

KAM 25-32 A Lighting Busbar System KAP 40-63 A Plug-in Busbar Distribution System

EAE GROUP IN NUMBERS





Since 1973

EAE Group of Companies started its journey in the electrical sector in 1973 with the establishment of EAE Elektrik. Since its founding, EAE has grown rapidly, expanding its production and areas of operation by incorporating EAE Lighting in 1983, EAE Machinery in 1996, EAE Electrotechnics in 2004, and EAE Technology in 2009.

EAE carries out its production activities in accordance with ISO 9001 Quality Management, ISO 14001 Environmental Management, ISO 14064-1 Greenhouse Gas Management System, ISO 45001 Occupational Health and Safety Management, ISO 10002 Customer Satisfaction Management, ISO 50001 Energy Management System, and ISO 27001 Information Security Management System standards.







Active Factories



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General Description





Fast, Easy and Safe Installation

Mechanics and electrics are provided with a single action by driving the silver-plated spring contacts towards each other. It is enough to screw a single bolt to fix the locking.

Safety

The grounding conductors of the tap off plugs and tap off boxes first contact the busbar housing for safety and are disconnected last when being removed.

Full Insulation

Busbar conductors are coated with full length noncombustible insulation material. Even if the housing is damaged by heavy impact from the outside, full assurance is provided in terms of human safety.

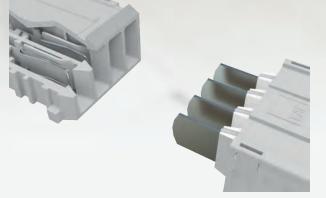
5 Conductor Options

In addition to the phase and neutral conductors designed with a full section, a ground conductor option is also offered if needed.

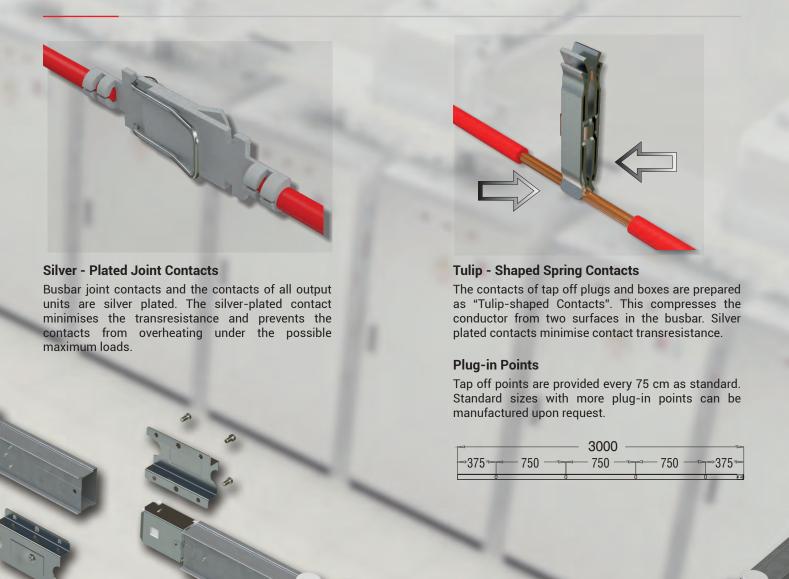
Tin Plated Conductors

Electrolytic copper conductors are plated with full length tin to prevent CopperOxide formation. The contact resistances have been minimised with this feature.









Coloured Covers Showing the Phase

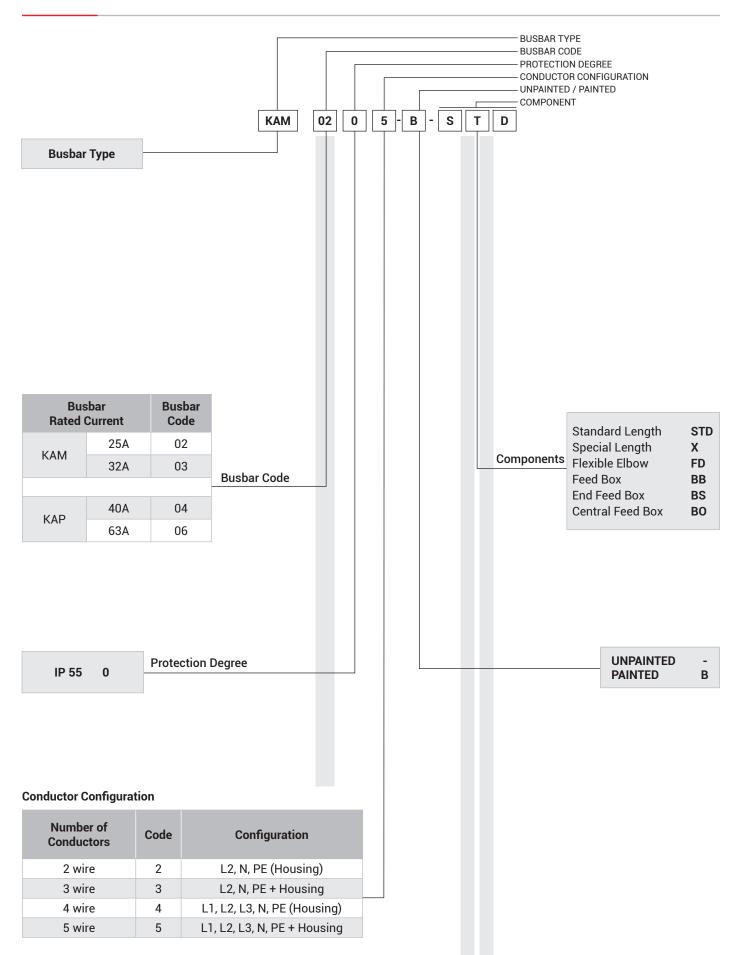
The covers of E-Line KAM/KAP tap off plugs have been designed with different colours so that you can easily see which phase the armature is fed with.

High-Technology Product

EAE KAM- KAP Busbar systems are manufactured in accordance with ISO 9000 Standards and with certified quality assurance by using the latest manufacturing technologies in the world. The products are designed and certified in accordance with IEC 61439-1/6.

Order Code System





Technical Characteristics



Rated Current	In	A	25	32	40	63
Busbar Code			KAM 02	KAM 03	KAP 04	KAP 06
Main Standards	IEC 61439-1	/6, TS EN 6	1439-1/6			
Rated Isolation Voltage	Ui	٧	500	500	690	690
Rated Frequency	f	Hz	50	50	50	50
Protection Degree	IP55					
Rated Short-time Withstand Current (0,1s)	lcw	kA _(rms)	2,27	2,72	3,4	4
Rated Peak Withstand Current	lpk	kA	5	6	7,5	9
MEAN PHASE CONDUCTOR CHARACTERISTICS AT RATED CURRENT In						
Resistance at a conductor temperature of 20 °C	R ₂₀	mW/m	5,598	4,509	2,963	1,557
Resistance at an ambient air temperature of 35 °C	R	mW/m	6,612	5,444	3,518	1,914
Reactance (Independent from Temperature)	Х	mW/m	0,488	0,377	0,229	0,155
Positive and negative sequence impedances at an ambient air temperature of 35 °C	Z	mW/m	6,630	5,458	3,525	1,920
Positive and negative sequence impedances at a conductor temperature of 20 °C	Z ₂₀	mW/m	5,619	4,524	2,972	1,565
Rated Power Loss at 35 °C	20	W/m	12,7	16,5	18,2	22,1
DC Resistance at a conductor temperature of 20 °C for Phases	R/ort _{Ph}	mW/m	5,534	4,333	2,871	1,462
DC Resistance at a conductor temperature of 20 °C for Neutral	R _N	mW/m	5,466	4,368	2,876	1,457
DC Resistance at a conductor temperature of 20 °C for PE	R _{PE}	mW/m	2,519	1,711	1,154	1,150
SECTIONS	12					
L1,L2,L3,N		mm²	3,14	3,98	6,16	12,57
PE (5 Conductors)		mm²	3,14	3,98	6,16	12,57
PE (Sheet Metal)		mm²	96	96	96	96
PE (Cu Equivalent)		mm²	9	9	9	9
Busbar Weight (4 Conductors)		kg/m	1,13	1,17	1,33	1,42
Busbar Weight (5 Conductors)		kg/m	1,17	1,19	1,41	1,48
MEAN FAULT-LOOP CHARACTERISTICS						
Zero-sequence Impedance						
Zero-sequence impedance at a conductor temperature of 20 °C	Z(0)b20phN	mW/m	22,53	18,40	12,13	6,06
Zero-sequence impedance at a conductor temperature of 20 °C (Housing)	Z(0)b20phPE	mW/m	12,30	10,32	7,09	5,62
Zero-sequence impedance at an ambient temperature of 35 °C	Z(0)bphN	mW/m	26,58	22,22	14,40	7,43
Zero-sequence impedance at an ambient temperature of 35 °C (Housing)	Z(0)bphPE	mW/m	14,50	12,44	8,39	6,87
Resistances and Reactances						
Resistance at a conductor temperature of 20 °C	Rb20phph	mW/m	10,92	8,82	5,89	2,98
Resistance at a conductor temperature of 20 °C	Rb20phN	mW/m	10,97	8,84	5,92	2,99
Resistance at a conductor temperature of 20 °C (Housing)	Rb20phPE	mW/m	7,60	6,18	4,21	2,81
Resistance at an ambient air temperature of 35 °C	Rbphph	mW/m	12,90	10,65	7,00	3,67
Resistance at an ambient air temperature of 35 °C	RbphN	mW/m	12,95	10,67	7,03	3,68
Resistance at an ambient air temperature of 35 °C (Housing)	RbphPE	mW/m	8,98	7,46	4,99	3,45
Reactance (Independent from temperature)	Xbphph	mW/m	0,61	0,11	0,25	0,21
Reactance (Independent from temperature)	XbphN	mW/m	0,63	0,37	0,10	0,24
Reactance (Independent from temperature)	XbphPE	mW/m	0,28	0,27	0,17	0,27

The maximum permitted load for the support of light fittings of the system is 15 kg. concentrated or 20 kg. distributed for a recommended support span of every 2 metres without any deformation of the housing.

Voltage Drop Calculation

Generally Voltage drop of a busbar system can be calculated with the following formula.

For single phase;

 $\Delta U = 1.2L (R.\cos \phi + X.\sin \phi).10^{-3} [V]$

For three phase ;

 $\Delta U = \sqrt{3.1.L} (R.\cos\varphi + X.\sin\varphi).10^{-3} [V]$

 ΔU = Voltage Drop V

I = Rated Current [A

L = Length of Line [m]

R = Resistance $[m\Omega m]$

 $X = Reactance \left[m\Omega m \right]$

E-LINE KAM

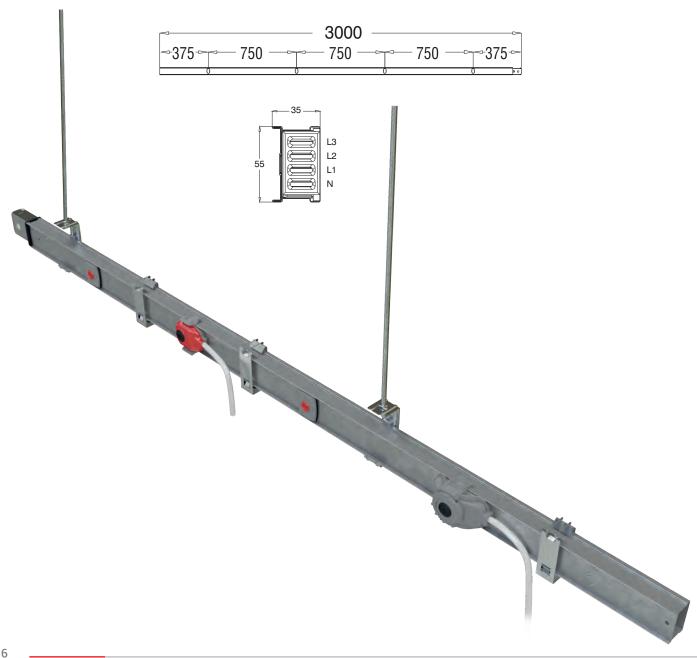
Standard Elements

Standard Busbars



Current (A)	Description	Conductors	Phase	Unpainted Order Code	Painted Order Code
	KAM 0205 Standard Busbars	5	L1, L2, L3, N, (PE+Housing)	3025050	3025051
25	KAM 0204 Standard Busbars	4	L1, L2, L3, N, (+Housing)	3025046	3025047
25	KAM 0203 Standard Busbars	3	L2, N, (PE+Housing)	3025029	3025030
	KAM 0202 Standard Busbars	2	L2, N, (+Housing)	3025027	3025028
	KAM 0305 Standard Busbars	5	L1, L2, L3, N, (PE+Housing)	3025058	3025059
22	KAM 0304 Standard Busbars	4	L1, L2, L3, N, (+Housing)	3025054	3025055
32	KAM 0303 Standard Busbars	3	L2, N, (PE+Housing)	3025033	3025034
	KAM 0302 Standard Busbars	2	L2, N, (+Housing)	3025031	3025032

^{*}Special straight length busbars are manufactured as standard as 1 m., 1,5 m. and 2 m.



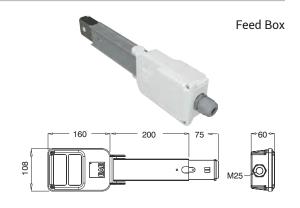
E-LINE KAM

Standard Elements

Feed Box*

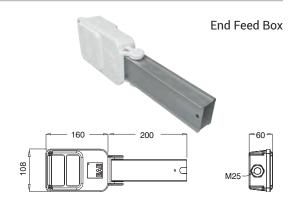


Current (A)	Description	Busbars	Unpainted Order Code	Painted Order Code
25	KAM 0205 BB Feed Box	KAM 0205 KAM 0204 KAM 0203 KAM 0202	3025062	3025063
32	KAM 0305 BB Feed Box	KAM 0305 KAM 0304 KAM 0303 KAM 0302	3025064	3025065



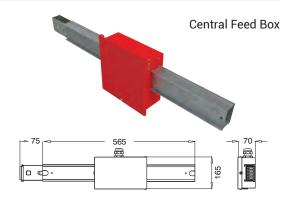
End Feed Box*

Current (A)	Description	Busbars	Unpainted Order Code	Painted Order Code
25	KAM 0205 BS End Feed Box	KAM 0205 KAM 0204 KAM 0203 KAM 0202	3025066	3025067
32	KAM 0305 BB Feed Box	KAM 0305 KAM 0304 KAM 0303 KAM 0302	3025068	3025069



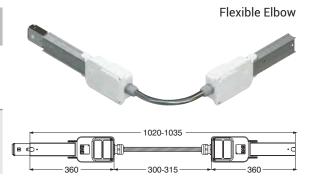
Central Feed Box*

Current (A)	Description	Busbars	Unpainted Order Code	Painted Order Code
25	KAM 0205 BO Central Feed Box	KAM 0205 KAM 0204 KAM 0203 KAM 0202	3025070	3025071
32	KAM 0305 BO Central Feed Box	KAM 0305 KAM 0304 KAM 0303 KAM 0302	3025072	3025073



Flexible Elbow

Current (A)	Description	Busbars	Unpainted Order Code	Painted Order Code
25	KAM 0205-FD Flexible Elbow	KAM 0205 KAM 0204 KAM 0203 KAM 0202	3024417	3024418
32	KAM 0305-FD Flexible Elbow	KAM 0305 KAM 0304 KAM 0303 KAM 0302	3024415	3024416



^{*} With PE Conductor and M25 Gland as standard. End Closer is supplied together with the feed unit.

E-LINE KAM

Tap Off Plugs

Tap-off Plug (B)



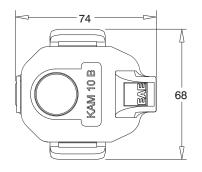
Current (A) Description	Deceription	Cable Length / Type		Phase	Dramantica	Order Code					
	Description	Halojen Free	Standard (PVC)	Filase	Phase Properties	Halojen Free	Standard (PVC)				
	KAM 10 - B Tap-off Plug L1	0,75 m. 052XZ1-F 3x1,5 mm2 Cable(*)	0,75 m. 0,75 m.	L1, N, PE	With Black Cover	3024549	3086986				
10	KAM 10 - B Tap-off Plug L1						NYMHY 3x1,5 mm2	L2, N, PE	With Yellow Cover	3024548	3086988
	KAM 10 - B Tap-off Plug L1		Cable(*)	L3, N, PE	With Blue Cover	3024547	3086990				

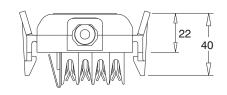
Tap-off Plug (BL)**

Current (A)	Description	Cable Length / Type	Phase	Dhasa	Properties	Order Code
Current (A)	Halojen Free	Properties	Halojen Free			
	KAM 10 - BL Tap-off Plug L1	0,75 m.	L1, N, PE	With Black Cover	3134596	
10	KAM 10 - BL Tap-off Plug L2	052XZ1-F 3x0,75 mm2	L2, N, PE	With Yellow Cover	3134597	
	KAM 10 - BL Tap-off Plug L3	Cable(*)	L3, N, PE	With Blue Cover	3134598	

- Plugs with different length cable available upon request.** It is used only for lighting fittings supply in lighting circuits.







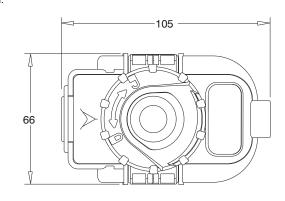
Tap Off Plugs

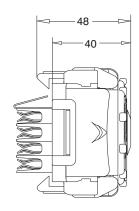
Current (A)	Description	Cable Length	Phase	Properties	Order Code
	KAM 16 - FS Tap-off Plug L1	-	L1, N, PE		3024612
16	KAM 16 - FS Tap-off Plug L2	-	L2, N, PE	With 5x20 cylindirical fuseholders. Max	3024611
16	KAM 16 - FS Tap-off Plug L3	-	L3, N, PE	diameter of feeder cable is Ø 11mm.**	3024610
	KAM 16 - FS Tap-off Plug L123	-	L1, L2, L3, N, PE	Cable 13 Ø 1 IIIIII.""	3024609
	KAM 16 - K Tap-off Plug L1	-	L1, N, PE		3024616
10	KAM 16 - K Tap-off Plug L2	-	L2, N, PE	Without Fuses. Max diameter	3024615
16	KAM 16 - K Tap-off Plug L3	-	L3, N, PE	of feeder cable is Ø 11mm.	3024614
	KAM 16 - K Tap-off Plug L123	-	L1, L2, L3, N, PE	וווווווו ש פו.	3024613

** The cylindirical fuse plug is not included.



KAM 16 FS **KAM 16 K**





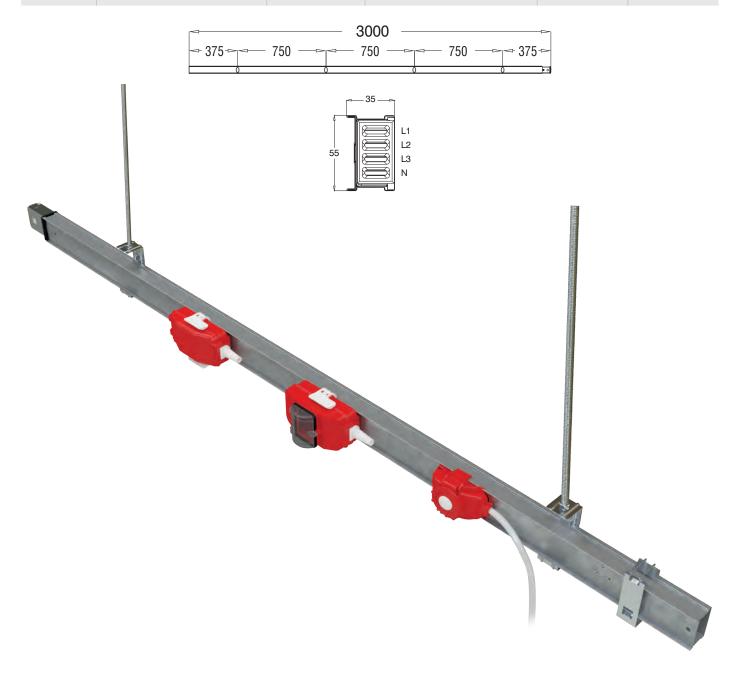
E-LINE KAP

Standard Elements

Standard Busbars



Current (A)	Description	Conductors	Phase	Unpainted Order Code	Painted Order Code
	KAP 0405 Standard Busbars	5	L1, L2, L3, N, (PE+Housing)	3025076	3025077
40	KAP 0404 Standard Busbars	4	L1, L2, L3, N, (+Housing)	3025074	3025075
40	KAP 0403 Standard Busbars	3	L2, N, (PE+Housing)	3025086	3025087
	KAP 0402 Standard Busbars	2	L2, N, (+Housing)	3025088	3025089
	KAP 0605 Standard Busbars	5	L1, L2, L3, N, (PE+Housing)	3025080	3025081
60	KAP 0604 Standard Busbars	4	L1, L2, L3, N, (+Housing)	3025078	3025079
63	KAP 0603 Standard Busbars	3	L2, N, (PE+Housing)	3025082	3025083
	KAP 0602 Standard Busbars	2	L2, N, (+Housing)	3025084	3025085



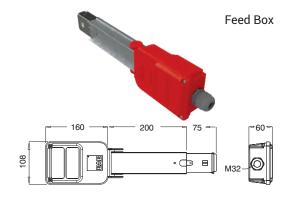
E-LINE KAP

Standard Elements

Feed Box

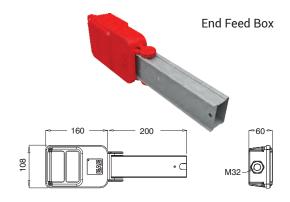


Current (A)	Description	Busbars	Unpainted Order Code	Painted Order Code
40	KAP 0405 BB Feed Box	KAP 0405 KAP 0404 KAP 0403 KAP 0402	3025098	3025099
63	KAP 0605 BB Feed Box	KAP 0605 KAP 0604 KAP 0603 KAP 0602	3025100	3025101



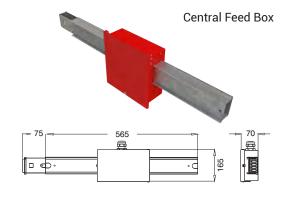
End Feed Box

Current (A)	Description	Busbars	Unpainted Order Code	Painted Order Code
40	KAP 0405 BS End Feed Box	KAP 0405 KAP 0404 KAP 0403 KAP 0402	3025102	3025103
63	KAP 0605 BS End Feed Box	KAP 0605 KAP 0604 KAP 0603 KAP 0602	3025104	3025105



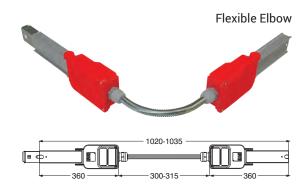
Central Feed Box

Current (A)	Description	Busbars	Unpainted Order Code	Painted Order Code
40	KAP 0405 B0 Central Feed Box	KAP 0405 KAP 0404 KAP 0403 KAP 0402	3024960	3024961
63	KAP 0605 BO Central Feed Box	KAP 0605 KAP 0604 KAP 0603 KAP 0602	3024962	3024963



Flexible Elbow

Current (A)	Description	Busbars	Unpainted Order Code	Painted Order Code
40	KAP 0405-FD Flexible Elbow	KAP 0405 KAP 0404 KAP 0403 KAP 0402	3024413	3024414
63	KAP 0605-FD Flexible Elbow	KAP 0605 KAP 0604 KAP 0603 KAP 0602	3024411	3024412



^{*} With PE Conductor and Special EAE Gland M32 as standard.

E-LINE KAP

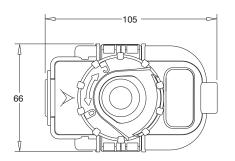
Tap Off Plugs

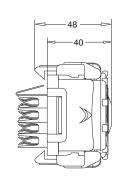
Tap Off Plugs



Current (A)	Description	Phase	Properties	Order Code
16	KAP 16 - FS Tap-off Plug L1	L1, N, PE		3024556
	KAP 16 - FS Tap-off Plug L2	L2, N, PE	5 x 20 Fuse holders. Max diameter of feeder	3024555
	KAP 16 - FS Tap-off Plug L3	L3, N, PE	cable is Ø 11 mm.	3024554
	KAP 16 - FS Tap-off Plug L123	L1, L2, L3, N, PE		3024557
16	KAP 16 - K Tap-off Plug L1	L1, N, PE		3024552
	KAP 16 - K Tap-off Plug L2	L2, N, PE	Without Fuses Max diameter of feeder	3024551
	KAP 16 - K Tap-off Plug L3	L3, N, PE	cable is Ø 11 mm.	3024550
	KAP 16 - K Tap-off Plug L123	L1, L2, L3, N, PE		3024553



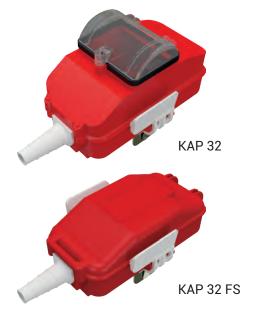


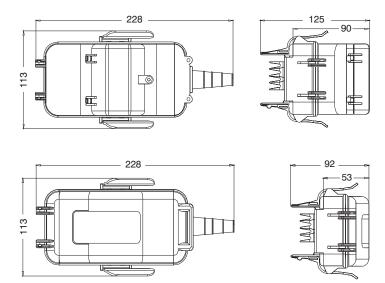


Tap Off Plugs

Current (A)	Description	Phase	Properties	Order Code
32	KAP 32 - Empty Tap Off Box*	L1, L2, L3, N, PE	10 x 38 Fuse cylindirical holders Max diameter of feeder	3025109
	KAP 32 - Tap Off Box 10x38 fuse holders**	L1, L2, L3, N, PE	cable is Ø 20 mm.**	3025108

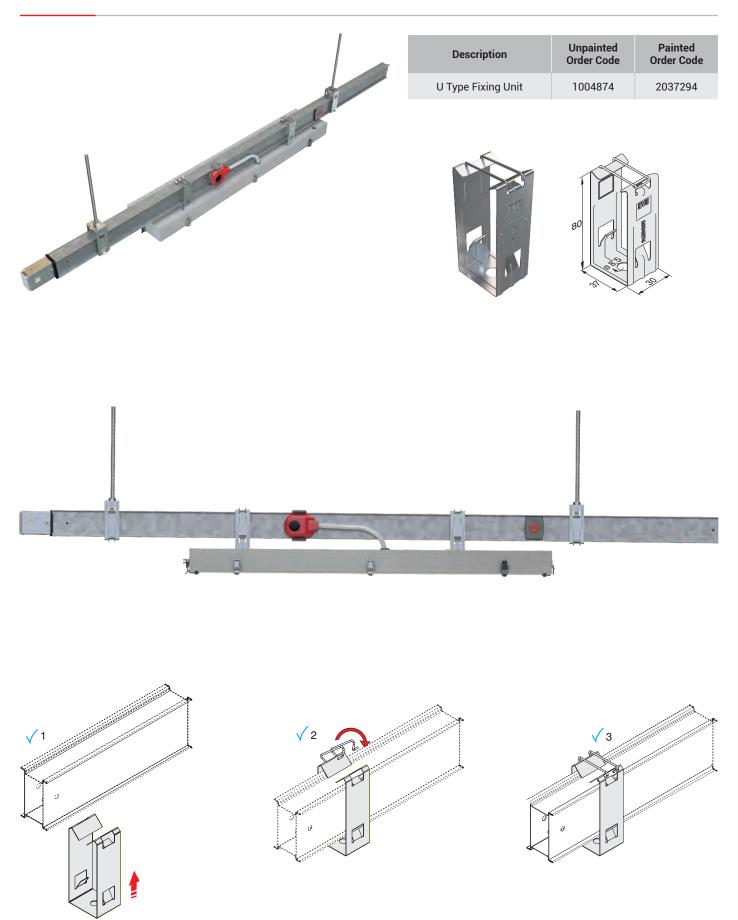
- \star Tap off box can be fitted with MCB's of different ratings and brands.
- ** The cylindirical fuse plug is not included.





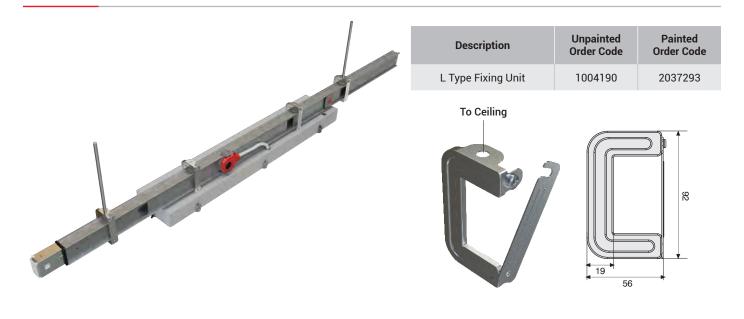
Hanger accessories for Busbar and Lighting Luminaries

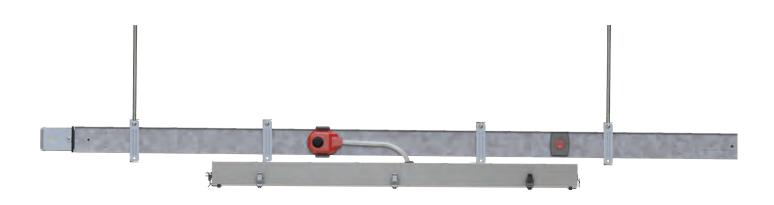


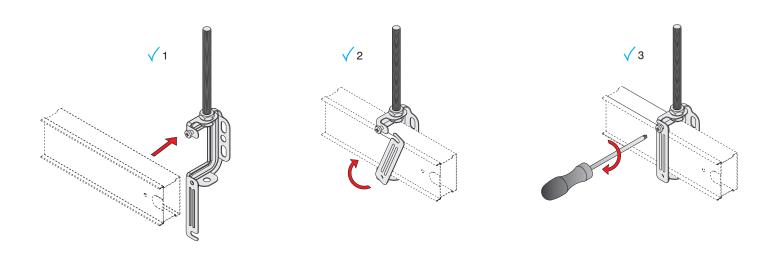


Hanger accessories for Busbar and Lighting Luminaries



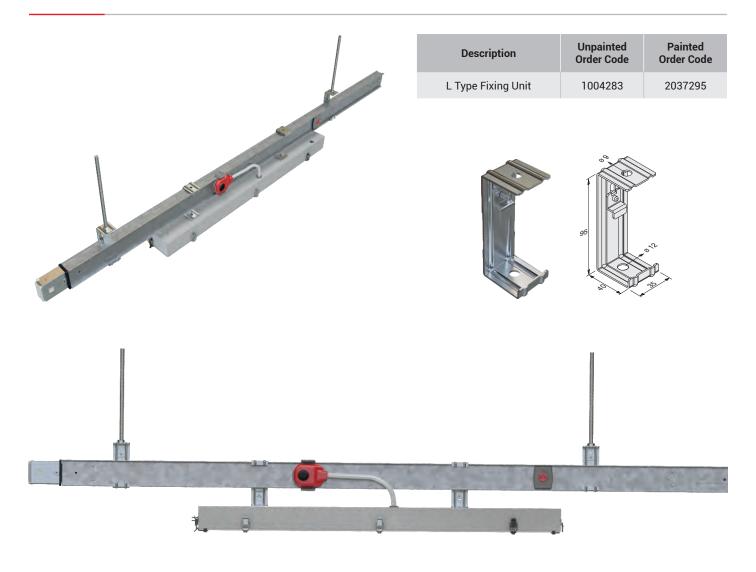


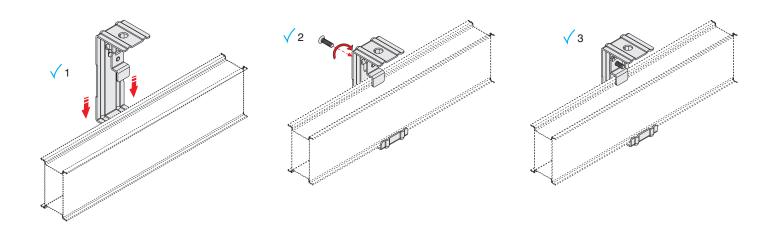




Hanger accessories for Busbar and Lighting Luminaries



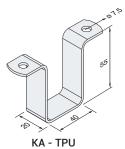


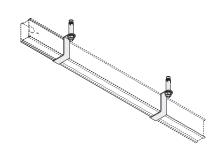


Fixing and IP Accessories

Fixing Unit "U" Type

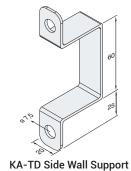


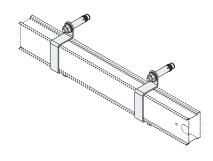




Side Wall Support

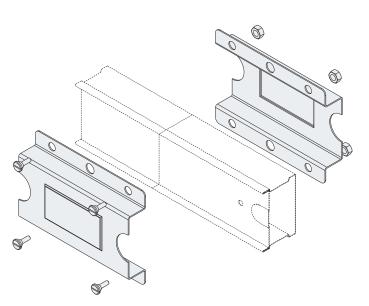
Description	Unpainted Order Code	Painted Order Code
KA-TD Side Wall Support	3025106	3025107

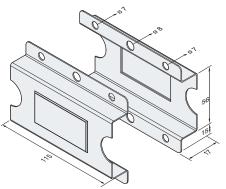




KAM-KAP Joint Support

Description	Unpainted Order Code	Painted Order Code
KAM-KAP Joint Support	3025160	3025161





KAM-KAP Joint Support

Certificates





Declaration



CE DECLARATION OF CONFORMITY

Product Group E-Line KAM-KAP Busbar Energy Distribution System

Manufacturer EAE Elektrik Asansor End. Insaat San. ve Tic. A.S.

Akcaburgaz Mahallesi, 3114. Sokak, No:10 34522 Esenyurt-Istanbul

The objects of the declaration described below is in conformity with the relevant Union harmonisation legislation. This declaration of conformity is issued under the sole responsibility of the manufacturer.

Standard:

TS EN 61439-6

Low-voltage switchgear and controlgear assemblies - Part 6: Busbar trunking systems

CE - Directive:

2014/35/EU "The Low Voltage Directive"

2014/30/EU "Electromagnetic Compatibility (EMC) Directive"

2011/65/EU "Restriction of the use of certain hazardous substances (RoHS)"

Technical Document Preparation Official;

EAE Elektrik Asansor End. Insaat San. ve Tic. A.S. Akcaburgaz Mahallesi, 3114. Sokak, No:10 34522 Esenyurt-Istanbul

Mustafa AKÇELİK

Date

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20.03.2025

Elif Gamze KAYA OK Deputy General Manager

Product Overview

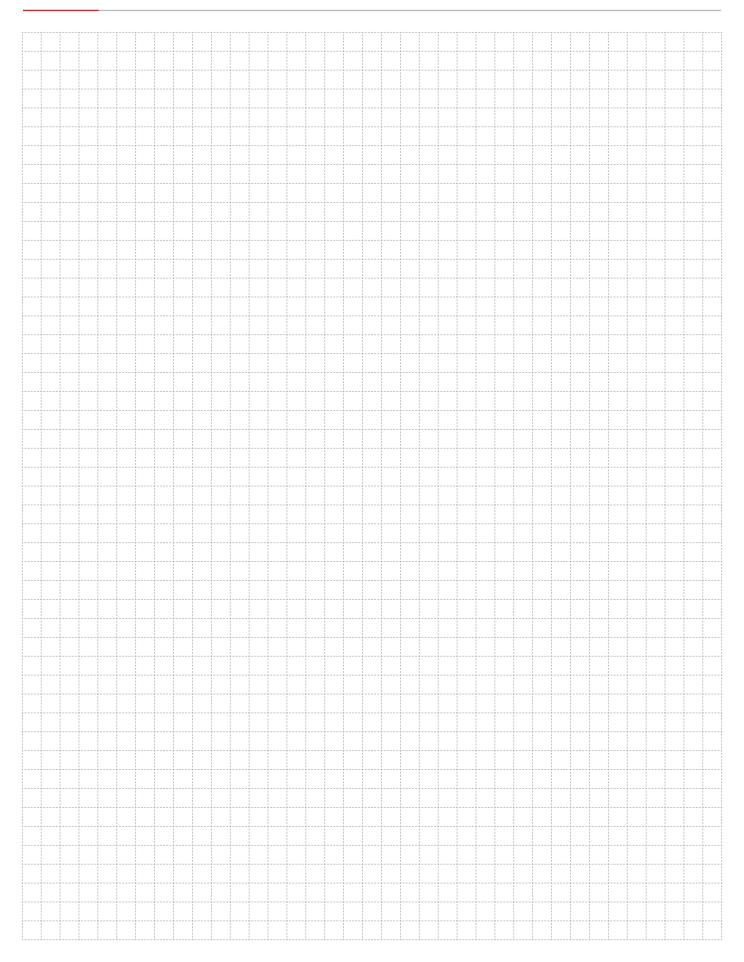


25A - 63A Plug-In Busbar Systems Product Overview (E-Line KAM / KAP)

- 1- The standard busbar system must be manufactured in accordance with IEC 61439-6. It must have type test certificates from international test laboratories for each current level.
- 2- The standard busbar system must be manufactured in facilities with the ISO 9001 quality system and ISO 14001 environment system certificates.
- 3- The nominal insulation voltage of the standard busbar system must be KAM(500V), KAP(690V).
- 4- The standard busbar system must be tin plated and have a copper conductor at current values between 25A and 63A.
- 5- The conductors of the standard busbar system must have full-length insulation. It must be peeled off to create a contact area at the plug-in points.
- 6- The standard busbar system must have the following number of conductors and phase configuration.
- a) 2 Wire: L1 / N / Housing
- b) 3 Wire: L1 / N / PE + Housing (PE Conductor and Housing Combined)
- c) 4 Wire: L1 / L2 / L3 / N / Housing
- d) 5 Wire: L1 / L2 / L3 / N / PE + Housing (PE Conductor and Housing Combined)
 The housing must be used as the ground conductor.
- 7- There are 4 plug-in points on the 3 m standard length of the standard busbar system. The number of fenestrations can be increased on special request. There must be a protection cover on the plug-in windows.
- 8- There should be insulator wedges to carry the conductors at the plug-in points.
- 9- The conductors must be electrolytic copper, and tin plated over the entire length.
- 10- The additional joints of the busbar system elements must have a plug-in structure. Joint contacts of the conductors must be silver plated. Loosening of the joint must be prevented with the double-sided spring pressure method. A joint structure with terminals that will allow loosening must not be used.
- 11- Busbar channels must have the IP 55 protection rating.
- 12- The housing of the standard busbar system must be manufactured with an 0.50 mm thick galvanised sheet. It can be produced painted with electrostatic oven-baked paint of RAL 7038 colour by the manufacturer if requested.
- 13- The contacts of the tap off plugs and boxes must be silver-plated and have tulip-shaped spring contacts that will press on the conductors inside the busbar from both surfaces.
- 14- It must have standard bracket and fixing elements in accordance of the external structure of the busbar system and these must be produced by the manufacturer.

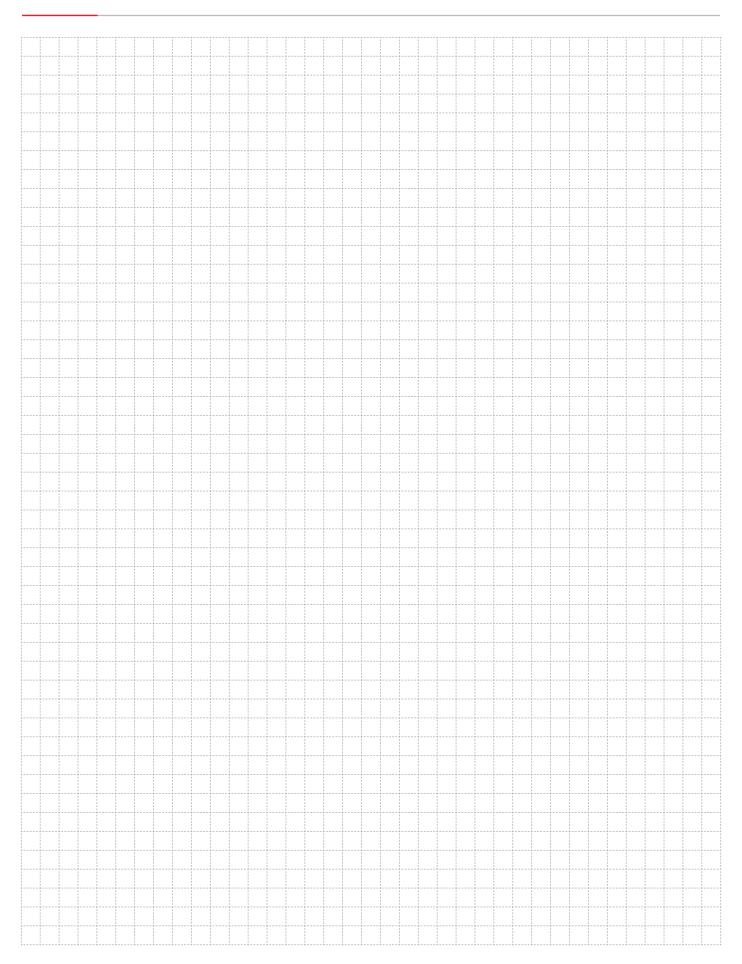
Notes





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SUSTAINABLE FUTURE

Sustainability Management at EAE Elektrik



As part of our goal to support sustainable development and green transformation, measuring, evaluating, and managing all economic, environmental, and social impacts resulting from our sustainability practices is a key governance priority for EAE Elektrik. We act with great care in analyzing, monitoring, and managing the economic, environmental, and social impacts and risks that arise throughout our value chain in both our national and global operations.





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Busbar

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