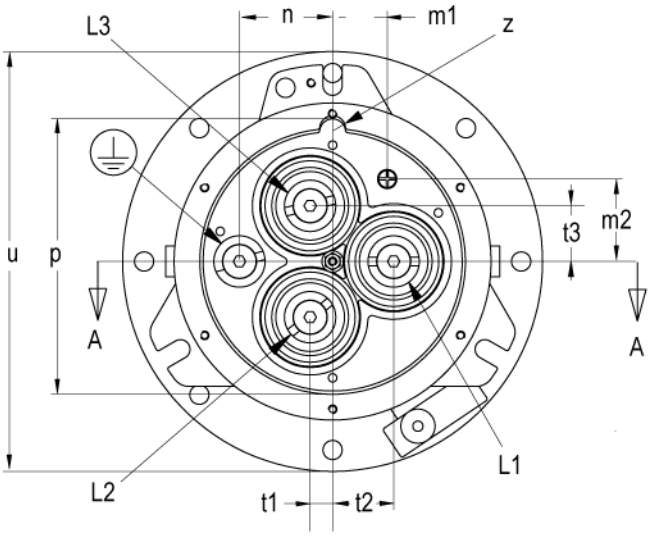


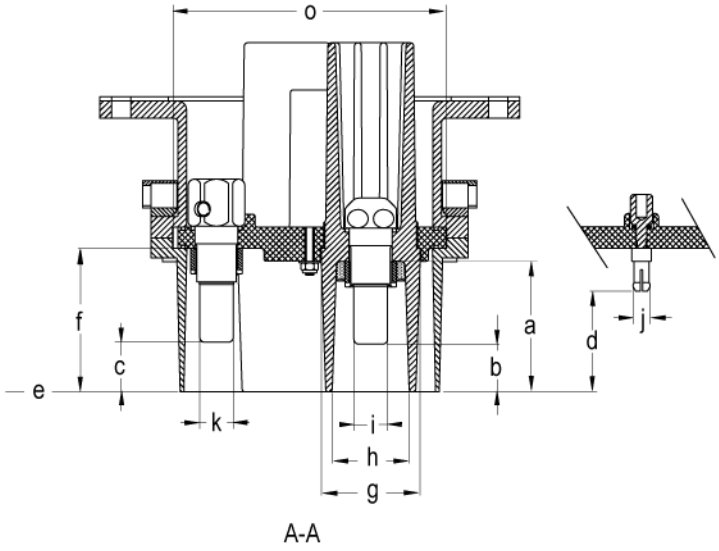
Key	Description	Dimension mm	
a	Top, insulator	10,5	±0,50
b	Top, phase contacts	31,0	±0,50
c	Top, earth contact	19,5	±0,50
d	Earth contact	27,1	±0,50
e	Phase contact	39,0	±0,50
f	Bottom, pilot contact	43,9	±0,50
g	Top, pilot contact	5,7	±0,50
h	Pilot contact	9,0	±0,50
i	Bottom, earth contact	88,6	±0,50
j	Bottom, insulator	69,6	±0,50
k	Bottom, phase contact	64,2	±0,50
m1	Pitch, pilot contact	40,4	±0,50
m2	Pitch, pilot contact	61,1	±0,50
n	Pitch, earth contact	69,0	±0,50
o	Insulator width	202,2	±0,50
p	Socket + nose	214,3	±0,50
q	Socket width	204,0	±1,50
r	Tongue depth	111,7	±0,50
t1	Pitch, phase contact	45,2	±0,50
t2	Pitch, phase contact	16,7	±0,50
t3	Pitch, phase contact	41,3	±0,50
z	Nose radius	12,0	±1,00
L1/L2/L3	Phase contacts	-	
Pil.	Ground check contact		



IEC

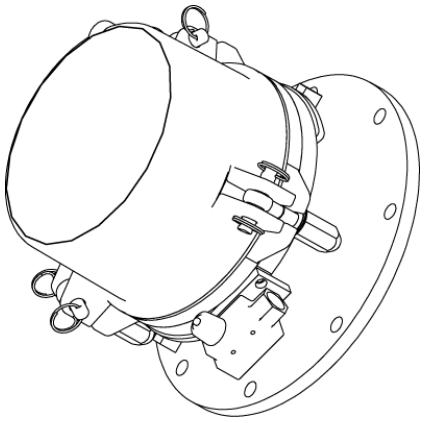
G.4 Ship inlet





A-A

Key	Description	Dimension mm	
a	Insulator depth	96,4	±1,50
b	Top, phase contacts	34,2	±1,50
c	Top, earth contact	35,6	±1,50
d	Top, pilot contact	73,7	±1,50
e	Top, insulator	0,0	
f	Tongue depth	105,4	±1,50
g	Insulator outside diameter	72,0	±0,50
h	Insulator inside diameter	56,6	±0,50
i	Diameter, phase contact	24,9	0 -0,051
j	Diameter, pilot contact	12,8	±0,06
k	Diameter, earth contact	24,9	±0,051
m1	Pitch, pilot contacts	40,4	±0,50
m2	Pitch, pilot contacts	61,1	±0,50
n	Pitch, earth contact	69,0	±0,50
o	Insulator width	202,2	±0,50
p	Connector + nose	203,0	±1,50
u	Flange diameter	311,0	±1,50
t1	Pitch, phase contact	16,7	±0,50
t2	Pitch, phase contact	45,2	±0,50
t3	Pitch, phase contact	41,3	±0,50
z	Nose radius	12,0	±1,0
L1/L2/L3	Phase contacts	-	
Pil.	Ground check contact		

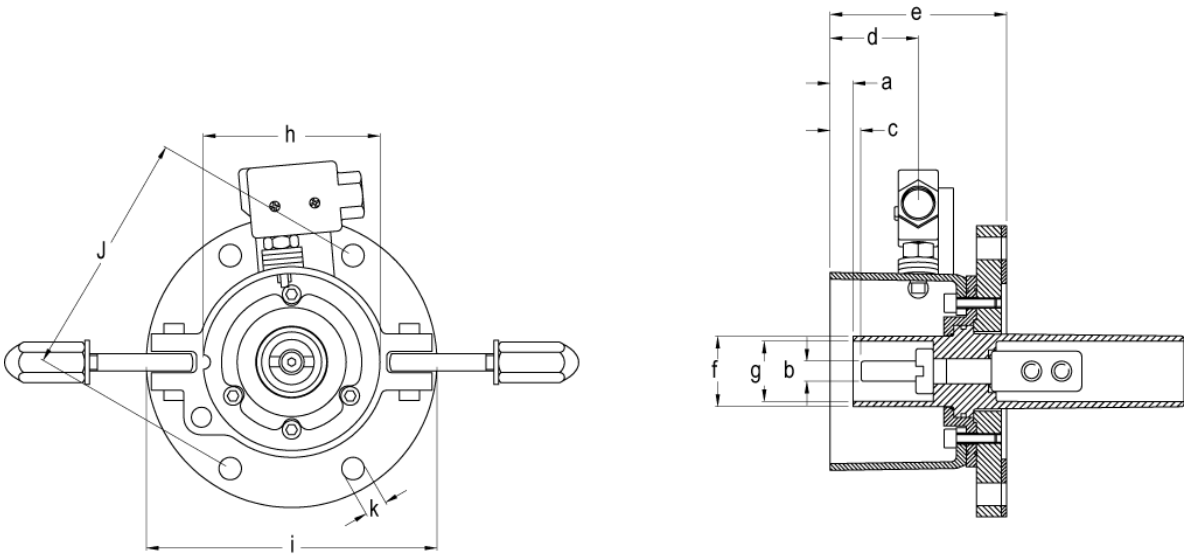


IEC

Annex H
(normative)

Standard sheets H:
7,2 kV 250 A single-pole (neutral) accessories

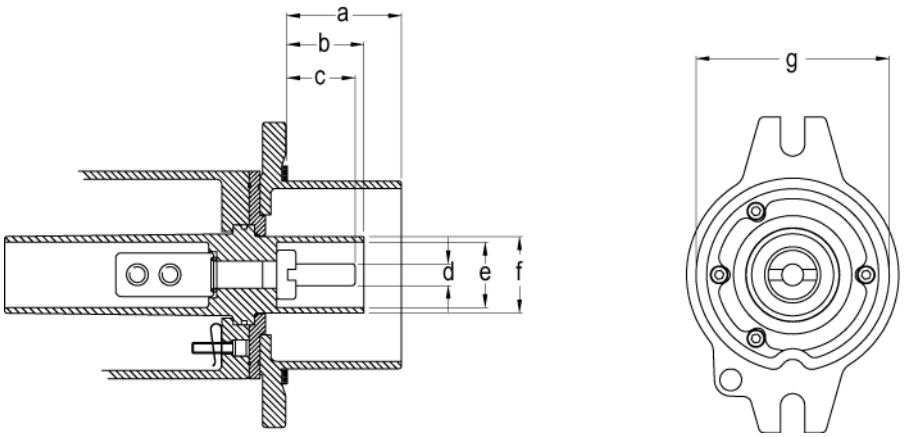
H.1 Socket-outlet



IEC

Key	Description	Dimension mm	
a	Insulator depth	3,4	±0,50
b	Contact diameter	14,5	±0,50
c	Top, contact	19,3	±0,50
d	Centre line of microswitch	55,9	±0,50
e	Overall height	113,0	±1,50
f	Insulator inner diameter	47,6	±0,50
g	Insulator inner shed diameter	32,5	±0,50
h	Body inside diameter	114,0	±1,50
i	Flange diameter	184,2	±1,50
J	Mounting hole pitch circle diameter	155,6	±0,50
k	Mounting hole diameter	14,2	±0,50

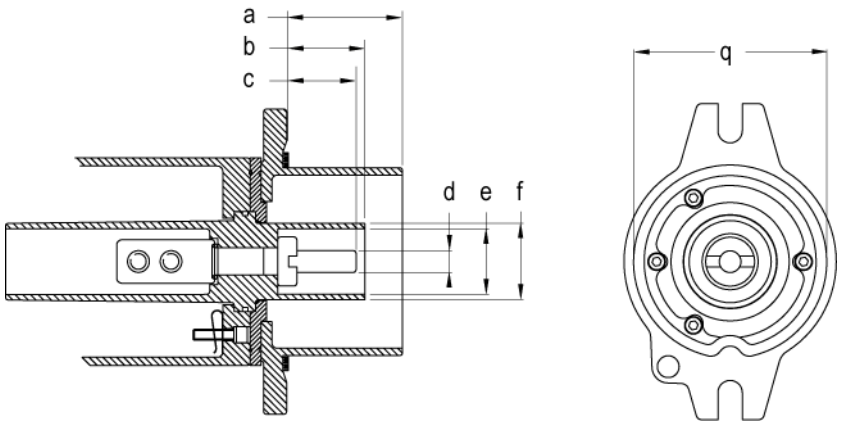
H.2 Plug top



IEC

Key	Description	Dimension mm	
a	Front body height	67,1	±1,50
b	Insulator height	41,7	±0,50
c	Contact height	38,6	±0,50
d	Contact diameter	12,7	±0,06
e	Insulator inner diameter	38,1	±1,50
f	Insulator outer diameter	44,5	±0,50
g	Body diameter	110,4	±0,50

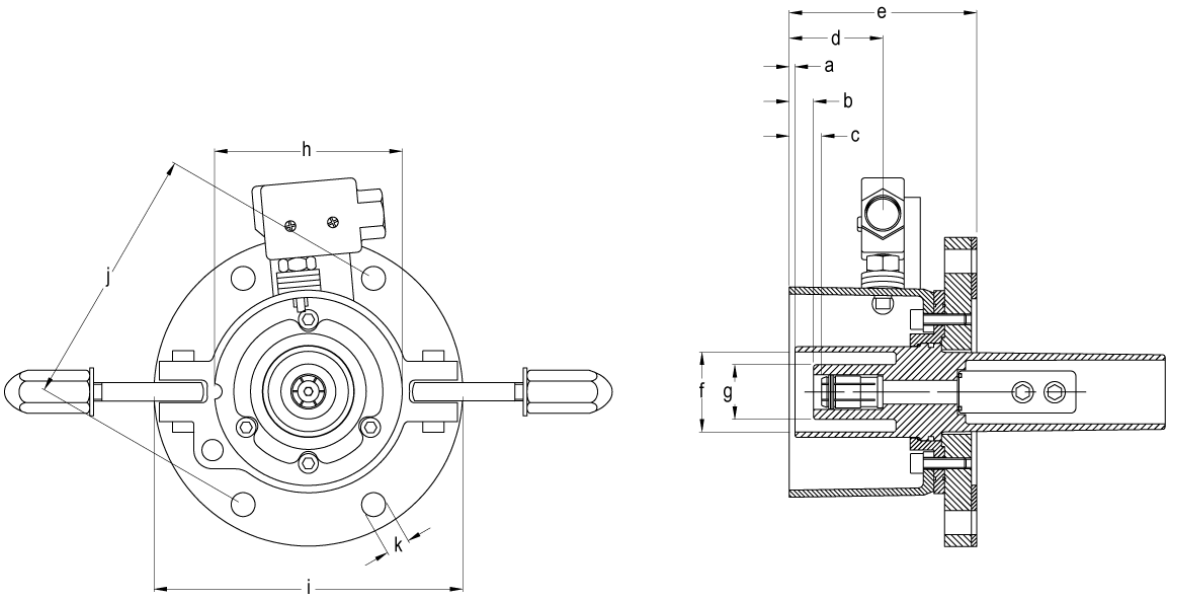
H.3 Ship connector top



IEC

Key	Description	Dimension mm	
a	Front body height	14,7	±0,50
b	Insulator height	12,7	±0,06
c	Contact height	19,6	±0,50
d	Contact diameter	55,9	±0,50
e	Insulator inner diameter	113,0	±1,50
f	Insulator outer diameter	44,5	±0,50
g	Body inner diameter	38,1	±0,50

H.4 Ship inlet

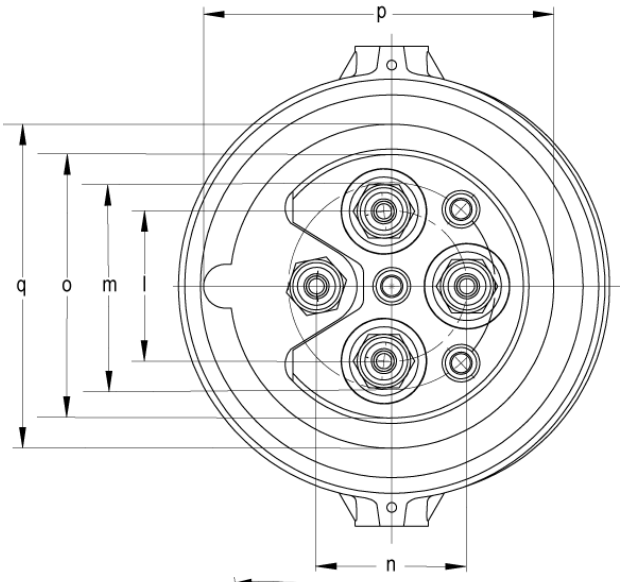


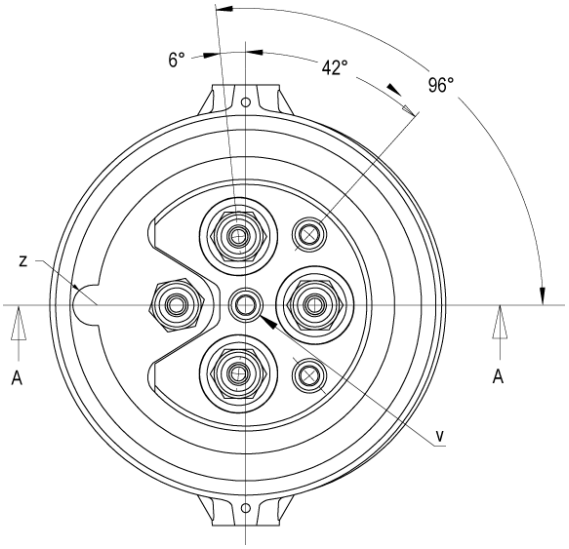
Key	Description	Dimension mm	
a	Insulator depth	14,7	±0,50
b	Contact diameter	12,7	±0,06
c	Top contact	19,6	±0,50
d	Centre line of microswitch	55,9	±0,50
e	Overall height	113,0	±1,50
f	Insulator inner diameter	44,5	±0,50
g	Insulator outer diameter	38,1	±0,50
h	Body inside diameter	114,0	±1,50
i	Flange diameter	184,2	±1,50
j	Mounting hole pitch circle diameter	155,6	±0,50
k	Mounting hole diameter	14,2	±0,50

Annex I
(normative)

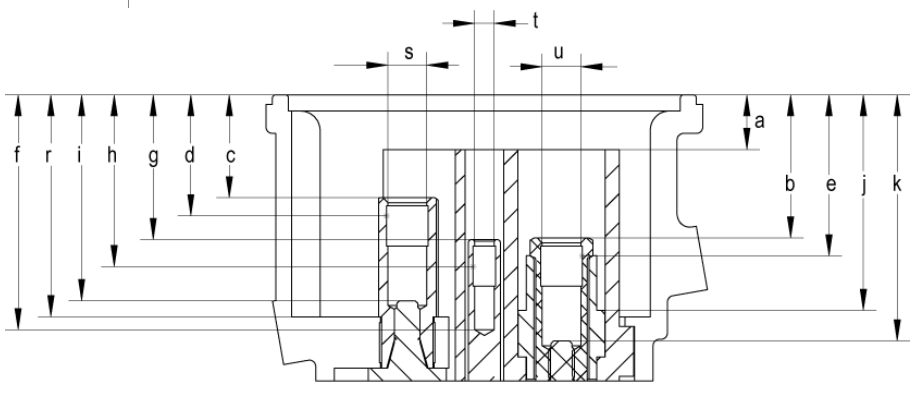
Standard sheets I:
7,2 kV 350 A three-phase accessories with three IP0 pilot contacts

I.1 Socket-outlet



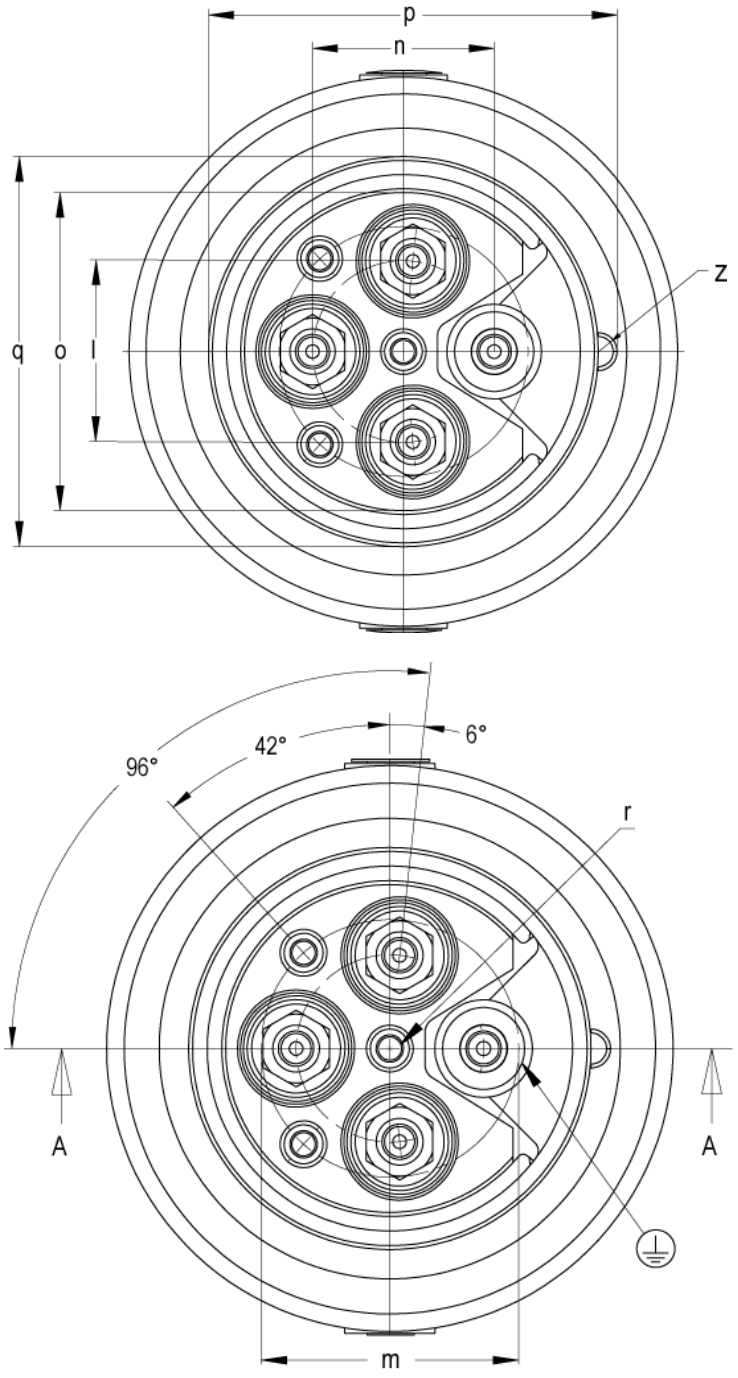


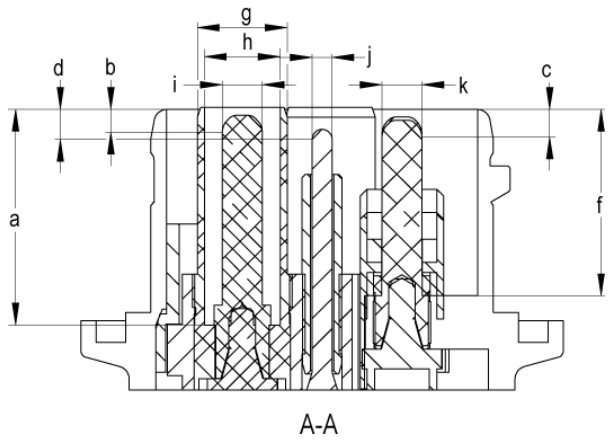
Key	Description	Dimension mm	
a	Top, insulator	17,0	±0,25
b	Top, phase contact	44,0	±0,25
c	Top, earth contact	32,0	±0,25
d	Earth contact	37,6	±0,25
e	Phase contact	50,1	±0,25
f	Bottom, pilot contact	76,0	±0,25
g	Top, pilot contact	48,0	±0,25
h	Pilot contact	53,4	±0,25
i	Bottom, earth contact	64,0	±0,25
j	Bottom, insulator	66,0	±0,25
k	Bottom, phase contact	76,5	±0,25
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, pilot contacts	66,6	±0,25
n	Pitch, earth contact	48,0	±0,25
o	Insulator diameter	84,0	±0,10
p	Socket + nose	111,6	±0,25
q	Diameter	103,3	+0,20 0
r	Tongue depth	69,0	±0,25
s	Diameter, earth contact	12,0	+0,10 0
t	Diameter, pilot contact	6,0	+0,10 0
u	Diameter, phase contact	12,0	+0,10 0
v	Pitch, pilot contact	0,0	±0,25
z	Nose radius	7,0	±0,25



A-A

I.2 Plug top



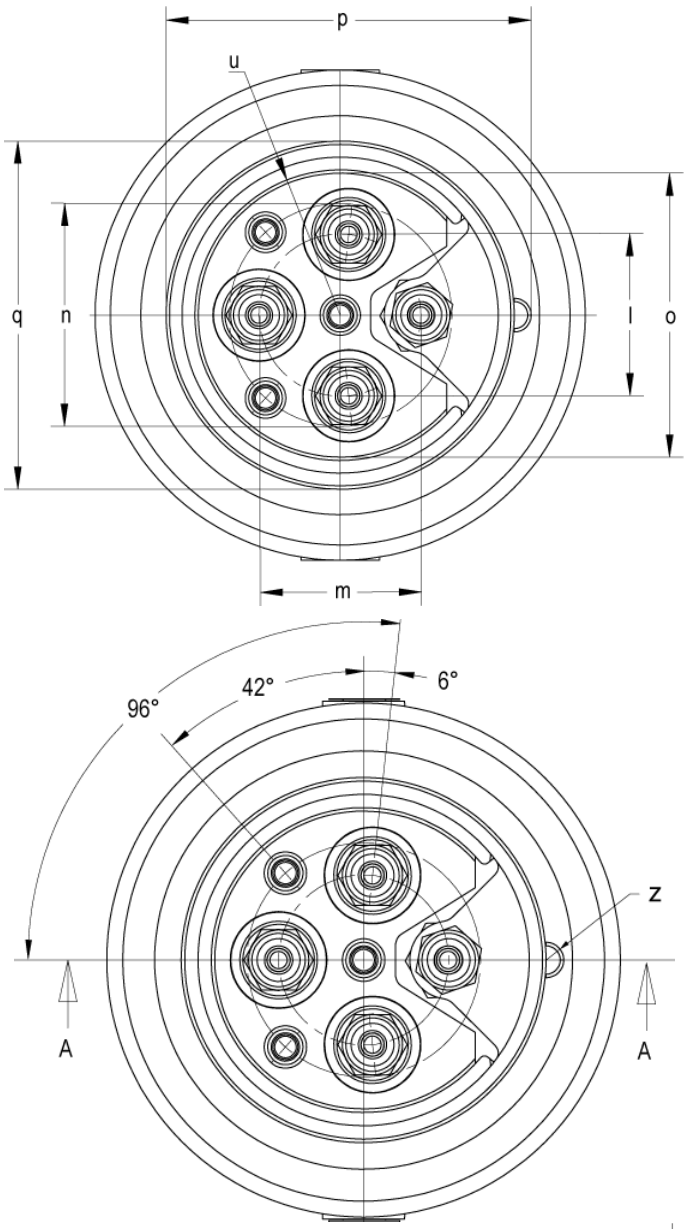


A-A

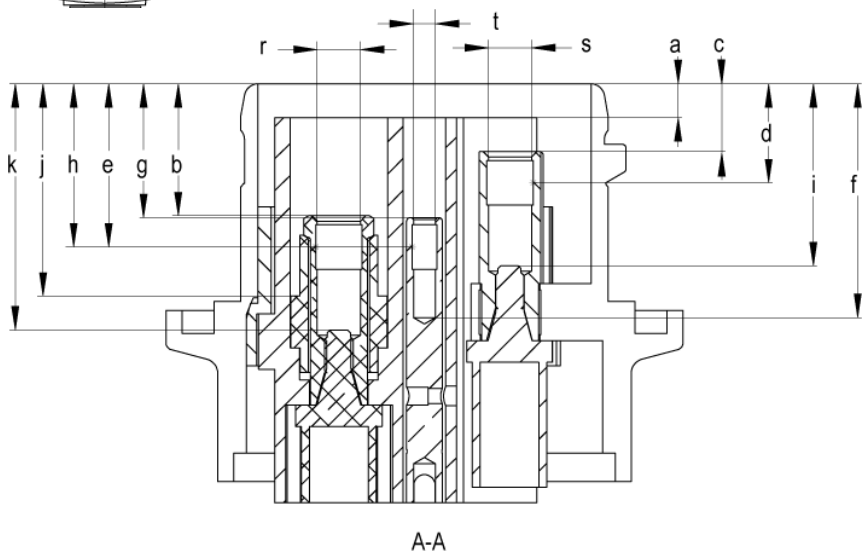
Key	Description	Dimension mm	
a	Insulator depth	64,8	±0,25
b	Top, phase contact	6,9	±0,25
c	Top, earth contact	7,3	±0,25
d	Top, pilot contact	9,0	±0,25
f	Tongue depth	56,0	±0,25
g	Insulator outer diameter	27,0	±0,25
h	Insulator inner diameter	22,8	±0,25
i	Diameter, phase contacts	12,0	0 -0,05
j	Diameter, pilot contacts	6,0	0 -0,05
k	Diameter, earth contact	12,0	0 -0,05
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, pilot contacts	66,6	±0,25
n	Pitch, earth contact	48,0	±0,25
o	Insulator width	84,0	±0,10
p	Diameter + nose	108,9	±0,25
q	Diameter	103,0	±0,25
r	Pitch, third pilot contact	0,0	±0,25
z	Nose radius	5,0	±0,25

IEC

I.3 Ship connector top



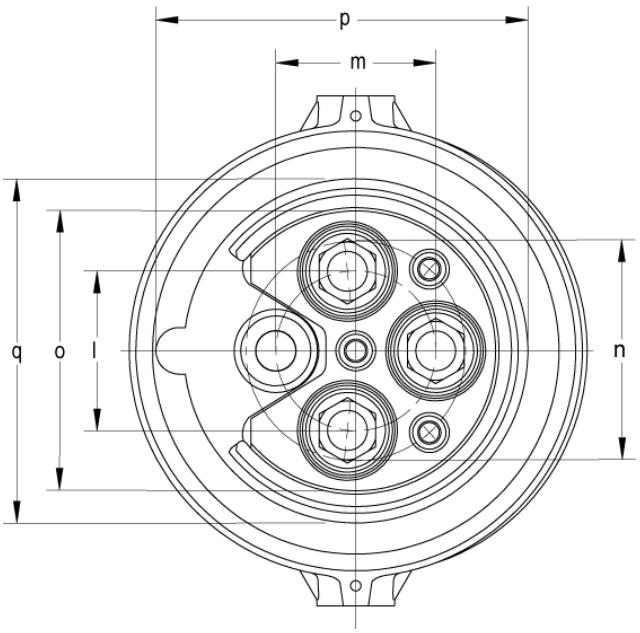
Key	Description	Dimension mm	
a	Top, insulator	9,5	±0,25
b	Top, phase contact	36,5	±0,25
c	Top, earth contact	19,0	±0,25
d	Earth contact	27,7	±0,25
e	Phase contact	45,3	±0,25
f	Bottom, pilot contact	68,5	±0,25
g	Top, pilot contact	40,5	±0,25
h	Pilot contact	48,7	±0,25
i	Bottom, earth contact	51,0	±0,25
j	Bottom, insulator	58,5	±0,25
k	Bottom, phase contact	69,0	±0,25
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator width	84,0	±0,10
p	Diameter + nose	111,6	±0,25
q	Diameter	103,0	0 -0,20
r	Phase contact inner diameter	12,0	+0,10 0
s	Earth contact inner diameter	12,0	+0,10 0
t	Pilot contact inner diameter	6,0	+0,10 0
u	Insulator inner diameter	43,0	±0,25
z	Nose radius	5,0	±0,25

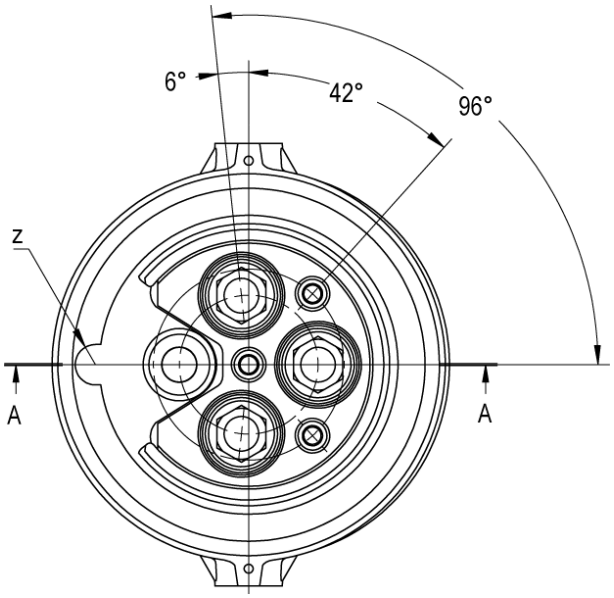


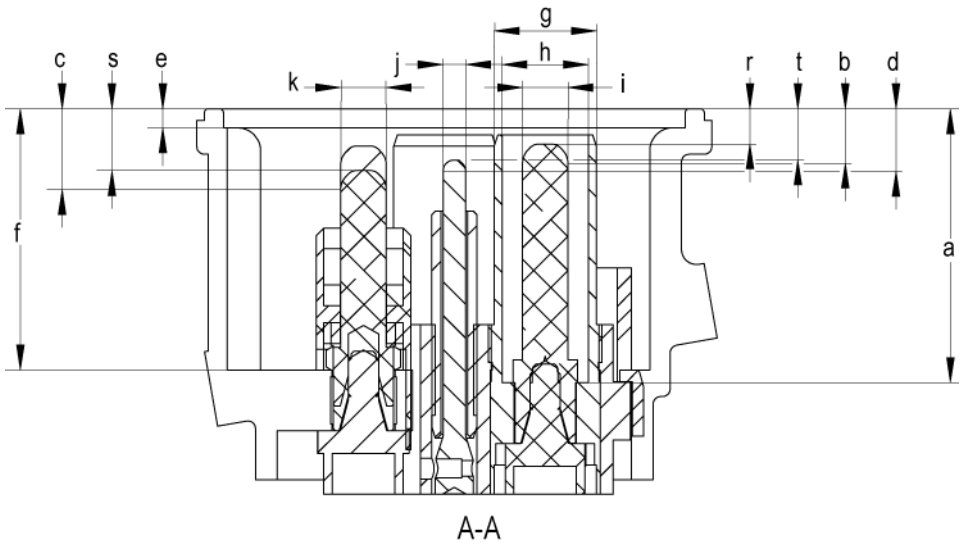
A-A

IEC

I.4 Ship inlet







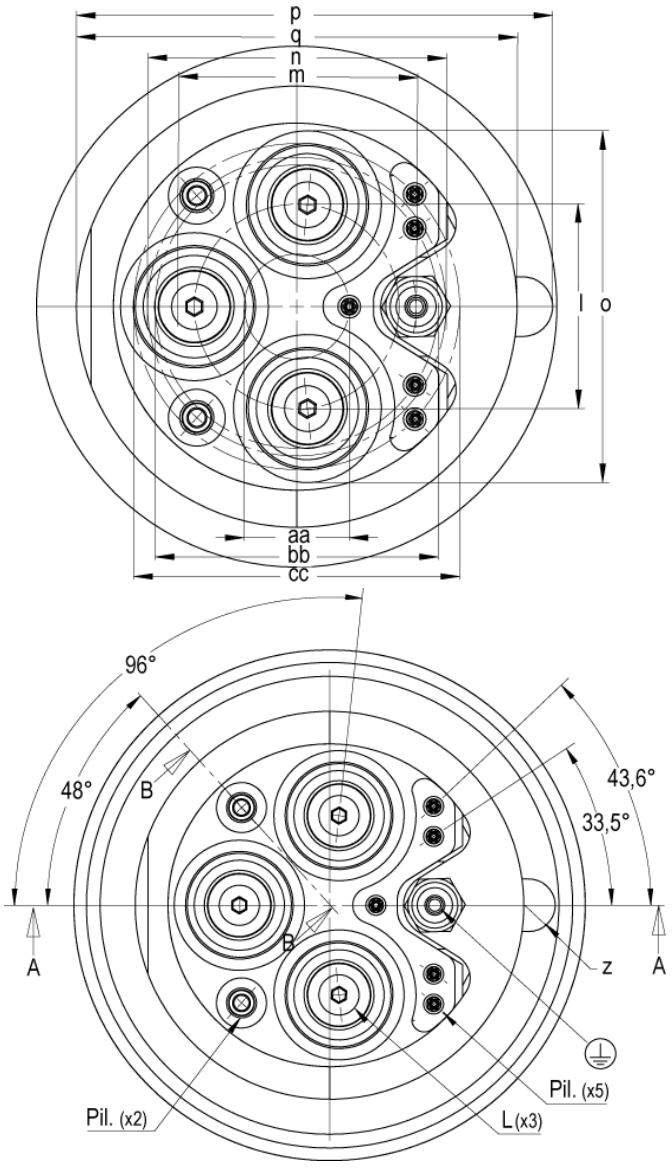
Key	Description	Dimension mm	
a	Insulator depth	72,3	±0,25
b	Top, phase contact	14,4	±0,25
c	Top, earth contact	21,3	±0,25
d	Top, pilot contact	16,5	±0,25
e	Top, insulator	5,0	±0,25
f	Tongue depth	69,0	±0,25
g	Insulator outer diameter	27,0	±0,25
h	Insulator inner diameter	22,8	±0,25
i	Diameter, phase contacts	12,0	0 -0,05
j	Diameter, pilot contacts	6,0	0 -0,05
k	Diameter, earth contact	12,0	0 -0,05
l	Pitch, phase contacts	48,3	±0,25
m	Pitch, earth contact	48,0	±0,25
n	Pitch, pilot contacts	66,6	±0,25
o	Insulator width	84,0	±0,10
p	Inlet + nose	108,9	±0,25
q	Inlet width	103,3	+0,20 0
r	Top, phase contacts	9,3	±0,25
s	Top, earth contact	16,3	±0,10
t	Top, pilot contacts	13,5	±0,25
z	Nose radius	7,0	±0,25

IEC

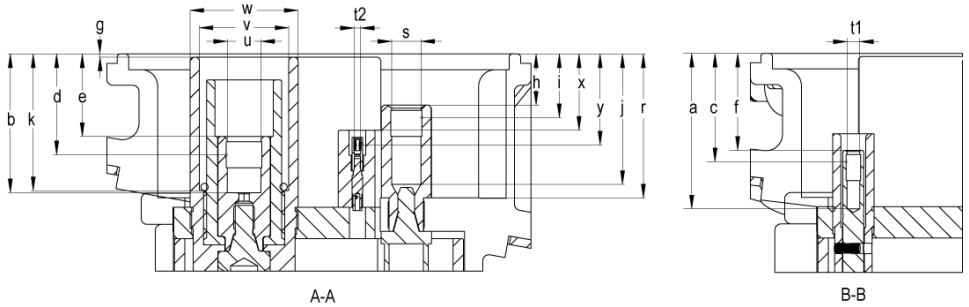
Annex J
(normative)

Standard sheets J:
12 kV 500 A three-phase accessories with seven pilot contacts

J.1 Socket-outlet

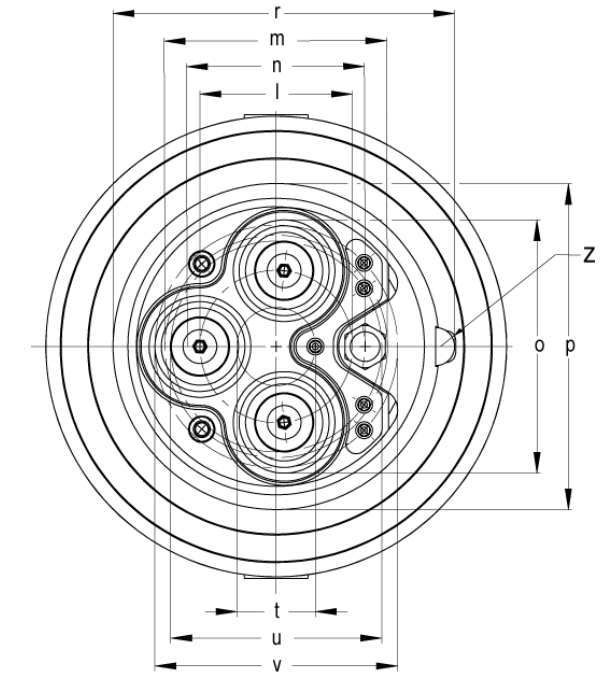


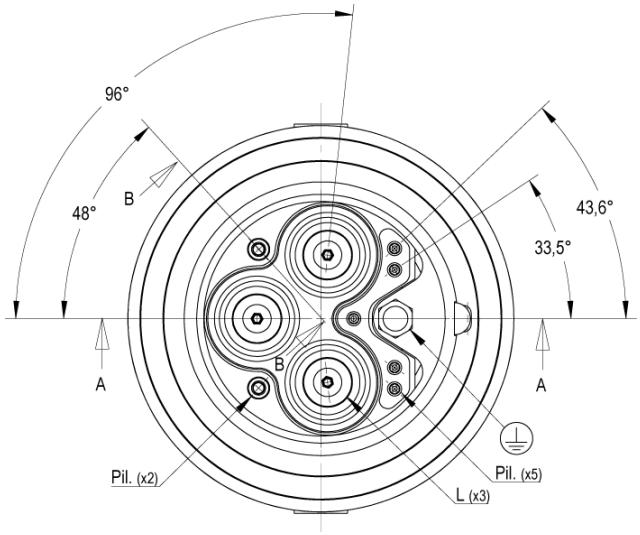
Key	Description	Dimension mm	
a	Bottom, pilot contact	74,5	+0,10 0
b	Bottom, phase contact	67,5	+0,10 0
c	Pilot contact	52,0	±0,25
d	Phase contact	48,3	±0,25
e	Top, phase contacts	39,5	±0,25
f	Top, pilot contact	46,5	±0,25
g	Top, insulator	2,0	±0,25
h	Top, earth contact	24,5	±0,25
i	Earth contact	30,5	±0,25
j	Bottom, earth contact	62,5	±0,25
k	Bottom, insulator	66,5	±0,25
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, earth contact	84,0	±0,25
n	Pitch, pilot contacts	106,0	±0,25
o	Insulator diameter	123,6	±0,10
p	Socket-outlet diameter + nose	167,5	±0,25
q	Socket-outlet inner diameter	155,0	±0,25
r	Tongue depth.	69,0	±0,25
s	Earth contact inner diameter	14,0	+0,10 0
t1	Pilot contact inner diameter	6,0	+0,10 0
t2	Pilot contact inner diameter	3,0	+0,10 0
u	Phase contact inner diameter	16,0	+0,10 0
v	Insulator inner diameter	43,0	±0,25
w	Insulator outer diameter	52,0	±0,25
x	Top, pilot contact	36,5	±0,25
y	Pilot contact	43,6	±0,25
z	Nose radius	10,5	±0,25
aa	Pitch, pilot contact	37,0	±0,25
bb	Pitch, pilot contacts	99,6	±0,25
cc	Pitch, pilot contacts	114,6	±0,25
L	Phase contacts		
Pil.	Pilot contact		



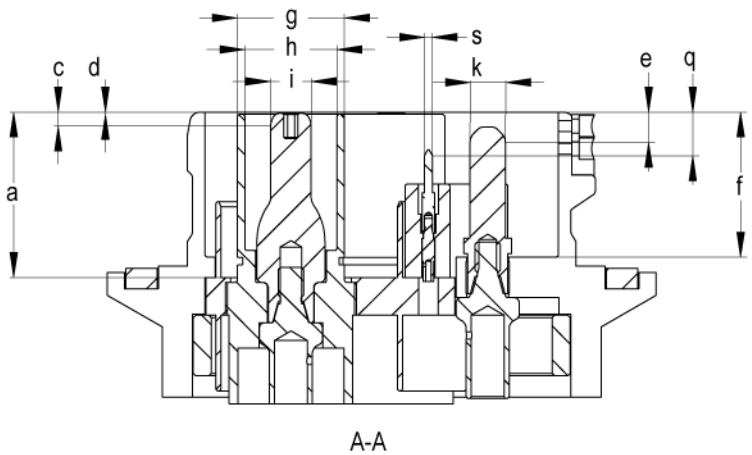
IEC

Plug top

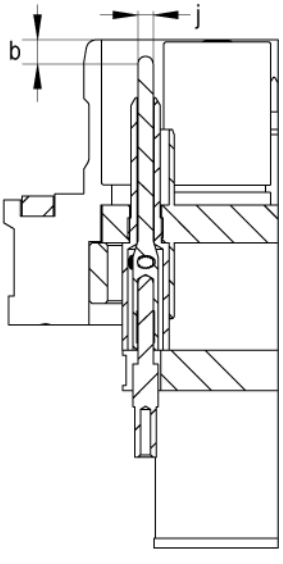




Key	Description	Dimension mm	
a	Insulator depth	65,5	0 -0,25
b	Pilot contact	9,5	0 -0,10
c	Phase contact	5,6	0 -0,10
d	Top, insulator	0,9	±0,25
e	Earth contact	11,0	0 -0,10
f	Tongue depth	57,5	±0,25
g	Insulator outer diameter	42,5	+0,10 0
h	Insulator inner diameter	36,5	±0,10
i	Diameter, phase contacts	16,0	0 -0,10
j	Diameter, pilot contacts	6,0	0 -0,10
k	Diameter, earth contact	14,0	0 -0,10
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, outer pilot contacts	106,0	±0,25
n	Pitch, earth contact	84,0	±0,25
o	Insulator diameter	119,6	±0,10
p	Plug outer diameter	154,5	±0,10
q	Pilot contact	17,3	±0,25
r	Plug outer diameter + nose	162,0	±0,25
s	Diameter, pilot contacts	3,0	0 -0,10
t	Pitch, pilot contact	37,0	±0,25
u	Pitch, pilot contacts	99,6	±0,25
v	Pitch, pilot contacts	114,6	±0,25
z	Nose radius	7,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		



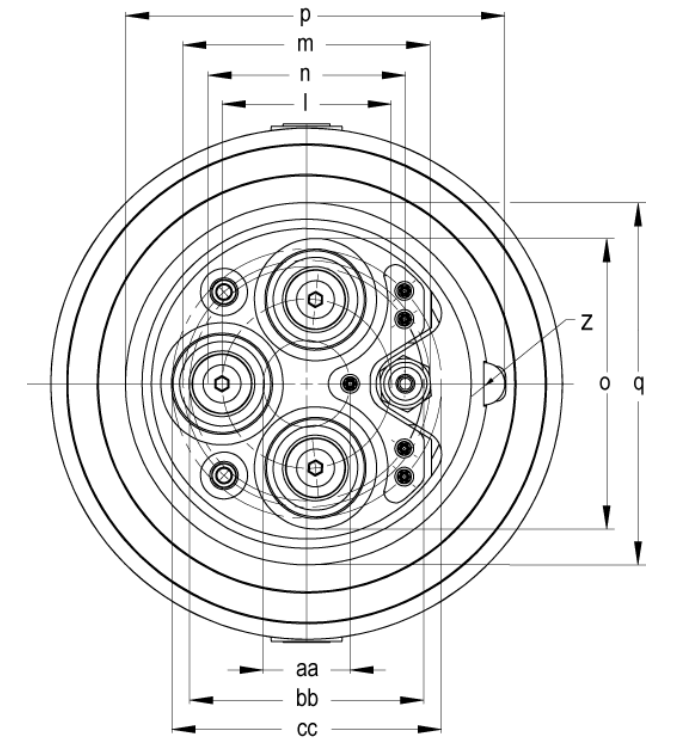
A-A

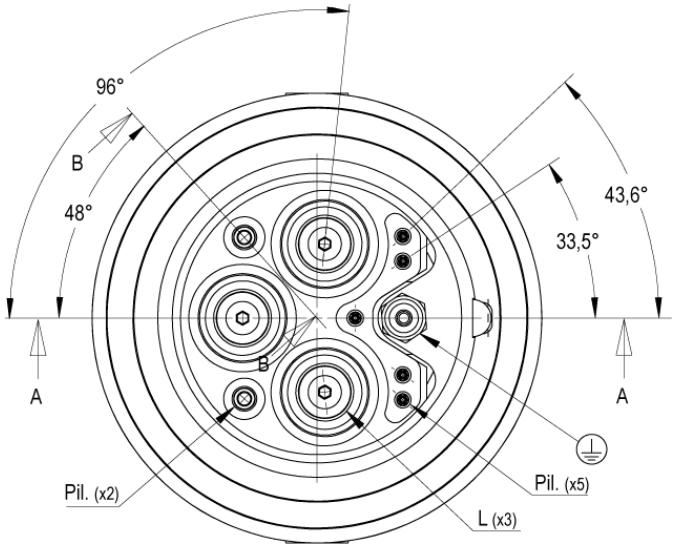


B-B

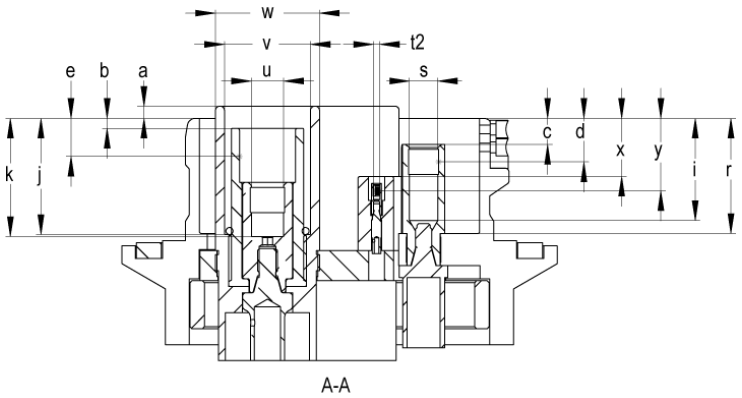
IEC

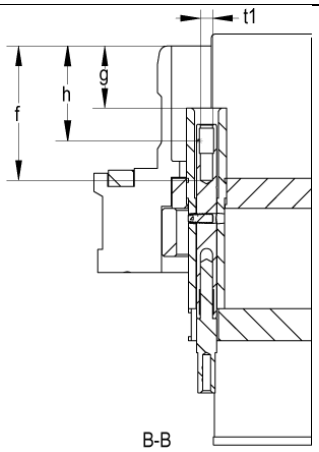
J.2 Ship connector top





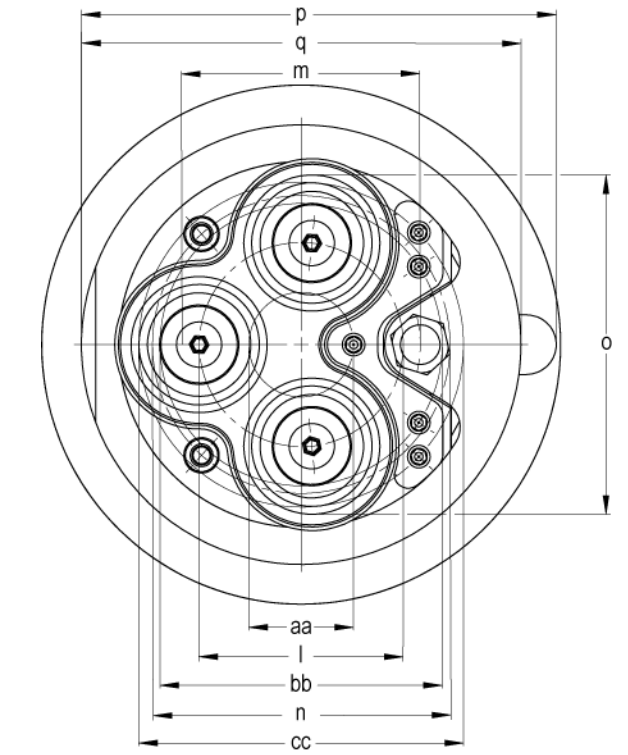
Key	Description	Dimension mm	
a	Top, insulator	6,0	±0,25
b	Top, phase contacts	5,0	±0,25
c	Top, earth contact	13,0	±0,25
d	Earth contact	21,8	±0,25
e	Phase contact	19,0	±0,25
f	Bottom, pilot contacts	67,0	±0,25
g	Top, pilot contact	31,0	±0,25
h	Pilot contact	47,0	±0,25
i	Bottom, earth contact	51,0	±0,25
j	Bottom, insulator	58,0	±0,25
k	Bottom, phase contact	59,0	±0,25
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, pilot contacts	106,0	±0,25
n	Pitch, earth contact	84,0	±0,25
o	Insulator width	123,6	±0,10
p	Connector inner diameter+ nose	161,2	±0,25
q	Connector inner diameter	154,0	±0,25
r	Tongue depth	57,7	±0,25
s	Inner diameter, earth contact	14,0	+0,10 0
t1	Inner diameter, pilot contact	6,0	+0,10 0
t2	Diameter, add. pilot contact	3,0	+0,10 0
u	Phase inner diameter	16,0	+0,10 0
v	Inner diameter, insulator	43,0	±0,25
w	Outer diameter, insulator	52,0	±0,25
x	Top, pilot contact	29,0	±0,25
y	Pilot contact	36,1	±0,25
z	Nose radius	7,5	±0,25
aa	Pitch, pilot contact	37,0	±0,25
bb	Pitch, pilot contacts	99,6	±0,25
cc	Pitch, pilot contacts	114,6	±0,25
L	Phase contacts		
Pil.	Pilot contacts		

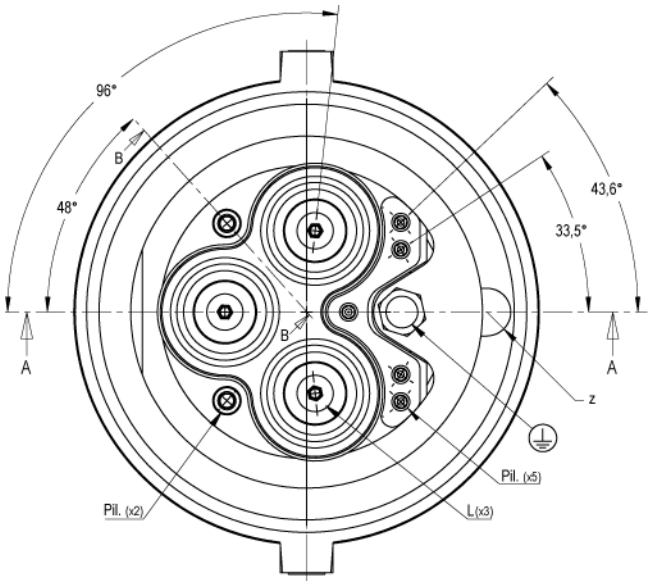


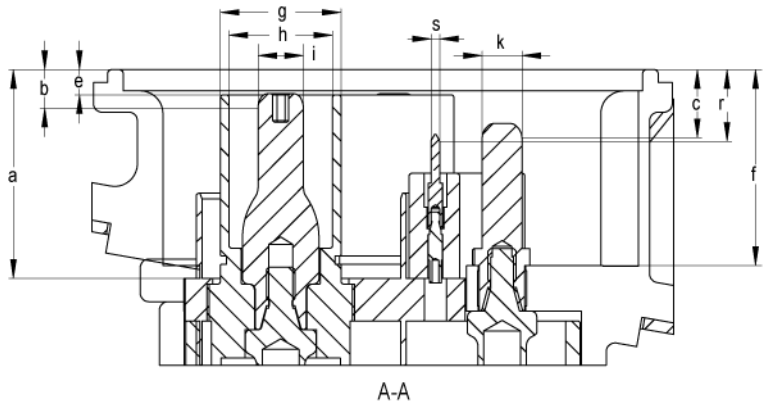


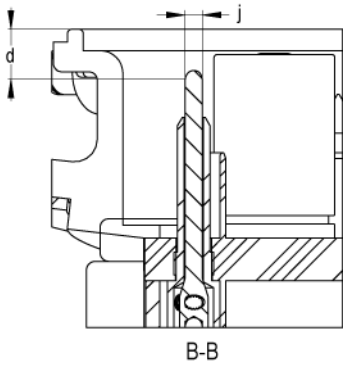
IEC

J.3 Ship inlet









Key	Description	Dimension mm	
a	Insulator depth	73,5	±0,25
b	Top, phase contact	13,6	±0,25
c	Top, earth contact	24,0	±0,25
d	Top, pilot contact	17,5	±0,25
e	Top, insulator	8,9	±0,25
f	Tongue depth	69,0	±0,25
g	Insulator outer diameter	42,5	±0,25
h	Insulator inner diameter	36,5	±0,25
i	Diameter, phase contact	16,0	0 -0,10
j	Diameter, pilot contact	6,0	0 -0,10
k	Diameter, earth contact	14,0	0 -0,10
l	Pitch, phase contacts	71,6	±0,25
m	Pitch, earth contact	84,0	±0,25
n	Pitch, pilot contacts	106,0	±0,25
o	Insulator diameter	119,6	±0,10
p	Inlet inner diameter + nose	167,5	±0,25
q	Inlet inner diameter	155,0	±0,25
r	Additional pilot contact	25,3	±0,25
s	Diameter, add. pilot contact	3,0	0 -0,10
aa	Pitch, pilot contact	37,0	±0,25
bb	Pitch, pilot contacts	99,6	±0,25
cc	Pitch, pilot contacts	114,6	±0,25
z	Nose radius	10,5	±0,25
L	Phase contacts		
Pil.	Pilot contacts		

IEC

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