



One solution for all applications!



AK - The distribution board |
With Innovative Air®-Technology

1983

1998



AK I



AK II

Dear Spelsberg customers and partners,

Innovation has a long tradition at Spelsberg. Especially with regard to safety, we are constantly setting new standards. In the past, new products like fireproof WKE junction boxes with functional integrity or halogen-free junctions boxes from the red range helped Spelsberg go new ways as a driver of innovation and developed installation technology further.

With the new generation of AK distribution boards, we celebrate the continued development of the best-selling surface-mounted distribution boards and the premier of a new, fully integrated serial ventilation system: The innovative Air®-Technology.

The objective from the start was to develop a distribution board that you can always be sure of, no matter whether it is installed indoors or outdoors. We are delighted to present the new AK to you for the first time in this brochure.

Your Spelsberg Management Team

2015



AK III

AK - The distribution board

This VDE-certified and ammonia-resistant distribution board is composed of extremely resistant polycarbonate. The focus test of the German Agricultural Association (DLG) confirms resistance to stable air for at least 20 years. This expands the application fields ranging from indoor and outdoor installations to industrial and agricultural buildings. When it comes to installation, nothing is left to be desired, be it thanks to the 3-point keyhole fastening, the optional fastening outside of the sealed enclosure, or direct installation with external fastening lugs. Let the new AK inspire you and discover more exciting details at www.spelsberg.com





Interior and outdoor installation



It can be so simple! One material – one distribution board!
Featuring Integrated Air[®] ventilation elements!

AK - The distribution board!

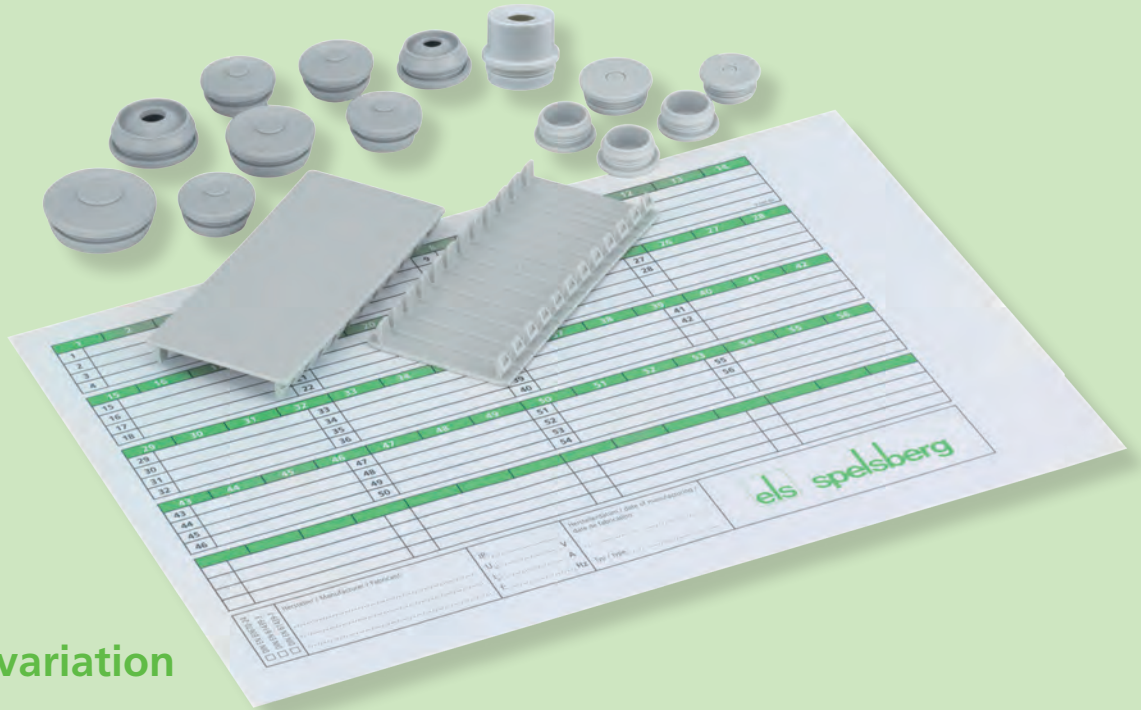
- One distribution board for every application
- Featuring Integrated Air[®] ventilation elements for prevention of condensate water
- Suitable for interior spaces and outdoor installation
- 14 modules per row
- 1- to 5-rows
- VDE-certified
- DLG-certified



1 = acc. DIN EN 60670-24
2 = acc. DIN EN 61439-2

AK | One distributor for every application!

Accessory set contents	AST M40	DMS M16	DMS M20	DMS M25	DMS M32	VST M16	VST M20	AK-AS 6TE
AK 14 / AK-F 14	1	1	5	2	1	4	1	2
AK 28 / AK-F 28 AK-Plus 14 / AK-F-Plus 14	1	1	5	2	1	4	1	2
AK 42 / AK-F 42 AK-Plus 28 / AK-F-Plus 28	2	2	10	4	2	8	2	4
AK 56 / AK-F 56 AK-Plus 42 / AK-F-Plus 42	2	2	10	4	2	8	2	4
AK 70	2	2	10	4	2	8	2	4



AK-F = flange variation

Easy installation - extensive accessories included!

The AK distribution board is delivered including:

- Assembly instructions with labelling strip on the rear side
- Accessory set consisting of double membrane seals (DMS), blanking plug (VST), combi connectors (AST) and masking off strips (AK-AS)
- One end face already equipped with 10 pieces DMS M20
- The quantities of accessories vary with the size of the AK distribution board



Integrated Air® ventilation elements



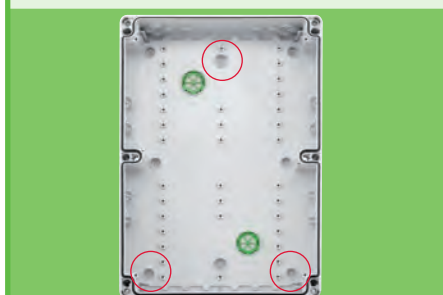
Prevention of condensate water in preservation of protection class IP65

Metric knock-outs



A number of knock-outs enable **variable cable entries**

Three-point installation



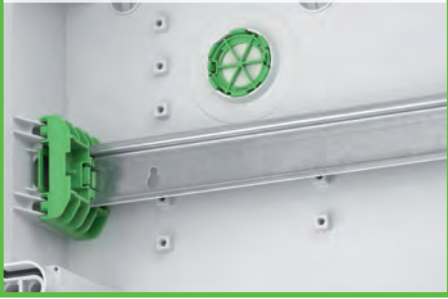
Easy installation via keyhole mounting

Cable cover mounting



Follow-up installation of optional cable cover possible

Height-adjustable mounting rail



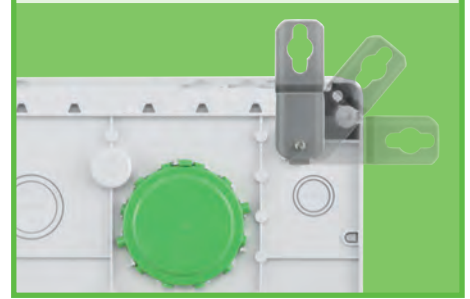
For serial installation devices sizes 1 to 3 and special designs

Labelling for installation dimensions



Engraved dimensions simplify installation

Optional exterior installation



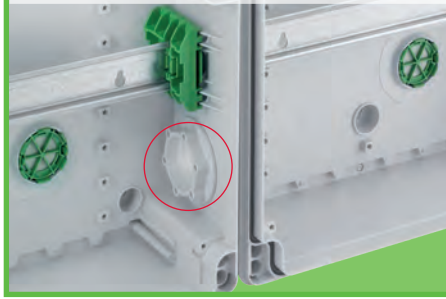
Installation via **external fixing lugs**

150 mm rail spacing



Offers plenty of space for wiring

Combinable



Easily lateral combination via optional **M50 combination connectors**

Lateral knock-outs M40/M50



Option for Schuko sockets

Optimised hinged window



With ergonomically shaped grips for simple opening and replacement of door end stop

New installation option



Installation outside of sealing area suitable for systems featuring a maximum measured insulation voltage of 1,000V AC / 1,500V DC

Lid able to be lead-sealed



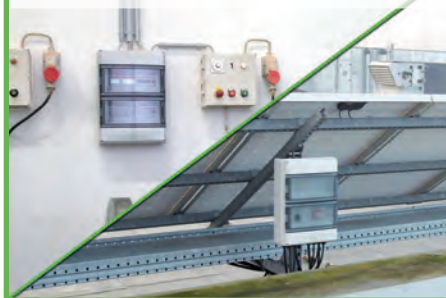
Protects against unauthorised access

DLG focus test: Ammonia resistance



Resistance against stable air for minimum 20 years

Indoor and outdoor installation



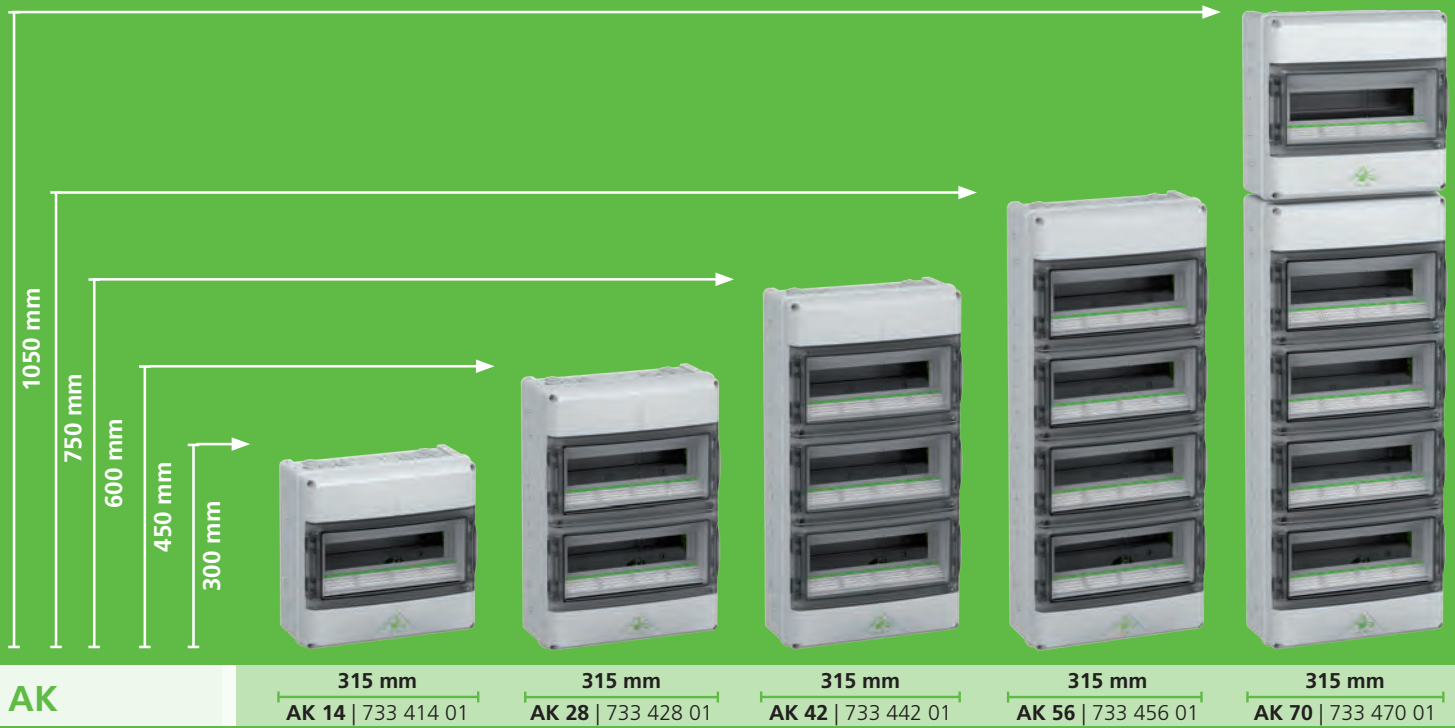
One distribution board for every application

Free of halogen, PVC and silicone



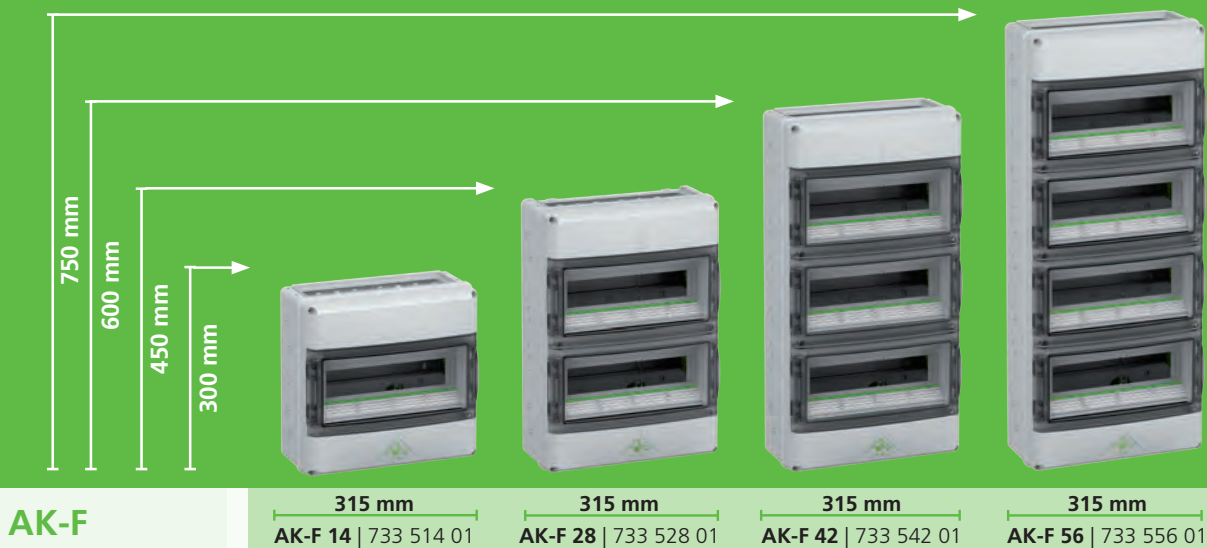
Highly flame-retardant

Delivery starting 01.04.2015



AK

Delivery starting 01.04.2015



AK-F

All types

- Featuring Integrated Air® ventilation elements
- Lateral combination
- VDE-certified
- DLG-certified

AK

- distribution board
- 1- to 5-rows
- 14 to 70 modules
- Face closed with metric knock-outs
- With screwless PE/N terminal

AK-F = (flange variation)

- Flexible distribution board ideal for customer-specific applications
- 1- to 4-rows
- 14 to 56 modules
- Face open
- Face combinable
- Various flanges for individual fitting (accessory)
- With screwless PE/N terminal
- Flange for special solutions upon request





AK Plus

315 mm 315 mm 315 mm
 AK 14 Plus | 733 614 01 AK 28 Plus | 733 628 01 AK 42 Plus | 733 642 01



AK-F Plus

315 mm 315 mm 315 mm
 AK-F 14 Plus | 733 714 01 AK-F 28 Plus | 733 728 01 AK-F 42 Plus | 733 742 01

AK-Plus

- Additional connection space with 35 mm mounting rail
- May either be used above or below the series installation device (rotating lid)
- 1- to 3-rows
- 14 to 42 modules
- Face closed with metric knock-outs

AK-F Plus (flange variation)

- Flexible distribution board ideal for customer-specific applications
- Additional connection space with 35 mm mounting rail
- May be used above or below the series installation devices (rotating lid)
- 1- to 3-rows
- 14 to 42 modules
- Face open
- Face combinable
- Diverse flange for individual fitting (accessories)

■ Flange for special solutions upon request





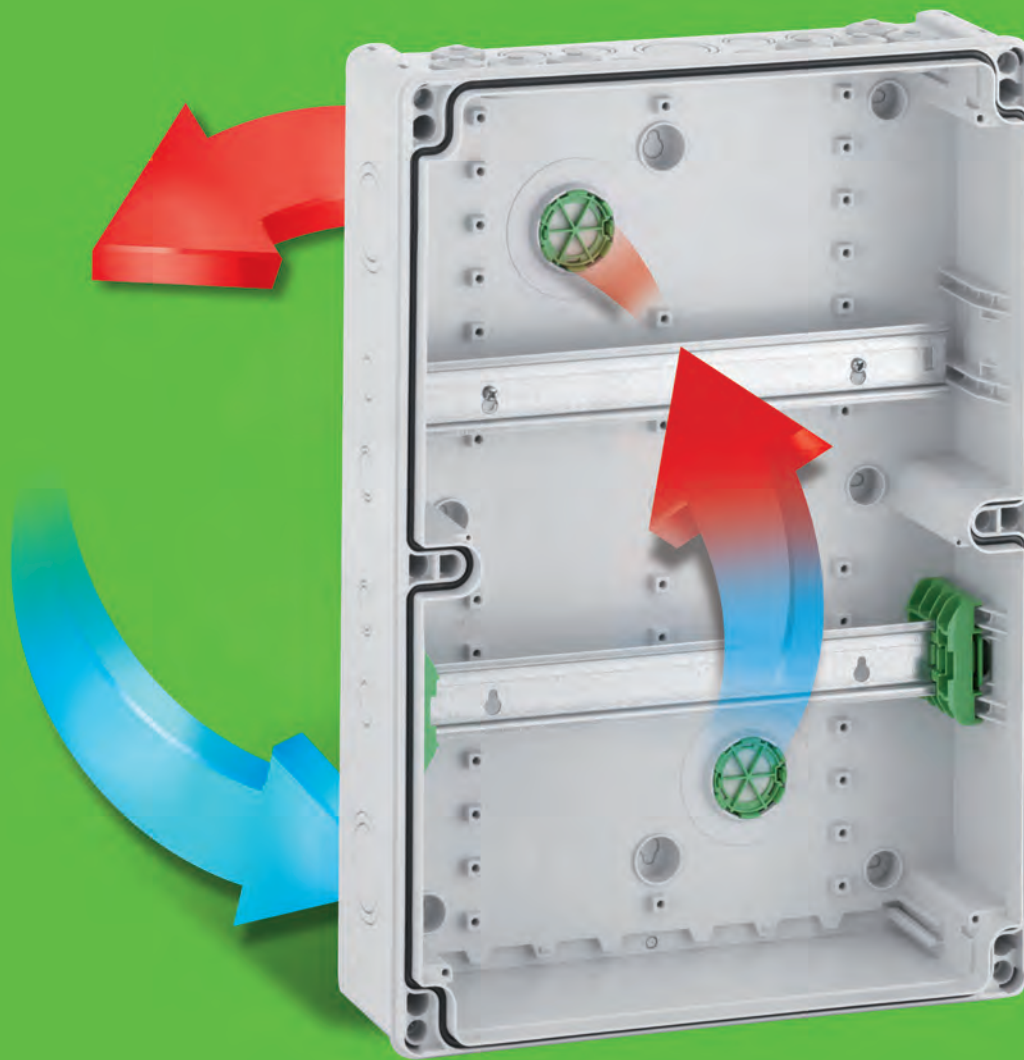
The Air® ventilation elements

The Air® ventilation elements avoid Condensate water under preservation of high protection class IP65. Occurring condensate is transported out of the enclosure immediately via air exchanger.

The continuous and high air exchange allows the interior air to mix constantly with the environmental air and transports the moisture outward.

Even environments with nearly constant humidity and temperature possess air exchange, since the air on the interior of the enclosure warms due to the fittings. The individual components of the ventilation elements mainly consist of the rotating cover (rear side of box) and the filter element integrated on the inside of the box.





**Advantages of
Air® ventilation elements**

- Prevention of condensate water in preservation of high protection class IP65
- High air exchange rate
- 100% pressure compensation
- 100% foreign object protection
- Maintenance-free

Additional information, such as data sheets, the AK trailer, and the AK product manual, is available at:

www.spelsberg.com/AK



AK 14

315 x 300 x 155 mm



Entries
top/bottom end:
1 x M 32/40
4 x M20/25
15 x M20
2 x M16
Entries on each
side:
2x M40/50
1x M20
Rear entries:
2x M32/40
4x M20/25

315 x 450 x 155 mm



Entries
top/bottom end:
1 x M32/40
4 x M20/25
15 x M20
2 x M16
Entries on each
side:
2 x M40/50
2 x M20/25
2 x M20
Rear entries:
2 x M32/40
6 x M20/25

Description

Order no.

Distribution board - Industrial Quality, 1-row, 14 modules, integrated ventilation elements to reduce formation of condensate water, elastic entries on top, masking and labelling strips, additional double-membrane seals and other accessories



AK 14
screwless PE/N terminal rails each with 3 screwable clamping points, 2.5 - 16 mm², 14 screwable clamping points, 1.5 - 4 mm²

733 414 01

AK 14 Plus
with additional connection space, with 35 mm mounting rails, without PE/N terminal rails

733 614 01



AK 28

315 x 450 x 155 mm



Entries
top/bottom end:
1 x M32/40
4 x M20/25
15 x M20
2 x M16
Entries on each
side:
2 x M40/50
2 x M20/25
2 x M20
Rear entries:
2 x M32/40
6 x M20/25

Distribution board - Industrial Quality, 2-row, 28 modules, 150 mm rail clearance, integrated ventilation elements to reduce formation of condensate water, elastic entries on top, masking and labelling strip, additional double membrane seals, and other accessories



AK 28
screwless PE/N terminal, each featuring 6 screwable clamping points 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 - 4 mm²

733 428 01

AK 28 Plus
with additional connection space, with 35 mm mounting rails, without PE/N terminal rails

733 628 01



315 x 600 x 155 mm



Entries
top/bottom end:
1 x M32/40
4 x M20/25
15 x M20
2 x M16
Entries on each
side:
2 x M40/50
4 x M20/25
3 x M20
Rear entries:
2 x M32/40
8 x M20/25

AK 42

315 x 600 x 155 mm



Entries
top/bottom end:
1 x M32/40
4 x M20/25
15 x M20
2 x M16
Entries on each
side:
2 x M40/50
4 x M20/25
3 x M20
Rear entries:
2 x M32/40
8 x M20/25

Description

Order no.

Distribution board - Industrial Quality, 3-row, 42 modules, 150 mm rail clearance, integrated ventilation elements to reduce formation of condensate water, elastic entries on top, masking and labelling strips, additional double-membrane seals and other accessories

IP65



IK08



400V
AC



AK 42

733 442 01

screwless PE/N terminal, each with 6 screwable clamping points, 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 - 4 mm²

AK 42 Plus

315 x 750 x 155 mm



Entries
top/bottom end:
1 x M32/40
4 x M20/25
15 x M20
2 x M16
Entries on each
side:
2 x M40/50
6 x M20/25/
4 x M20
Rear entries:
2 x M32/40
10 x M20/25

AK 42 Plus

733 642 01

with additional connection space, with 35 mm mounting rails, without PE/N terminal rails



AK 56

315 x 750 x 155 mm



Entries
top/bottom end:
1 x M32/40
4 x M20/25
15 x M20
2 x M16
Entries on each
side:
2 x M40/50
6 x M20/25
4 x M20
Rear entries:
2 x M32/40
10 x M20/25

Description

Order no.

Distribution board - Industrial Quality, 4-row, 56 modules, 150 mm rail clearance, integrated ventilation elements to reduce formation of condensate water, elastic entries on top, masking and labelling strips, additional double membrane seals and other accessories



AK 56
with screwless PE/N terminal featuring
6 screwable clamping points, 2.5 - 16 mm²,
21 / 2 x 14 screwless clamping points 1.5 - 4 mm²

733 456 01



AK 70

315 x 1,050 x 155 mm



Entries
top:
1 x M32/40
4 x M20/25
15 x M20
2 x M16
Entries
bottom:
Flange
1 x M40/50
2 x M32/40
2 x M20
Entries on each
side:
4 x M40/50
6 x M20/25
5 x M20
Rear entries:
4 x M32/40
14 x M20/25

Distribution board - Industrial Quality, consisting of 2 distribution boards, 70 modules, 150 mm rail clearance, integrated ventilation elements to reduce formation of condensate water, elastic entries on top, masking and labelling strips, additional double-membrane seals and other accessories



AK 70
with screwless PE/N terminal featuring
6 screwable clamping points, 2.5 - 16 mm²,
21 / 2 x 14 screwless clamping points 1.5 mm-4 mm²

733 470 01



AK-F 14

315 x 300 x 155 mm



Face open,
Number of entries
depending on
flange type
Entries on each
side:
2 x M40/50
1 x M20
Rear entries:
2 x M32/40
4 x M20/25

315 x 450 x 155 mm



Face open,
Number of
entries depending
on flange type
Entries on each
side:
2 x M40/50
2 x M20/25
2 x M20
Rear entries:
2 x M32/40
6 x M20/25

Description

Order no.

Distribution board - Industrial Quality, flange type, with open face surfaces, for use with various flanges, for combination of multiple AK-F distribution boards using combination flange, 1-row, 14 modules, integrated ventilation elements to reduce formation of condensate water, masking and labelling strips, additional double membrane seals, and other accessories
Flange and flange set must be purchased separately

IP65



IK08



400V
AC



AK-F 14

with screwless PE/N terminal, each featuring 3 screwable clamping points 2.5 - 16 mm², 14 screwless clamping points, 1.5 - 4 mm²

733 514 01

AK-F 14 Plus

with additional connection space, with 35 mm mounting rails, without PE/N terminal rails

733 714 01

Required accessories:

Extension flange and combination flange, see page 19

AK-F 28

315 x 450 x 155 mm



Face open,
Number of entries
depending on
flange type
Entries on each
side:
2 x M40/50
2 x M20/25
2 x M20
Rear entries:
2 x M32/40
6 x M20/25

315 x 600 x 155 mm



Face open,
Number of
entries depending
on flange type
Entries on each
side:
2 x M40/50
4 x M20/25
3 x M20
Rear entries:
2 x M32/40
8 x M20/25

Distribution board - Industrial Quality, flange type, with open face surfaces, for use with diverse flanges, for combination of multiple AK-F distribution boards using a combination flange, 2-row, 28 modules, 150 mm rail clearance, integrated ventilation element to reduce formation of condensate water, masking and labelling strips, additional double membrane seals, and other accessories, flange and flange set must be purchased separately

IP65



IK08



400V
AC



AK-F 28

with screwless PE/N terminal each featuring 6 screwable clamping points 2.5 - 16 mm², 21 / 2 x 14 screwless clamping points 1.5 - 4 mm²

733 528 01

AK-F 28 Plus

with additional connection space, with 35 mm mounting rails, Without PE/N terminal rails

733 728 01

Required accessories:

Extension flange and combination flange, see page 19



AK-F 42

315 x 600 x 155 mm



Face open,
Number of entries
depending on
flange type
Entries on each
side:
2 x M40/50
4 x M20/25
3 x M20
Rear entries:
2 x M32/40
8 x M20/25

Description

Order no.

Distribution board - Industrial Quality, flange type, with open face surfaces, for use with diverse flanges, for combination of multiple AK-F distribution boards using a combination flange, 3-row, 42 modules, 150 mm rail clearance, integrated ventilation elements to reduce formation of condensate water, masking and labelling strip, additional double membrane seals, and other accessories, Flange and flange set must be purchased separately



AK-F 42
with screwless PE/N terminal featuring
6 screwable clamping points 2.5 - 16 mm²,
21 / 2 x 14 screwless clamping points 1.5 - 4 mm²

733 542 01

315 x 750 x 155 mm



Face open,
Number of entries
depending on
flange type
Entries on each
side:
2 x M40/50
6 x M20/25
4 x M20
Rear entries:
2 x M32/40
10 x M20/25

AK-F 42 Plus
with additional connection space, with 35 mm mounting rails,
without PE/N terminal rails

733 742 01

Required accessories:
Extension flange and combination flange, see page 19



AK-F 56

315 x 750 x 155 mm



Face open,
Number of entries
depending on
flange type
Entries on each
side:
2 x M40/50
6 x M20/25
4 x M20
Rear entries:
2 x M32/40
10 x M20/25

Distribution board - industrial quality, flange type, with open face surfaces, for use with various flanges, for combination of multiple AK-F distribution boards using combination flange, 4-row, 56 modules, 150 mm rail clearance, integrated ventilation elements to reduce formation of condensate water, masking and labelling strips, additional double membrane seals and other accessories, Flange and flange set must be purchased separately

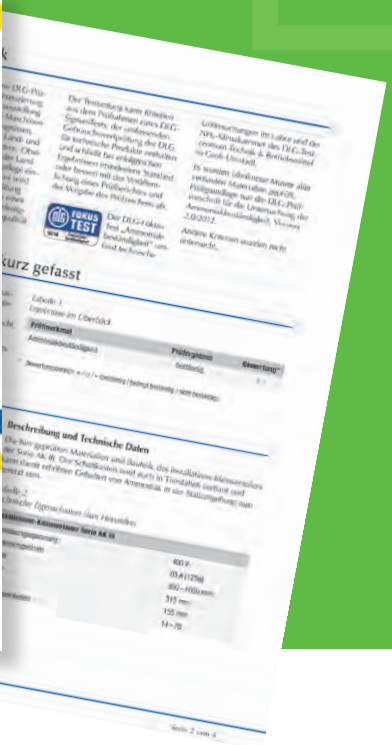
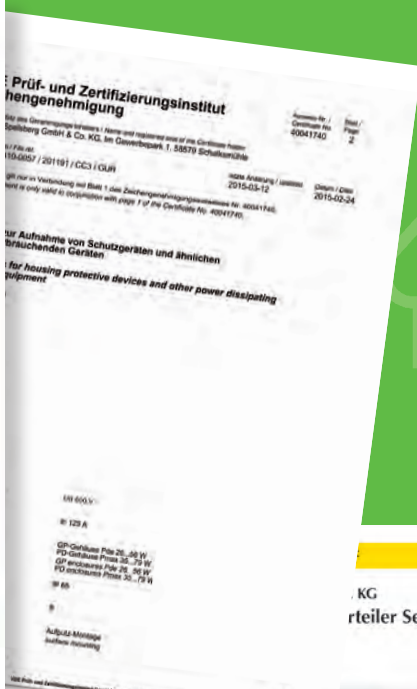


AK-F 56
with screwless PE/N terminal featuring
6 screwable clamping points 2.5 - 16 mm²,
21 / 2 x 14 screwless clamping points 1.5 - 4 mm²,

733 556 01

Required accessories:
Extension flange and combination flange, see page 19





VDE-certified

The new AK distribution board is certified as per EN 60670-24. EN 60670-24, which is valid since 2014 as VDE 0606-24, establishes special requirements for acceptance of protective devices and similar energy-consuming devices for households and similar fixed local electrical installations. With this VDE-certified AK distribution board, you remain on the safe side for installations with a measured voltage no higher than 400V and feed current of up to and including 125A.

The DLG focus test confirms resistance to stable air. The ammonia resistance of the new AKs was examined as a laboratory test in accordance with the DLG test standard for agricultural use in the form of atmospheric testing. The DLG laboratory test for NH3 resistance shows that the test samples of all materials of the AK III have withstood the influence of stable air for a duration of at least 20 years of use.

Double membrane seals



Description

Order no.

IP66

Double membrane seals made of elastic plastic with two sealing membranes, closed

	for wall thick./mm	sealing area/mm	
DMS M16	1.5 - 4.5	5 - 9	260 416 01
DMS M20	1.5 - 4.5	7 - 12	260 420 01
DMS M25	1.5 - 4.5	9 - 16	260 425 01
DMS M32	1.5 - 4.5	14 - 21	260 432 01

Cable glands



IP68

Cable gland with strain relief, polyamide, M_ x 1.5 mm, with lock nut

	Thread length/ mm	sealing area/mm	
KVR M12-MGM	8	2 - 6.5	227 412 01
KVR M16-MGM	8	4 - 10.0	227 416 01
KVR M20-MGM	9	6 - 12.0	227 420 01
KVR M20-GDB/MGM	9	7 - 14.0	227 421 01
KVR M25-MGM	11	9 - 16	227 425 01
KVR M32-MGM	11	11 - 21.0	227 432 01
KVR M40-MGM	11	16 - 28.0	227 440 01
KVR M50-MGM	13	21 - 34.5	227 450 01
KVR M63-MGM	17	30 - 44.5	227 463 01

AK3 KS M50



IP65

Cable gland for combination M50 for lateral connection of enclosures
AK/AK-F 14/28/42/56 and Plus types

AK3 KS M50	733 830 01
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AK3 FL

Description

Order no.

Extension flange including flange connector for sealing the face on AK-F enclosures

AK3 FL00
without knock-outs

733 820 01

AK3 FL01
with knock-outs: 1 x M50/M40, 2 x M40/32, 2 x M20

733 821 01

AK3 FL02
with knock-outs: 5 x M25/M20, 6 x M20

733 822 01

AK3 FL13
extension flange including flange connector for sealing the face of AK-F enclosures.
With insertion via double membrane seals DMS M32 and opening for flange types FL13 as per standard SEN 28 09 01

733 828 01

AK3 KFL

Combination flange incl. flange connector for connection on face of AK-F enclosures

AK3 KFL

733 829 01

Lock fittings

Lock fittings for installation in folding doors of distribution boards AK 03 to AK/AKi 70 and AK/AKi Plus 14 to 56, with 2 keys and installation manual

AK SGA-1
identical locks

706 102 01

AK SGA-2
diverse locks
max. 10 different locks possible

706 902 01

AK3 TW

Plastic separating partition suitable for interior division of enclosures AK/AK-F 14/28/42/56 and Plus types with knock-outs for line arrangement

AK3 TW

733 832 01

AK3 KBL



Description

Order no.

Cable cover for attachment to enclosures AK/AK-F 14/28/42/56 and Plus types, may be installed retroactively on face

AK3 KBL

733 831 01

AK3 NS35



Mounting rail as profile rail 35 x 7.5 mm

AK3 NS35-14
for 14 modules, incl. profile rail mount for all
AK/AK-F 14/28/42/56 and Plus types

733 812 01

AK3 NS35-275
length 275 mm, incl. universal base fastening mounts
for all AK/AK-Fs 14/28/42/56 and Plus types and
AKi empty enclosures

733 813 01

AK3 STD



Schuko® socket outlet 16 A, IP54 for lateral installation on enclosures
AK/AK-F 14/28/42/56 and Plus types

AK3 STD

733 834 01

AK3 ABL-ES



Stainless external fixing lugs,
suitable for distribution boards AK/AK-F 14/28/42/56 and Plus types, 1 set = 4 pieces

AK3 ABL-ES

733 833 01

Screwless PE/N terminal



Description

Order no.

Screwless PE/N terminal for installation in AK/AKi distribution board for AK/AKi 14 and higher as additional clamping or for replacement needs

AK 14 PEN-SL

single-stage PE/N terminal with each 3 screwable clamping points, 2.5 mm² - 16 mm² and 14 screwless clamping points, 1.5 - 4 mm²

790 317 01

AK 28 PEN-SL

two-row PE/N terminal rails each with 6 screwable clamping points, 2.5 mm² - 16 mm² and 21 / 2 x 14 screwless clamping points, 1.5 mm² - 4 mm²

790 327 01

AK N-SL

single-stage N terminal, with 4 screwable clamping points 2.5 mm² - 16 mm² and 28 screwless clamping points 1.5 mm² - 4 mm², following removal of the cross-connection, distribution into, 2 potentials after removing the cross connector with each 3 screwable clamping points, 2.5 mm² - 16 mm² and 14 screwless, clamping points 1.5 mm² - 4 mm²

790 318 01

PE/N terminal



PE/N terminal for installation in AK/AKi distribution boards for additional clamping or for replacement needs

	Number of poles	Clamping range	
AK 14/28 PEN-S	2 x 17-pin	1 x 25/4 x 16/12 x 6 mm ²	790 217 01
AK 42 PEN-S	2 x 25-pin	1 x 25/6 x 16/18 x 6 mm ²	790 225 01

Masking off strips



Masking off strips for sealing unused machine spaces, isolating, grey

AK AS

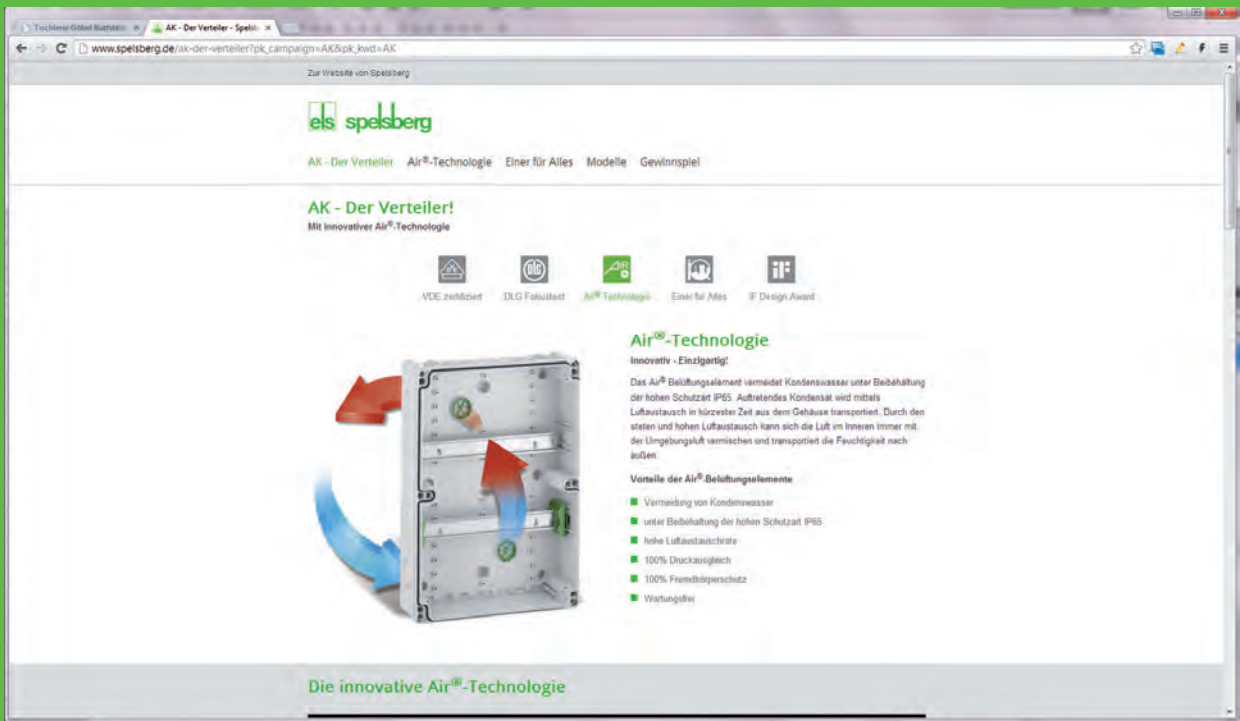
width 108 mm for 6 modules

799 012 01

AK AS-v

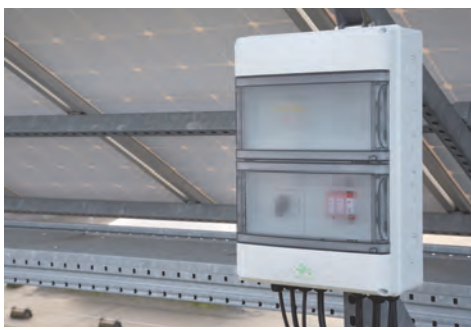
width 216 mm for 12 modules, locking

799 013 01



More information such as data sheets, the AK trailer, and the AK product manual, are available at: www.spelsberg.com/ak





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