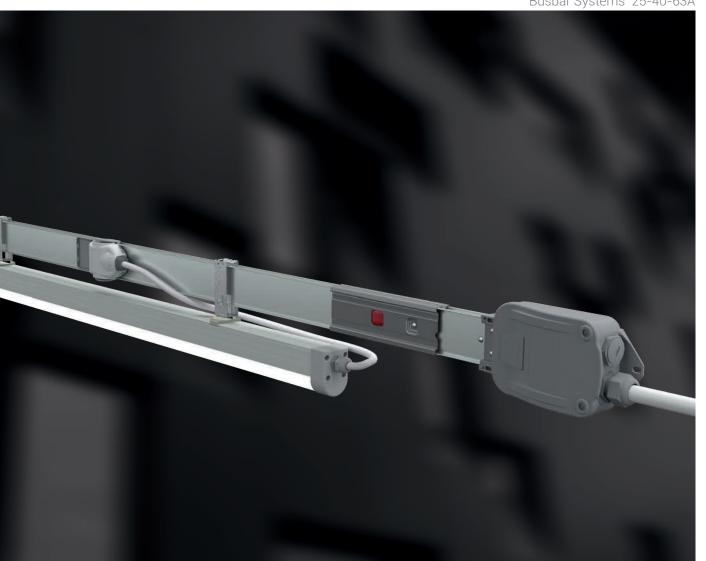


# E-LINE KY-S Busbar Systems 25-40-63A



# EAE

## **CONTENTS**

#### ►► E-LINE KY-S

GENERAL	
General Overview	
Technical Characteristics Order Code System	
DUCDAD CELECTION	
BUSBAR SELECTION  KY-S Busbar Conductor Structure and Addressing Types (Key Plan)	6
KY-S Busbar Selection Tables	
KY-S DALI Busbar Selection Tables	
TAP-OFF PLUG SELECTION	
KY-S Busbar Tap-Off Plug Selection Tables	10-13
KY-S DALI Busbar Tap-Off Plug Selection Tables	14-15
TAP-OFF BOX SELECTION	16.06
KY-S Busbar Tap-Off Box Selection Tables	16-20
BUSBAR MODULE SELECTION	
Head Feeder Module (B1) Selection Table	
End Feeder Module (B2) Selection Table	
Flexible Elbow (FD) Module Selection Table	23
FITTING BRACKETS AND ACCESSORY SELECTION	
Busbar and Fitting Brackets (KY-S)	
KY-S Accessories	27
INSTALLATION DETAILS	
KY-S Busbar Joint Installation / Single Tap-Off Plug Installation	28
KY-S Busbar Tap-off Plugs with clips/Cylindrical Fuse Installation	29
KY-S Busbar Miniature Circuit Breaker (MCB) Tap-Off Box Installation	30
K1-5 busbar Tap-Off box with Cartriage (Cylindrical) Puse Installation	31
CIRCUIT DIAGRAMS	
KY-S Busbar C6 (5 Conductors/L1-L2-L3-N-L <sub>EMG</sub> -PE) Principle Connection Circuit Diagram (Common Neutral) with Residual	33
Current Device (RCD)	0.4
KY-S DALI Busbar C10 (6 Conductors/D1-D2-L-N- $L_{EMG}$ -NEMG-PE) Principle Connection Circuit Diagram (Common Neutral) with Residue KY-S DALI Busbar C9 (5 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle Connection Circuit Diagram (Common Neutral) with Residue KY-S DALI Busbar C9 (5 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle Connection Circuit Diagram (Common Neutral) with Residue KY-S DALI Busbar C9 (5 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle Connection Circuit Diagram (Common Neutral) with Residue KY-S DALI Busbar C9 (5 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle Connection Circuit Diagram (Common Neutral) with Residue KY-S DALI Busbar C9 (5 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle Connection Circuit Diagram (Common Neutral) with Residue KY-S DALI Busbar C9 (5 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle Connection Circuit Diagram (Common Neutral) with Residue KY-S DALI Busbar C9 (5 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle Connection Circuit Diagram (Common Neutral) with Residue KY-S DALI Busbar C9 (5 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle Connection Circuit Diagram (Common Neutral) with Residue KY-S DALI Busbar C9 (5 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle Connection Circuit Diagram (Common Neutral) with Residue KY-S DALI Busbar C9 (5 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle C0 (6 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle C0 (7 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle C0 (7 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle C0 (7 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle C0 (8 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle C0 (8 Conductors/L1-L2-L-N- $L_{EMG}$ -PE) Principle C0 (8 Conductors/L1-L2-L2-L2-L1-L2-L2-L2-L2-L2-L2-L2-L2-L2-L2-L2-L2-L2-	34
Current Device (RCD)	ıaı <b>3</b> 3
KY-S DALI Busbar C8 (4 Conductors/D1-D2-L-N-PE) Principle Connection Circuit Diagram	36
KY-S DALI Busbar C11 (6 Conductors/D1-D2-L1-L2-L3-N-PE) Principle Connection Circuit Diagram	
SPECIFICATIONS AND "CE" CERTIFICATE	
E-LINE KY-S Busbar Product Overview	38
E-LINE KY-S Busbar CE Declaration of Conformity	39
KV-S Bushar Product Group	40

#### **▶**▶General Overview

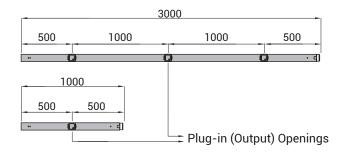


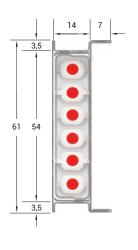
E-Line KY-S Busbar Distribution Systems are used in building electrical installations with a power requirement of 25-40-63A. Due to the specifications of 10 and 16A tap-off plugs and 32A tap-off boxes, they are designed to supply lighting and wall socket circuits and small electrical machines and devices. The protection degree is IP55 when the covers of opening points are closed.

EAE Busbar Systems are produced using the world's latest manufacturing technologies, in accordance with ISO 9001 Standards and with a certified Quality Assurance System. Units are designed and tested according to IEC 61439-6. In standard production, the busbar housing is pre-galvanized sheet metal, and optionally, it can be manufactured in RAL 7038 colour.

#### 3 and 1 Plug-in Openings in Standard 3m and 1m Lengths

KY-S Busbar system is manufactured in two different standard lengths.







#### Tap-off Plugs and Boxes

The Tap-off plugs of KY-S busbar systems are designed with different address structures in order to prevent misuse and shock.

All plugs and boxes are manufactured to be connected to the busbar in one direction only. This prevents the use of a wrong phase.

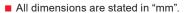


Earth contacts of the tap-off plugs and boxes make first when pluggingin, and the contact breaks last when unplugging.

#### **Colours Indicating Plugs and Boxes**

In plugs and boxes, the colours of the cover, housing, ear and cable entry gland are designed in different colours so that you can easily see the phase, function and features. (See. Page: 10)



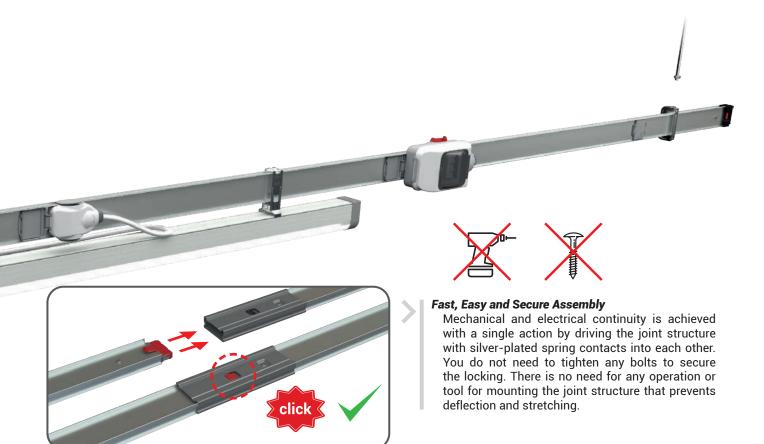


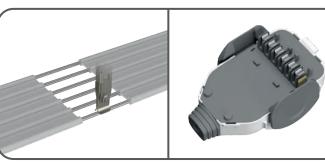




#### Insulation at Full Length

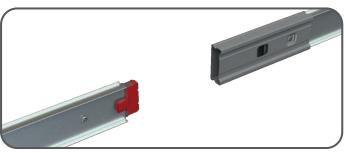
Busbar conductors are coated with full-length flameproof insulation material. Full protection regarding human safety is provided even when the body is severely damaged due to external heavy impacts that may occur.





#### Tin-Plated Conductors and Contacts

Copper conductors are plated with tin in full-length, preventing the formation of Copper Oxide. With this process, contact resistances are minimized. Steel spring reinforced. With the jawed contact construction, the contacts of the tap-off plugs and boxes compress the conductor from two surfaces in the busbar.



#### Silver-Plated Joint Contacts

The contacts at the busbar joints and the contacts of all tap-off units are silver-plated. The silver-plating minimises the contact impedances, thus preventing the over-heating of the contacts in case of possible over-loads.

## **▶▶**Technical Characteristics



	Rated Current	l <sub>n</sub>	Α	2	5	4	0	6	3		
	Busbar Code			2	2	4	4	6	6		
	Standards		IEC	61439-1	/6, TS EI	N 61439	phase phase 0,138 0,159 0,174 0,201 0,188 0,217 0,194 0,224				
	Rated Isolation Voltage	U <sub>i</sub>	V	69	90	69	90	69	90		
	Operating Voltage	U <sub>e</sub>	V	400		40	00	40	00		
	Rated Frequency	f	Hz	50-	-60	50	-60	50-60			
	Operating Ambient Temperature	t	°C	-5/	+50	-5/	+50	-5/	+50		
	Protection Degree (IP)			IP 55							
	Mechanical Impact Resistance (IK)			IK07							
	Rated Short-Time Current (0.1 s)	I <sub>cw</sub>	kA <sub>(rms)</sub>	2,	,5	:	4	4			
	Rated Peak Withstand Current	l <sub>pk</sub>	kA	4	1	!	5	6	,5		
3	Resistance (AC) at a conductor temperature of 20 °C	R <sub>20</sub>	mΩ/m	7,3	87	3,7	793	2,4	696		
AT RATED CURRENT IN	Resistance (AC) at an ambient air temperature of 35 °C	R <sub>t</sub>	mΩ/m	8,9	03	4,8	646	3,2	727		
AT RATED CURRENT IN	Reactance (Independent from Temperature)	X	mΩ/m	1,0	10	0,6	638	0,2	177		
Ë	Positive and negative sequence impedances at an ambient air temperature of 35 °C	Z <sub>35</sub>	mΩ/m	8,9	03	4,9	097	3,2	800		
U.B.	Positive and negative sequence impedances at a conductor temperature of 20 °C	Z <sub>20</sub>	mΩ/m	7,3	87	3,8	510	2,4	792		
DC	Rated Power Loss at 35 °C	Р	W/m	16	5,7	23	3,4	39	9,0		
ATE	DC Resistance at a conductor temperature of 20 °C for Phases	R/ort <sub>Ph</sub>	mΩ/m	7,2	203	3,9	2,697				
T. R.	DC Resistance at a conductor temperature of 20 °C for Neutral	$R_{N}$	mΩ/m	7,2	200	3,891		2,575			
4	DC Resistance at a conductor temperature of 20 °C for PE	R <sub>PE</sub>	mΩ/m	2,2	.67	2,2	267	2,267			
3	DC Resistance at a conductor temperature of 20 °C for Clean Earth	R <sub>PE</sub>	mΩ/m	7,2	200	3,8	391	2,5	575		
	L1, L2, L3, N	S <sub>L</sub>	mm²	2,	54	4	3,891		4,9 8		В
	CPE (5 Conductors)	S <sub>CPE</sub>	mm²	2,	54	3,891 4,9			8		
SNO	PE (Sheet Steel)	S <sub>PE</sub>	mm²	9	5	9	5	9	15		
Ĕ	PE (Cu Equivalent-Sheet Steel)	S <sub>PE(CU)</sub>	mm²	7,60		7,60		7,60			
SE(	Busbar Weight (2 conductors)	Р	kg/m	1,0	26	1,0	066	1,1	118		
HOUSING AND SECTIONS	Busbar Weight (3 conductors)	Р	kg/m	1,0	56	1,1	15	15 1,193			
₽ B	Busbar Weight (4 conductors).	Р	kg/m	1,0	186	1,1	64	1,2	264		
SIN	Busbar Weight (5 conductors)	Р	kg/m	1,0	16	1,2	213	1,3	345		
ᅙ	Busbar Weight (6 conductors)	Р	kg/m	1,1	46	1,2	262	1,4	115		
_	Busbar Housing Dimensions	LxH	mm	542	k13	54:	x13	543	x13		
	Temperature of Operating Environment (min/max)	t	°C	-5/-	+50	-5/	+50	-5/	+50		
				Three phase	Single phase	Three		Three phase	Sin		
	Power factor (Cosφ) = 0.7	ΔU	Volt/m	0,186		1					
	Power factor (Cosφ) = 0.8	ΔU	Volt/m	0,202	0,233	0,174	0,201	0,169	0,1		
<b>A</b>	Power factor (Cosφ) = 0.9	ΔU	Volt/m	0,225	0,260	0,188	0,217	0,186	0,2		
80	Power factor (Cosφ) = 1.0	ΔU	Volt/m	0,236	0,272	0,194	0,224	0,199	0,2		
VOLTAGE DROP	*It is assumed that the voltage drop values are at full load (max. current) and the load meter for different power factors (Cos $\phi$ ).  *If the entire load is at the end of the line, please find the end-of-line voltage drop by $\kappa$ *k=0,66 (Load distribution factor). $ k = \frac{n+1}{2n} $						values	(Volt) p	er		

	Allowable Mechanical Loading Table											
Busbar Types KY-S	Fixing Element Intermediate Distance (L) (m)	Single Point Suspended Load (F) (kg)	Distributed Load (F) (kg)									
	1,5	60	66									
25A / 40A / 63A	2,0	30	35									
	3,0	10	12									

\*Table values are given to facilitate basic calculations, and for exact values, calculations should be made according to IEC 60364-52, taking into account

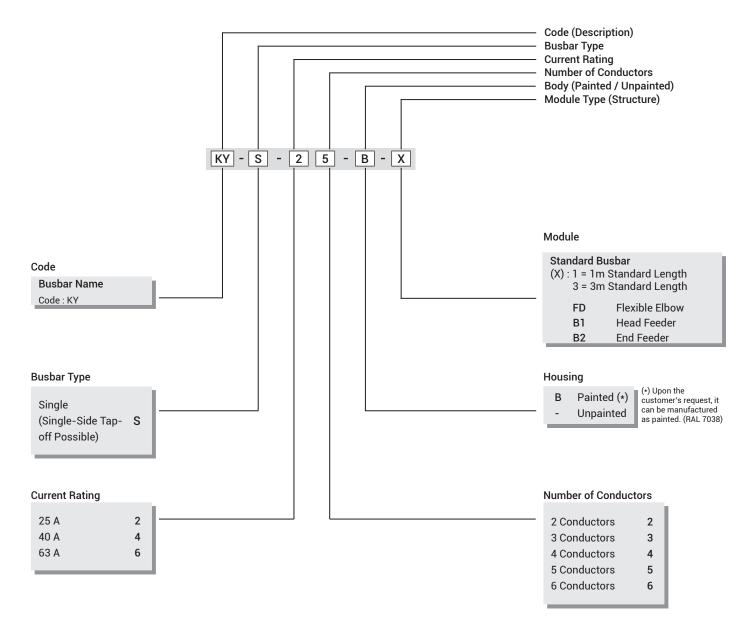
**n = 3** (Number of tap-off in a standard 3 m busbar)

the project details.



#### **▶**▶Order Code System





#### **Busbar Function**

Р Power

Power + Emergency Kit  $\mathsf{P}_{\mathsf{Emg}}$ 

(Emg) Supply

Power + DALI Lighting PDL

Automation

Power + DALI Lighting Automation + Emergency Kit

 $\mathsf{PDL}_{\mathsf{Emg}}$ (Emg) Supply

#### **Protection Conductor**

PE Housing

Independent CPE

Conductor

#### Addressing Type

A1 - A2 - A3 -A4

#### **Phase Structure**

L1 Faz-1

L2 Faz-2

L3/L Faz-3

Ν Neutral

**Emergency Kit (Emg)** Phase

Emergency Kit (Emg)

Neutral

#### **Conductor Model**

KY-S:

C1-C2-C3-C4-C5-C6-C7

KY-S-DALI:

C8-C9-C10-C11

#### **DESCRIPTION:**

Apart from the information specified as "order code system", the following information is available on the busbar as label information;

- Busbar function,
- Phase structure, Protection conductor,
- Conductor model and addressing type

are available on busbar as label information.

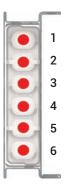
#### **▶▶KY-S Busbar Conductor Structure and Addressing Types**



#### **▶Key Plan**

Based on the conductor model given below, determine the KY-S busbar suitable for your needs. For the busbar, tap-off plug, tap-off box and other modules, select the products on the sides of the tables and from the pages given below:

#### KY-S



Conductor Model

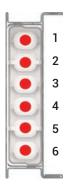
Addressing Type

Number of Conductors

		Lī		L1	L1	L1
		L2		L2	L2	L2
L	L	L3	L	L3	L3	L3
N	N	N	N	N	N	N
	СРЕ		L <sub>EMG</sub>	CPE	L <sub>EMG</sub>	L <sub>EMG</sub>
			N <sub>EMG</sub>			N <sub>EMG</sub>
PE		PE	PE		PE	PE
C1	C2	C3	C4	C5	C6	<b>C7</b>
A1	A1	A1	A2	A1	A2	A2
2	3	4	4	5	5	6
		_ •			•	

- See page 7-8 for busbar selection,
- See page 10-13 for plug selection,
- See page 16-20 for box selection.

#### **KY-S-DALI**



Conductor Model

Addressing Type

Number of Conductors

D1	D1	D1	D1
D2	D2	D2	D2
L	L	L	L1
N	N	N	L2
	L <sub>EMG</sub>	L <sub>EMG</sub>	L3
		N <sub>EMG</sub>	N
PE	PE	N <sub>EMG</sub>	PE
PE	PE	PE	
PE C8	PE C9	Livio	

6

6

- See page 9 for busbar selection
- See page 14-15 for plug selection,

- For head feeder (B1) module: See page 21
- For end feeder (B2) module: See page 22
- For flexible elbow (FD) module: See page 23
- For fixing element, installation details and principle connection circuit diagrams, see the following related pages.
- Addressing Type: Operation current plug-in openings and tap-off plugs and boxes are addressed to prevent incorrect use, the tap-off plugs and boxes with different address types and busbars cannot be used with each other.
- PE = housing with protective conductor CPE= Clean protection (clean earth) conductor (Independent conductor)

#### **▶▶KY-S Busbar Selection Tables**



■ (\*) Marked busbar definitions are given for 3 m standard lengths, take into account the expression in parentheses for 1 m standard lengths.

Conductor M	odel : C1	2 CONDUCTO	R CONSTRUCT	ΓΙΟΝ: L-N-PE	(housing)				
		BUSBAR	ORDEF	CODE	ADDRESSING TYPE:	A1			
	Current	Definition (*)	Туре	3 m	1 m	Description			
	25 A	KY-S 22-3m (1m)	Unpainted	3178721	3178780	• It is used with single-			
		KY-S 22-B-3m (1m)	Painted	3178735	3178794	single-phase distribution.  784  • See Table-01 on page 10 for tap	ver circuits as		
L	40.4	KY-S 42-3m (1m)	Unpainted	3178725	3178784		tion.		
N	40 A	KY-S 42-B-3m (1m)	Painted	3178740	3178799		10 fo	r tap-off plugs	
	63 A	KY-S 62-3m (1m)	Unpainted	3178730	3178789	and ● See Table-01 on page	16 fo	r tap-off boxes.	
PE		KY-S 62-B-3m (1m)	Painted	3178745	3178804				

Conductor M	odel : C2	3 CONDUCTO	R CONSTRUCT	TION : L-N-CI	PE (clean ear	th)			
	BUSBAR				CODE	ADDRESSING TYPE:	A1		
	Current	Definition (*)	Туре	3 m	1 m	Description			
	25 A	KY-S 23-3m (1m)	Unpainted	3178722	3178781		distribution, it is used with		
	25 A	KY-S 23-B-3m (1m)	Painted	3178736	3178795	a single-phase tap-off plug (L) in the socke and power circuits requiring a clean earth			
L	40 A	KY-S 43-3m (1m)	Unpainted	3178726	3178785	conductor.			
N CPE	40 A	KY-S 43-B-3m (1m)	Painted	3178741	3178800		e 10 for tap-off plugs		
CFE	63 A	KY-S 63-3m (1m)	Unpainted	3178731	3178790	• See Table-02 on page	e 16 for tap-off		
		KY-S 63-B-3m (1m)	Painted	3178746	3178805	boxes.			

Conductor M	odel : C3	4 CONDUCTOR CONSTRUCTION : L1-L2-L3-N-PE (housing)								
		BUSBAR		ORDEF	CODE	ADDRESSING TYPE:	A1			
	Current	Definition (*)	Туре	3 m	1 m	Description				
	25 A	KY-S 24-3m (1m)	Unpainted	3178723	3178782	As a three-phase distri				
L1 L2		KY-S 24-B-3m (1m)	Painted	3178737	3178796	a single-phase and/o plugs in lighting, sock				
● L3	40.4	KY-S 44-3m (1m)	Unpainted	3178727	3178786	See Table-03 on page and     See Table-03 on page boxes.	icts an	a power circuits.		
N	40 A	KY-S 44-B-3m (1m)	Painted	3178742	3178801		e 11 fo	r tap-off plugs		
	63 A	KY-S 64-3m (1m)	Unpainted	3178732	3178791		e 17 for tap-off			
PE		KY-S 64-B-3m (1m)	Painted	3178747	3178806					

Conductor Mo	odel : C4	4 CONDUCTOR	4 CONDUCTOR CONSTRUCTION : L-N-L <sub>EMG</sub> -N <sub>EMG</sub> -PE (housing)							
	BUSBAR				CODE	ADDRESSING TYPE:	A2			
	Current	Definition (*)	Туре	3 m	1 m	Description				
	25 A	KY-S 24-EMG-3m (1m)	Unpainted	3182912	3183136	• As a single-phase dis				
		KY-S 24-EMG-B-3m (1m)	Painted	3183252	3183506	with single-phase + E lighting fixture circuit				
<u>●</u> L	40.4	KY-S 44-EMG-3m (1m)	Unpainted	3182946	3183170	Ingriting fixture circuit	o with	emergency kit.		
N L <sub>EMG</sub>	40 A	KY-S 44-EMG-B-3m (1m)	Painted	3183291	3183545	<ul> <li>See Table-04 on page and</li> </ul>	r tap-off plugs			
N <sub>EMG</sub>	63 A	KY-S 64-EMG-3m (1m)	Unpainted	3182985	3183209	• See Table-04 on page	r tap-off			
PE		KY-S 64-EMG-B-3m (1m)	Painted	3183335	3183589	boxes.				

Conductor M	odel : C5	5 CONDUCTOR CONSTRUCTION : L1-L2-L3-N-CPE (clean earth)						
	BUSBAR				CODE	ADDRESSING TYPE: A1		
	Current	Definition (*)	Туре	3 m	1 m	Description		
<b>6</b> L1	25 A	KY-S 25-3m (1m)	Unpainted	3178724	3178783	As a three-phase distribution, it is used with		
• L2	25 A	KY-S 25-B-3m (1m)	Painted	3178738	3178797	single-phase and/or three-phase tap-off plugs in the sockets and power circuits requiring a		
L3	40 A	KY-S 45-3m (1m)	Unpainted	3178728	3178787	clean earth conductor.		
CPE	40 A	KY-S 45-B-3m (1m)	Painted	3178743	3178802	See Table-05 on page 12 for tap-off plugs     and		
	63 A	KY-S 65-3m (1m)	Unpainted	3178733	3178792	See Table-05 on page 18 for tap-off		
		KY-S 65-B-3m (1m)	Painted	3178748	3178807	boxes.		

<sup>■</sup> In standard manufacturing, the busbar housing is made of pre-galvanized sheet metal. However, it can also be optionally manufactured as painted in RAL 7038 colour.

#### **▶▶KY-S Busbar Selection Tables**



■ (\*) Marked busbar definitions are given for 3 m standard lengths, take into account the expression in parentheses for 1 m standard lengths.

Conductor M	odel : C6	5 CONDUCTO	R CONSTRUCT	TION : L1-L2-	L3-N-L <sub>EMG</sub> -P	E (housing)		
		BUSBAR	ORDEF	CODE	ADDRESSING TYPE:	A2		
	Current	Definition (*)	Туре	3 m	1 m	Description		
LI	25 A	KY-S 25-EMG-3m (1m)	Unpainted	3182915	3183139	As a three-phase dist		
L1 L2		KY-S 25-EMG-B-3m (1m)	Painted	3183256	3183510	single-phase + EMG t fixture circuits with er	ap-off plugs in lighting	
• L3	40 A	KY-S 45-EMG-3m (1m)	Unpainted	3182949	3183173	See Table-06 on page	,	,
N L <sub>EMG</sub>	40 A	KY-S 45-EMG-B-3m (1m)	Painted	3183295	3183549		e 12 for tap-off plugs	
EWG	63 A	KY-S 65-EMG-3m (1m)	Unpainted	3182988	3183212	and • See Table-6/1 ve 6/2	on pa	ge 18 for tap-off
PE		KY-S 65-EMG-B-3m (1m)	Painted	3183339	3183593	boxes.		

■ Principle Connection Circuit Diagram is given on page-33.

Conductor Me	odel : C7	6 CONDUCTOR CONSTRUCTION: L1-L2-L3-N-L <sub>EMG</sub> -N <sub>EMG</sub> -PE (housing)							
		BUSBAR	ORDER	CODE	ADDRESSING TYPE: A2				
	Current	Definition (*)	Туре	3 m	1 m	Description			
L1	25 A	KY-S 26-EMG-3m (1m)	Unpainted	3177338	3182906		stribution, it is used with		
L1 L2		KY-S 26-EMG-B-3m (1m)	Painted	3178739	3178798	single-phase + EMG t fixture circuits with e			
L3	40.4	KY-S 46-EMG-3m (1m)	Unpainted	3178729	3178788	See Table-07 on page and     See Table-7/1 ve 7/2 or	nergency kit.		
N L <sub>EMG</sub>	40 A	KY-S 46-EMG-B-3m (1m)	Painted	3178744	3178803		: 13 for tap-off plugs		
N <sub>EMG</sub>	63 A	KY-S 66-EMG-3m (1m)	Unpainted	3178734	3178793		on page 20 for tap-off		
PE		KY-S 66-EMG-B-3m (1m)	Painted	3178749	3178808	boxes.			



■ In standard manufacturing, the busbar housing is made of pre-galvanized sheet metal. However, it can also be optionally manufactured as painted in RAL 7038 colour.

8

#### **▶▶KY-S-DALI Busbar Selection Tables**



(\*) Marked busbar definitions are given for 3 m standard lengths, take into account the expression in parentheses for 1 m standard lengths.

Conductor Model : C8 4 CONDUCTOR CONSTRUCTION (DALI) :					D1-D2-L-N-	PE (housing)		
BUSBAR			ORDEF	CODE	ADDRESSING TYPE:	А3		
	Current	Definition (*)	Туре	3 m	1 m	Description		
21	25.4	KY-S 24-DALI-3m (1m)	Unpainted	3182916	3183140	As a single-phase dis		
D1 D2	25 A	KY-S 24-DALI-B-3m (1m)	Painted	3183257	3183511	DALI single-phase tap		lug in luminaire
L	40.4	KY-S 44-DALI-3m (1m)	Unpainted	3182950	3183174	GIIGUIG WITH DALI BUI	uot.	
N	40 A	KY-S 44-DALI-B-3m (1m)	Painted	3183296	3183550			
						• See Table-08 on page	14 fo	r tap-off plugs
PE						and		

■ Principle Connection Circuit Diagram is given on page-36.

Conductor M	odel : C9	5 CONDUCTOR	CONSTRUCT	TION (DALI) :	D1-D2-L-N-	L <sub>EMG</sub> -PE (housing)		
		BUSBAR		ORDEF	CODE	ADDRESSING TYPE:	А3	
	Current	Definition (*)	Туре	3 m	1 m	Descr	iption	
D1	25 A	KY-S 25-DALI-3m (1m)	Unpainted	3182917	3183141	• As a single-phase dis	on, it is used with	
D1	25 A	KY-S 25-DALI-B-3m (1m)	Painted	3183258	3183512	DALI single-phase and DALI single-phase + EMG tap-off plugs in luminaire circuits with DALI ballast and emergency (emg) kits. (Note: The neutral of luminaire and emergenc kit is common)		
L	40 A	KY-S 45-DALI-3m (1m)	Unpainted	3182951	3183175			
L <sub>EMG</sub>	40 A	KY-S 45-DALI-B-3m (1m)	Painted	3183297	3183551			
						• See Table-09 on page 14 for tap-off p		r tap-off plugs
PE						and		

■ Principle Connection Circuit Diagram is given on page-35.

Conductor Model : C10 6 CONDUCTOR CONST				TION (DALI) :	D1-D2-L-N-	L <sub>EMG</sub> -N <sub>EMG</sub> -PE (housing)		
BUSBAR			ORDER CODE		ADDRESSING TYPE:	А3		
	Current	Definition (*)	Туре	3 m	1 m	Descr	iption	
D1	25 A	KY-S 26-DALI-3m (1m)	Unpainted	3182918	3183142	As a single-phase distribution, it is used with DALI single-phase and DALI single-phase + EMG tap-off plugs in luminaire circuits with DALI ballast and emergency (emg) kits.  (Note: The neutral of luminaire and emergency kit is separate)		
D1 D2	25 A	KY-S 26-DALI-B-3m (1m)	Painted	3183259	3183513			
L	40 A	KY-S 46-DALI-3m (1m)	Unpainted	3182952	3183176			
N L <sub>EMG</sub>	40 A	KY-S 46-DALI-B-3m (1m)	Painted	3183298	3183552			
N <sub>EMG</sub>						• See Table-10 on page	15 for	tap-off plugs
PE						and		

■ Principle Connection Circuit Diagram is given on page-34.

Conductor Model : C11 6 CONDUCTOR CONSTRUCT				TON (DALI) :	D1-D2-L1-L2	2-L3-N-PE (housing)		
BUSBAR			ORDER CODE		ADDRESSING TYPE:	A4		
	Current	Definition (*)	Туре	3 m	1 m	Descr	iption	
D1	25 A	KY-S 26-DALI-3m (1m)	Unpainted	3182944	3183168	As a three-phase distribution, it is used		
D2		KY-S 26-DALI-B-3m (1m)	Painted	3183285	3183539	DALI single-phase tap circuits with DALI ball		lugs in luminaire
L1	40.4	KY-S 46-DALI-3m (1m)	Unpainted	3182983	3183207	Circuits with DALI ban	ust.	
L2 L3	40 A	KY-S 46-DALI-B-3m (1m)	Painted	3183329	3183583			
N						• See Table-11 on page	e 15 fo	or tap-off plugs
PE						and		

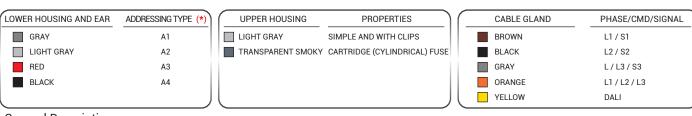
- Principle Connection Circuit Diagram is given on page-37.
- KY-S Busbar "DALI" version is not manufactured in 63A. If necessary, please contact our company.
- In standard manufacturing, the busbar housing is made of pre-galvanized sheet metal. However, it can also be optionally manufactured as painted in RAL 7038 colour.

#### ►►KY-S Busbar Tap-Off Plug Selection Tables





#### ► Colour Definitions in Plugs



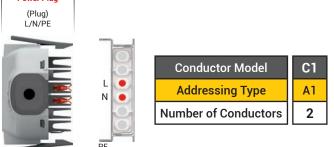
#### **General Descriptions:**

- The cross-section of the cable supplied with BL-10 A simple plugs is 0.75mm<sup>2</sup>, its type is 052XZ1-F or H05VV-F, and its length is 75cm.
- The cross-section of the cable supplied with B-16 A simple plugs is 1.5mm², its type is 052XZ1-F or H05VV-F, and its length is 75cm.
- In FS-16 A Cartridge (Cylindrical) fused plugs, the fuse base is 5x20 mm and the cartridge is not included. It can be ordered separately as needed.
- In plugs with K-16 A Terminals, the terminals are suitable for cables with a cross-section of 1.5 2.5mm².

#### **CAUTION:**

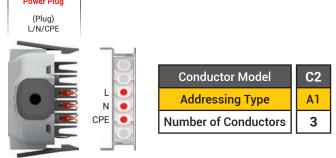
(\*) The compatibility of the selected busbar and tap-off plugs is ensured by "addressing pins". If the selected plug does not fit into the busbar current plug-in openings, please do not cut the pins.

#### ►KY-S Busbar Tap-Off Plugs: Table-01



	PE							
	TAP-OFF PLUG							
Order		_	_	able				
Code	Description	Current	Cross-Section (mm²)	Туре	Length (m)			
3196707	(BL) Simple - HF	10 A	3x0,75	052XZ1-F				
3196538	(BL) Simple - Normal	IU A	3,0,73	H05VV-F	0,75			
3196718	(B) Simple - HF	16 A	3x1.5	052XZ1-F	0,75			
3196546	(B) Simple - Normal	16 A	3X1,5	H05VV-F				
3196559	(FS) Cartridge (Cylindrical) Fuse	16 A	Without cable					
3196571	(K) with Clips	16 A	Witho	ut cable				

#### ►KY-S Busbar Tap-Off Plugs: Table-02



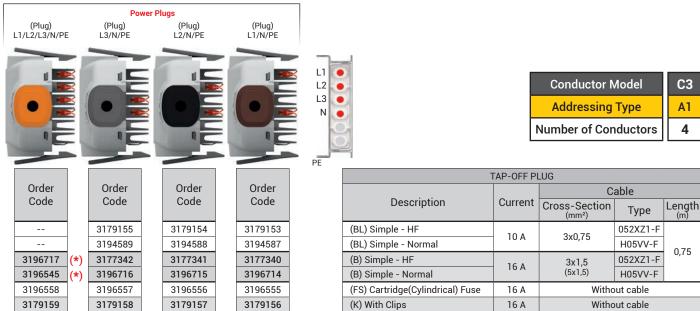
	TAP-OFF PLU	TAP-OFF PLUG					
Order Code	Description	Current	Cross Section (mm²)	Type	Length (m)		
		-					
	-						
3196723	(B) Simple - HF	16 A	3x1,5	052XZ1-F	0.75		
3196551	(B) Simple - Normal	16 A	3X1,5	H05VV-F	0,75		
3196564	(FS) Cartridge (Cylindrical) Fuse	16 A	Without cable				
3196576	(K) with Clips	16 A	Without cable				

All dimensions are stated in "mm".

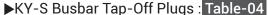
#### ▶▶KY-S - DALI Busbar Tap-Off Plug Selection Tables

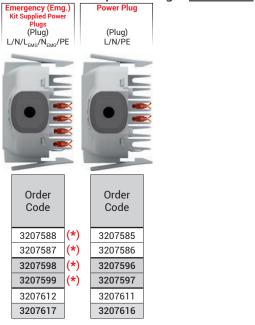


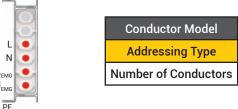
#### ►KY-S Busbar Tap-Off Plugs: Table-03



Cable cross-sections in parentheses are used in tap-off plugs marked (\*).







F Pl	LUG						
	Cable						
ent	Cross-Section (mm²)	Туре	Length (m)				
A	3x0,75	052XZ1-F					
Α	(5x0,75)	H05VV-F	0,75				
	0.15	052V71_E	0,75				

TAP-OFF PLUG								
			able					
Description	Current	Cross-Section (mm²)	Туре	Length (m)				
(BL) Simple - HF	10 A	3x0,75	052XZ1-F					
(BL) Simple - Normal	IU A	(5x0,75)	H05VV-F	0.75				
(B) Simple - HF	16 A	3x1,5	052XZ1-F	0,75				
(B) Simple - Normal	16 A	(5x1,5)	H05VV-F					
(FS) Cartridge(Cylindrical) Sig.	16 A	Without cable						
(K) With Clips	16 A	Without cable						

Cable cross-sections in parentheses are used in tap-off plugs marked (\*).

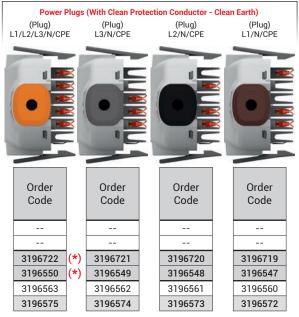
**C4** 

**A2** 

#### ▶▶KY-S - DALI Busbar Tap-Off Plug Selection Tables



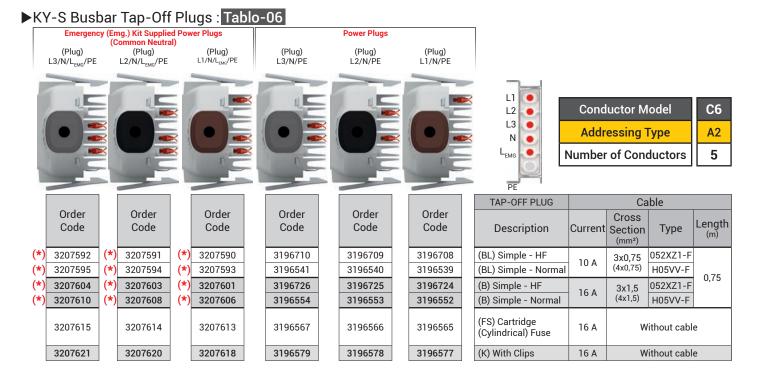
#### ►KY-S Busbar Tap-Off Plugs : Table-05



1		<u> </u>	
L2	ŏ	Conductor Model	C5
L3 N	•	Addressing Type	A1
CPE	•	Number of Conductors	5

TAP-OFF PLUG								
			able					
Description	Current	Cross-Section (mm²)	Type	Length (m)				
(BL) Simple - HF		-						
(BL) Simple - Normal		-						
(B) Simple - HF	16 A	3x1,5	052XZ1-F	0.75				
(B) Simple - Normal	10 A	(5x1,5)	H05VV-F	0,75				
(FS) Cartridge(Cylindrical) Fuse	16 A	Without cable						
(K) With Clips	16 A	Without cable						

Cable cross-sections in parentheses are used in tap-off plugs marked (\*).

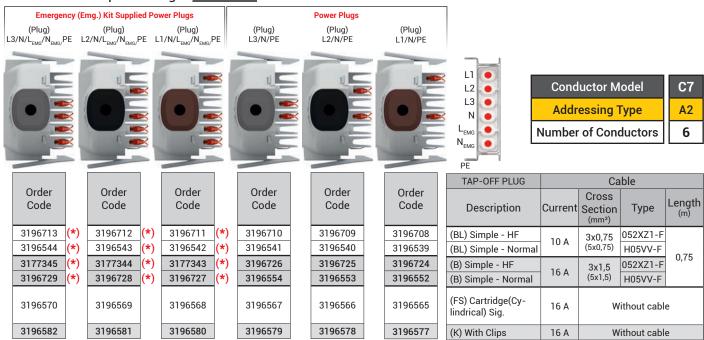


Cable cross-sections in parentheses are used in tap-off plugs marked (\*).

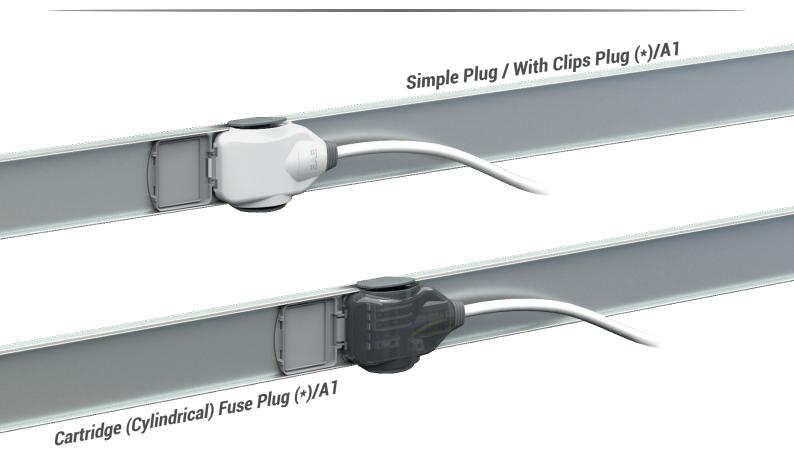
#### ▶▶KY-S - DALI Busbar Tap-Off Plug Selection Tables



#### ►KY-S Busbar Tap-Off Plugs: Table-07



Cable cross-sections in parentheses are used in tap-off plugs marked (\*).

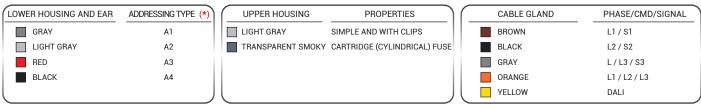


(\*) Terminal and Cartridge (Cylindrical) Fused plugs are manufactured as "Without cable".

#### ▶▶KY-S - DALI Busbar Tap-Off Plug Selection Tables



#### Colour Definitions in Plugs



#### **General Descriptions:**

- The cross-section of the cable supplied with BL-10 A simple plugs is 0.75mm<sup>2</sup>, its type is 052XZ1-F or H05VV-F, and its length is 75cm.
- The cross-section of the cable supplied with B-16 A simple plugs is 1.5mm², its type is 052XZ1-F or H05VV-F, and its length is 75cm.
   In FS-16 A Cartridge (Cylindrical) fused plugs, the fuse base is 5x20 mm and the cartridge is not included. It can be ordered separately as needed.
- In plugs with K-16 A Terminals, the terminals are suitable for cables with a cross-section of 1.5 2.5mm².

#### ►KY-S DALI Busbar Tap-Off Plugs: Table-08



DALI +Emergency

3196591

3196603

3196609

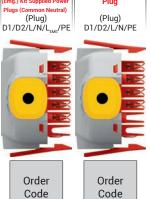


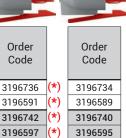
Conductor Model	C8
Addressing Type	А3
Number of Conductors	4

TAP-OFF PLUG								
	_	Cable						
Description	Current	Cross-Section (mm²)	Type	Length (m)				
(BL) Simple - HF	10 A	10.4 50.75						
(BL) Simple - Normal	10 A	5x0,75	H05VV-F	0.75				
(B) Simple - HF	16 A	5x1,5	052XZ1-F	0,75				
(B) Simple - Normal	16 A	5,1,5	H05VV-F					
(FS) Cartridge(Cylindrical) Fuse	16 A	Without cable						
(K) With Clips	16 A	Without cable						

#### ►KY-S DALI Busbar Tap-Off Plugs: Table-09

DALI + Power





3196601

3196607

D1	
D2	•
L	
N	•
L <sub>EMG</sub>	•
DE.	

Conductor Model	С9
Addressing Type	А3
Number of Conductors	5

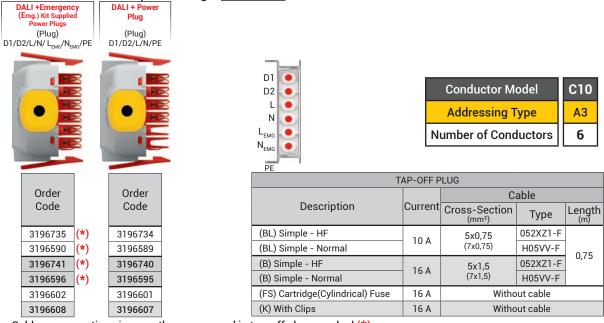
TAP-OFF PLUG				
	_	Cable		
Description	Current	Cross-Section (mm²)	Туре	Length (m)
(BL) Simple - HF	10 A	5x0,75	052XZ1-F	
(BL) Simple - Normal	TU A	(6x0,75)	H05VV-F	0.75
(B) Simple - HF	16 A	5x1,5	052XZ1-F	0,75
(B) Simple - Normal	10 A	(6x1,5)	H05VV-F	
(FS) Cartridge(Cylindrical) Fuse	16 A	Without cable		
(K) With Clips	16 A	Without cable		

Cable cross-sections in parentheses are used in tap-off plugs marked (\*).

#### ▶▶KY-S - DALI Busbar Tap-Off Plug Selection Tables







Cable cross-sections in parentheses are used in tap-off plugs marked (\*).

#### ►KY-S DALI Busbar Tap-Off Plugs: Table-11

DALI + Power Plugs



D1 💽	
D2 •	Conductor Model
L1 •	Addressing Type
L2	Addressing Type
L3 •	Number of Conductors
N 💿	
PE	

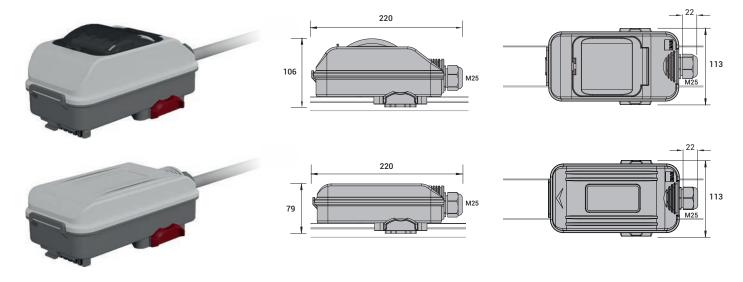
C11

6 6

TAP-OFF PLUG				
	_	Cable		
Description	Current	Cross-Section (mm²)	Туре	Length (m)
(BL) Simple - HF	10 A	5x0,75	052XZ1-F	
(BL) Simple - Normal	IUA	5x0,75	H05VV-F	0.75
(B) Simple - HF	16 A	51.5	052XZ1-F	0,75
(B) Simple - Normal	16 A	5x1,5	H05VV-F	
(FS) Cartridge(Cylindrical) Fuse	16 A	Without cable		
(K) With Clips	16 A	Without cable		

#### ▶▶KY-S Busbar Tap-Off Box Selection Tables





#### ► Colour Definitions in Tap-off Boxes

LOWER HOUSING	ADDRESSING TYPE(*)
DARK GRAY	A1
LIGHT GRAY	A2

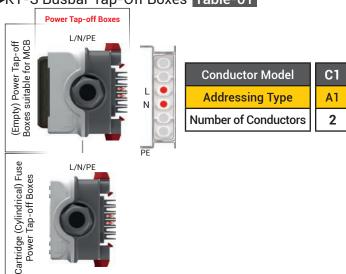
#### **General Descriptions:**

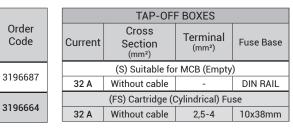
- In FS-32 A Cartridge (cylindrical) fused boxes, the fuse base is 10x38 mm and the cartridge is not included. It should be ordered separately as needed.
- In empty boxes suitable for (MCB)-S empty 32 A MCB, "DIN RAIL" is included, but MCB not included. It should be provided separately as needed.

#### **CAUTION:**

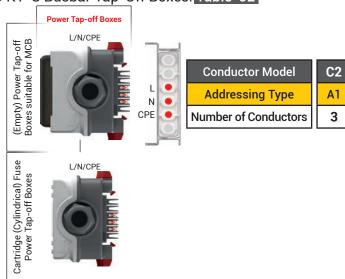
(\*) The compatibility of the selected busbar and tap-off boxes is ensured by "addressing pins". If the selected box does not fit into the busbar current plug-in openings, please do not cut the pins.

#### ►KY-S Busbar Tap-Off Boxes Table-01





#### ►KY-S Busbar Tap-Off Boxes: Table-02



			TAP-OFF BOXES			
Order Code		Current	Cross Section (mm²)	Terminal (mm²)	Fuse Base	
3196692		(S) Suitable for MCB (Empty)				
3190092		32 A	Without cable	-	DIN RAIL	
0106660		(FS) Cartridge (Cylindrical) Fuse				
3196669		32 A	Without cable	2,5-4	10x38mm	

All dimensions are stated in "mm".

#### ▶▶KY-S Busbar Tap-Off Box Selection Tables



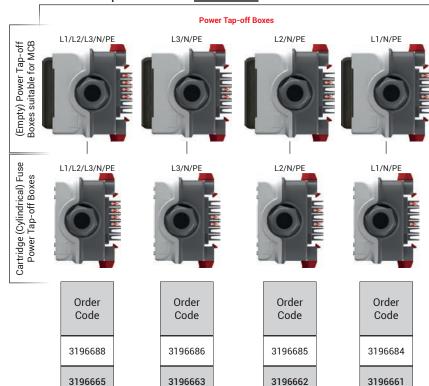
**C3** 

Α1

4

10x38mm

#### ►KY-S Busbar Tap-Off Boxes: Table-03



TAP-OFF BOXES			
Current Cross Section (mm²) Terminal (mm²) Fuse I		Fuse Base	
(S) Suitable for MCB (Empty)			
32 A	Without cable	-	DIN RAIL

(FS) Cartridge (Cylindrical) Fuse

Without cable

**Conductor Model** 

**Addressing Type** 

**Number of Conductors** 

L1 L2

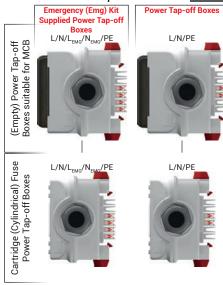
L3 .

Ν

PE

32 A

#### ►KY-S Busbar Tap-Off Boxes: Table-04

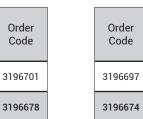


ŏ	Conductor Model	C4
	Addressing Type	A2
·	Number of Conductors	4

Ν

 $\mathsf{N}_{\mathsf{EMG}}$ 

3196661

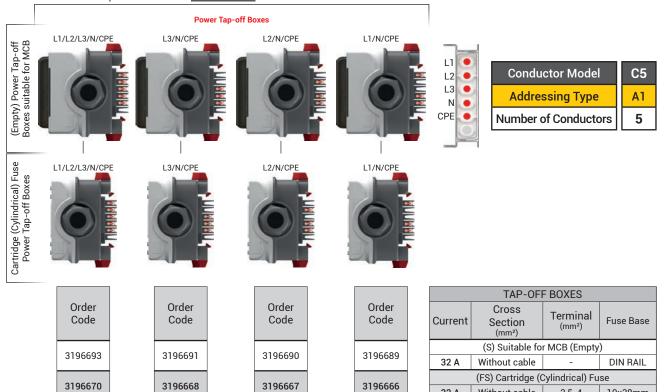


TAP-OFF BOXES				
Current	urrent Cross Section (mm²)		Fuse Base	
(S) Suitable for MCB (Empty)				
32 A	Without cable - DI		DIN RAIL	
(FS) Cartridge (Cylindrical) Fuse				
32 A	Without cable	2,5-4	10x38mm	

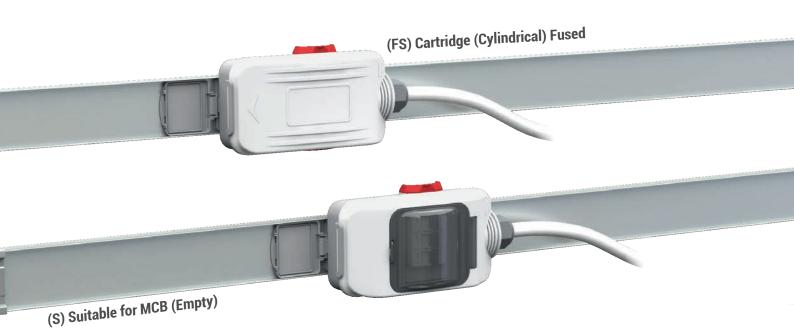
#### ►►KY-S Busbar Tap-Off Box Selection Tables



►KY-S Busbar Tap-Off Boxes: Table-05



3196667



Without cable

2,5-4

10x38mm

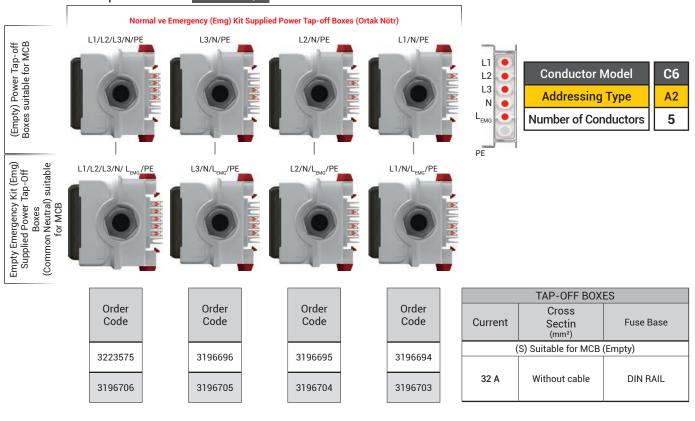
32 A

- (\*1) In FS-32 A Cartridge (cylindrical) fused boxes, the fuse base is 10x38 mm and the cartridge is not included. It should be ordered separately as needed
- (\*2) In empty boxes suitable for (MCB)-S empty 32 A MCB, "DIN RAY" is included, but MCB not included. It should be provided separately as needed.

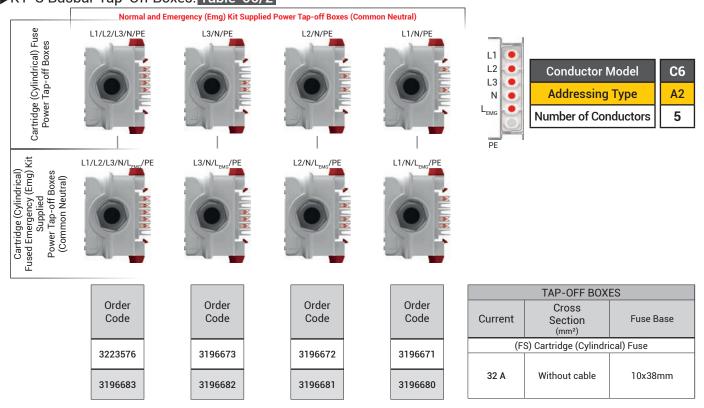
#### ►►KY-S Busbar Tap-Off Box Selection Tables



#### ►KY-S Busbar Tap-Off Boxes: Table-06/1



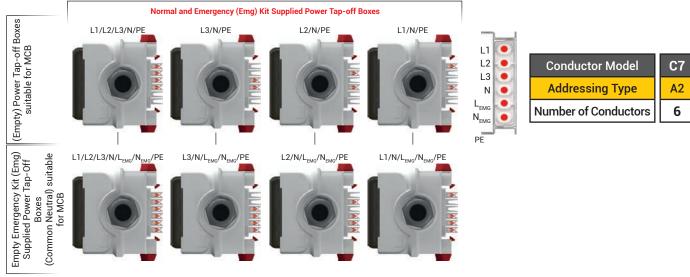
#### ►KY-S Busbar Tap-Off Boxes: Table-06/2



## ▶▶KY-S Busbar Tap-Off Box Selection Tables



#### ►KY-S Busbar Tap-Off Boxes: Table-07/1



Order Code
3223575
3196702

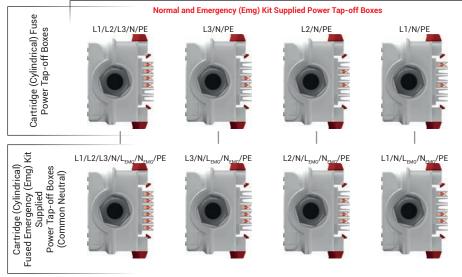
Order Code
3196696
3196700

Order Code	
3196695	
3196699	

Order Code	
3196694	
3196698	

TAP-OFF BOXES											
Current	Cross Section (mm²)	Fuse Base									
(	(Empty)										
32 A	Without cable	DIN RAIL									

#### ▶KY-S Busbar Tap-Off Boxes: Table-07/2



L3
N
L <sub>EMG</sub>
$N_{EMG}$
PE

L2

Conductor Model	С7
Addressing Type	A2
Number of Conductors	6

Order Code
3223576
3196679

Order Code
3196673
3196677

Order Code
3196672
3196676

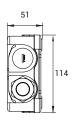
Order Code	
3196671	
3196675	

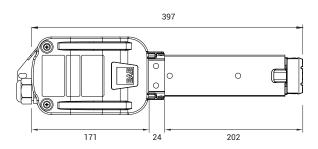
TAP-OFF BOXES											
Current	Current Cross Section Fuse Ba										
(F	cal) Fuse										
(1 (	b) our triage (oyililari	ou., . uoc									

## ▶► Head Feeder Module (B1) Selection Table









Busbar		0	0	0	0	0	0	0		A al alua a a i a a		Conductor Configuration						Unpainted		Painted	
Product Type	Conductor Model	Current (A)		_	Addressing Type	No	1	2	3	4	5	6	Order Code	Description	Order Code	Description					
KY-S Busbar	C1 C2 C3 C5		A1	1	L1	L2	L3	N	CPE		3178931	KY-S-25-B1-A1	3197829	KY-S-25-B1-B-A1							
	C4 C6 C7	25	A2	2	L1	L2	L3	N	L <sub>EMG</sub>	N <sub>EMG</sub>	3197841	KY-S-26-B1-A2	3197830	KY-S-26-B1-B-A2							
KY-S-DALI Busbar	C8 C9 C10	25	А3	3	D1	D2	L	N	L <sub>EMG</sub>	N <sub>EMG</sub>	3197843	KY-S-26-B1-A3	3197832	KY-S-26-B1-B-A3							
	C11		A4	4	D1	D2	L1	L2	L3	N	3197844	KY-S-26-B1-A4	3197833	KY-S-26-B1-B-A4							

KY-S Busbar	C1 C2 C3 C5		A1	1	L1	L2	L3	N	CPE		3178933	KY-S-45-B1-A1	3197970	KY-S-45-B1-B-A1
	C4 C6 C7	40	A2	2	L1	L2	L3	N	L <sub>EMG</sub>	N <sub>EMG</sub>	3197981	KY-S-46-B1-A2	3197971	KY-S-46-B1-B-A2
	C8 C9 C10	40	А3	3	D1	D2	L	N	L <sub>EMG</sub>	N <sub>EMG</sub>	3197984	KY-S-46-B1-A3	3197973	KY-S-46-B1-B-A3
KY-S-DALI Busbar	C11		A4	4	D1	D2	L1	L2	L3	N	3197986	KY-S-46-B1-A4	3197974	KY-S-46-B1-B-A4

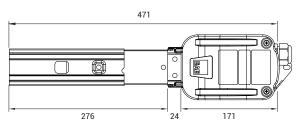
IVV C Bushar	C1 C2 C3 C5	62	A1	1	L1	L2	L3	N	CPE		3178935	KY-S-65-B1-A1	3198012	KY-S-65-B1-B-A1
KY-S Busbar	C4 C6 C7	03	A2	2	L1	L2	L3	N	L <sub>EMG</sub>	N <sub>EMG</sub>	3198022	KY-S-66-B1-A2	3198013	KY-S-66-B1-B-A2

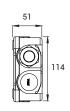
- KY-S Busbar "DALI" versions is not manufactured in 63A. If necessary, please contact our company.
- All dimensions are stated in "mm".

## ▶▶End Feeder Module (B2) Selection Table









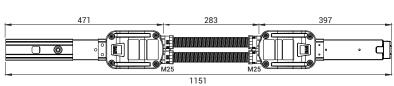
Busbar			A dalar		Со	nduc	tor C	onfig	gurat	on		Unpainted		Painted	
Product Type	Conductor Model	Current (A)	Addressing Type	Item No	1	2	3	4	5	6	Order Code	Description	Order Code	Description	
KY-S Busbar	C1 C2 C3 C5		A1	1	L1	L2	L3	N	CPE		3178932	KY-S-25-B2-A1	3197852	KY-S-25-B2-B-A1	
KY-S Buspar	C4 C6 C7	25	A2	2	L1	L2	L3	N	L <sub>EMG</sub>	N <sub>EMG</sub>	3197866	KY-S-26-B2-A2	3197853	KY-S-26-B2-B-A2	
KY-S-DALI	C8 C9 C10	23	А3	3	D1	D2	L	N	L <sub>EMG</sub>	N <sub>EMG</sub>	3197868	KY-S-26-B2-A3	3197855	KY-S-26-B2-B-A3	
Busbar	C11		A4	4	D1	D2	L1	L2	L3	N	3197870	KY-S-26-B2-A4	3197856	KY-S-26-B2-B-A4	
KY-S Busbar	C1 C2 C3 C5	40	A1	1	L1	L2	L3	N	CPE		3178934	KY-S-45-B2-A1	3197987	KY-S-45-B2-B-A1	
K1-3 Duspai	C4 C6 C7		40	A2	2	L1	L2	L3	N	L <sub>EMG</sub>	N <sub>EMG</sub>	3198003	KY-S-46-B2-A2	3197988	KY-S-46-B2-B-A2
KY-S-DALI	C8 C9 C10		А3	3	D1	D2	L	N	L <sub>EMG</sub>	N <sub>EMG</sub>	3198005	KY-S-46-B2-A3	3197990	KY-S-46-B2-B-A3	
Busbar	C11			A4	4	D1	D2	L1	L2	L3	N	3198006	KY-S-46-B2-A4	3197991	KY-S-46-B2-B-A4
KY-S Busbar	C1 C2 C3 C5		A1	1	L1	L2	L3	N	CPE		3178936	KY-S-65-B2-A1	3198032	KY-S-65-B2-B-A1	
	C4 C6 C7	63	A2	2	L1	L2	L3	N	L <sub>EMG</sub>	N <sub>EMG</sub>	3198041	KY-S-66-B2-A2	3198033	KY-S-66-B2-B-A2	

- KY-S Busbar "DALI" versions is not manufactured in 63A. If necessary, please contact our company.
- All dimensions are stated in "mm".

## ▶▶Flexible Elbow (FD) Module Selection Table







Busba	Current		Unpainted	Painted		
Product Type	Conductor Model	(A)	Order Code	Description	Order Code	Description
KY-S Busbar	C1 C2 C3 C4 C5 C6	25	3179682	KY-S 26-FD	3201403	KY-S 26-B-FD
KY-S-DALI Busbar	C8 C9 C10 C11					

KY-S Busbar	C1 C2 C3 C4 C5 C6	40	3178937	KY-S 46-FD	3201404	KY-S 46-B-FD
KY-S-DALI Busbar	C8 C9 C10 C11					

KY-S Busbar	C1 C2 C3 C4 C5 C6	63	3178938	KY-S 66-FD	3201405	KY-S 66-B-FD
-------------	----------------------------------	----	---------	------------	---------	--------------

<sup>(\*)</sup> Flexible Elbow for 63A KY-S and KY-S-DALI Busbar.

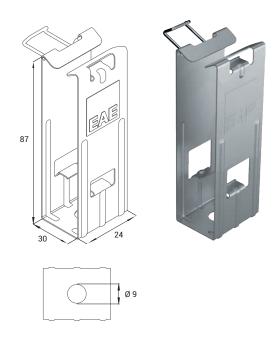
<sup>(\*\*)</sup> Flexible Elbow for 25A-40A KY-S and KY-S-DALI Busbar.

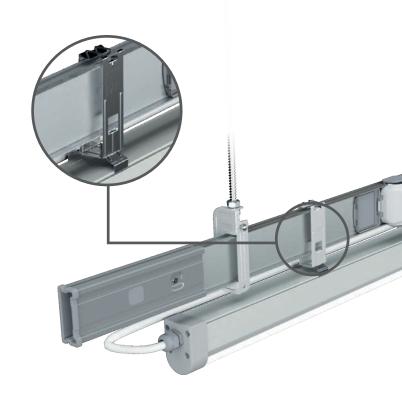
## **▶▶**Busbar and Fitting Brackets

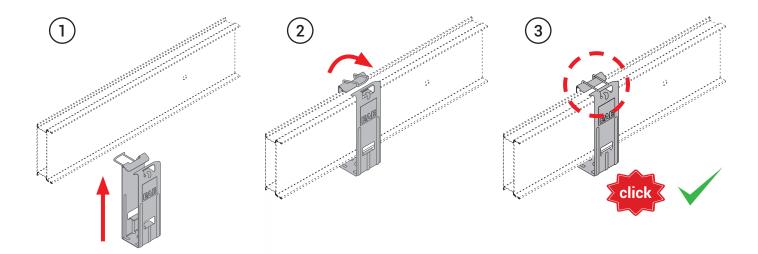
►U Hanger (KY-S)

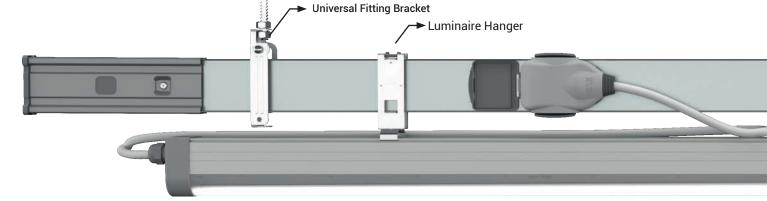
#### Luminaire Hanger

Description	ORDER CODE
U Hanger - Unpainted (KY-S)	3141733
U Hanger - Painted (KY-S)	3241417







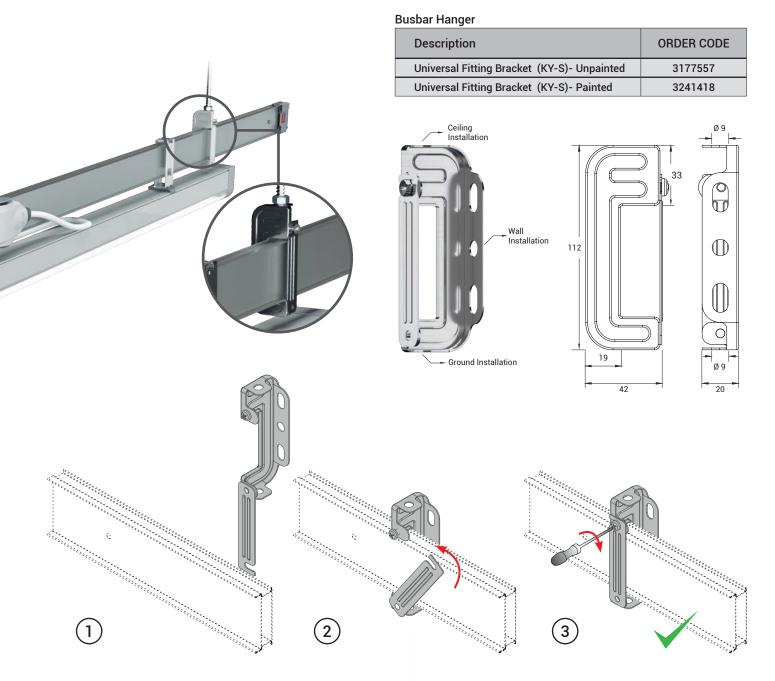


■ All dimensions are stated in "mm".

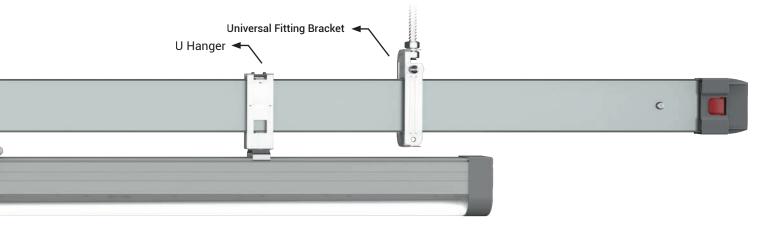
#### **▶** Busbar and Fitting Brackets

► Universal Fitting Bracket (KY-S)





CAUTION: In long KY-S busbar lines, rigid hangers should be used at maximum every 25 meters to prevent lateral vibration and oscillation.



## **▶▶**Busbar and Fitting Brackets

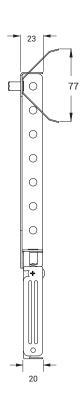
► Multifunctional Hanger (KY-S)

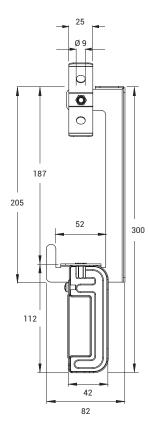


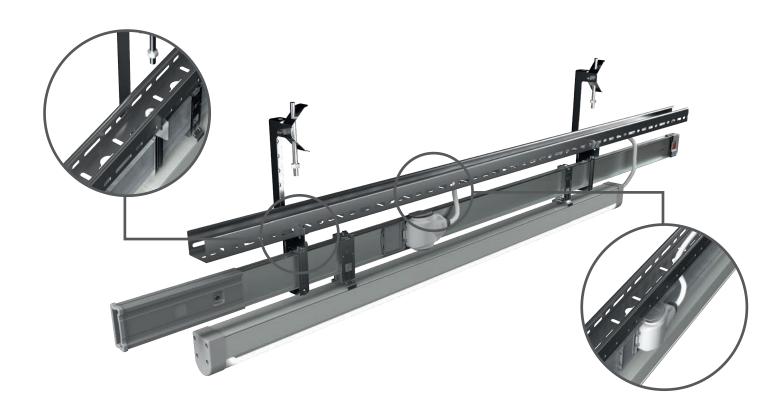
Description	ORDER CODE
Multifunctional Bracket (KY-S)- Unpainted	3241413
Multifunctional Bracket (KY-S)- Painted	3241419







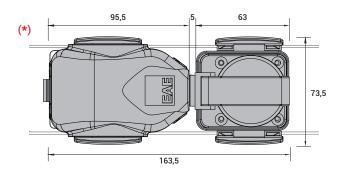


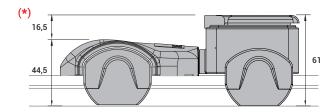


#### **▶▶**Accessories

►Integrated Cartridge Fused Tap-Off Plug with Schuko Socket Adapter (240V, L/N/PE, 1x16A Socket Included)

Description	ORDER CODE
KY 16A-FS Power Plug - L1- A1	3247085
KY 16A-FS Power Plug - L2- A1	3247086
KY 16A-FS Power Plug - L3- A1	3247088



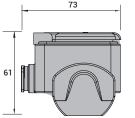


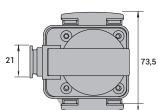
(\*) With Tap-Off Plug: 20x5mm and 15A cylindrical fuse cartridges are included.

## ► Schuko Socket Adapter (Including Socket)

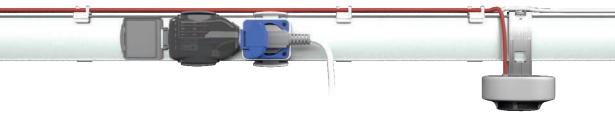
Description	ORDER CODE
KY- Schuko Socket Adapter	2111756



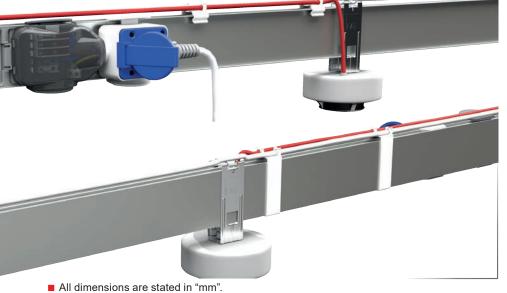




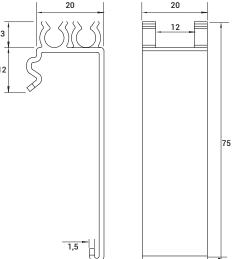
■ Tap-Off Plug is not included in the adapter and should be ordered separately if needed.



#### ▶KY-S Cable Clip



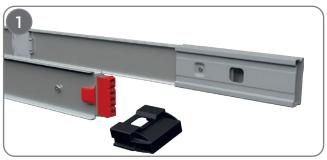
Des	cription	ORDER CODE	
KY-S	S Cable Clip		1037888
	20		20
8,3			12



#### **▶▶** Protection and End Closer Covers

**Note:** Be sure to use the end closer plastics during installation.





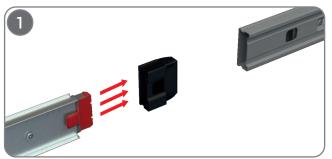
The **protection** plastics is in "black" colour and is supplied on the busbar. It will be discarded before assembly.



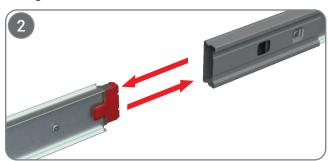
The **end closer** plastics are in "gray" and are supplied on the feeders. It will be disassembled before installation and used as an end closer.

#### **▶▶**Installing Busbar Joint

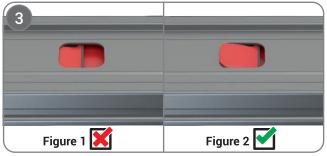
Note: There is no need for any other operation such as bolt tightening and hand tools.



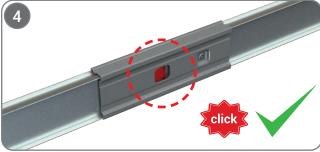
Remove and discard the protection plastics on the busbarends.



Slide one end of the busbar into the joint module on the other side.



Quickly push the two busbars so that they are clamped as in Figure 2.



Make sure you hear the clicking sound for correct connection.

#### **▶** Simple Tap-Off Plug Installation

Note: Simple plugs are supplied with the cable attached, ready to use.



Open the closed plug-in opening cover on the busbar. The tap off plug should be installed in the direction as stated in the figure. Tabs which located on the edge of the tap off plug must be installed to the current output windows which located on busbar itself with an angular position. Tap off plug should be positioned parallel to the busbar.

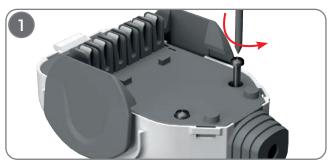


Spring type parts located on the edges of the tap off plug should be installed by pressing to the busbar by making sure of its totally merged.

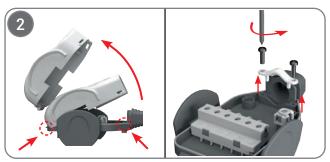
(Caution: Make sure fixing the plug to the busbar properly.)

#### ▶▶ Tap-off Plugs with clips/Cylindrical Fuse Installation

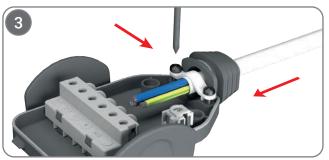




Turn the plug to be used upside down and remove two screws at bottom.



Remove the plug cover as shown in the figure. Remove the cable clamp by unscrewing the two screws.



Pass the cable through the cable gland that provides IP protection to the plug and tighten both screws sufficiently by seating the cable clamp into place.



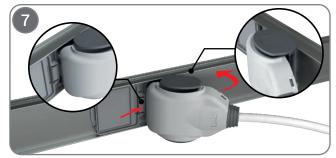
Please connect the yellow/green protective conductor to the earthing (PE) terminal, the blue neutral conductor cable to the neutral (N) terminal, and the other phase cable(s) to the relevant phase (L1, L2, L3) terminals. (Caution: Make sure that the terminal screws are tightened enough.)



Replace the plug cover, turn the plug upside down and replace the two screws on the back.



Open the closed plug-in opening cover on the busbar.



The tap off plug should be installed in the direction as stated in the figure. Tabs which located on the edge of the tap off plug must be installed to the current output windows which located on busbar itself with an angular position. Tap off plug should be positioned parallel to the busbar.



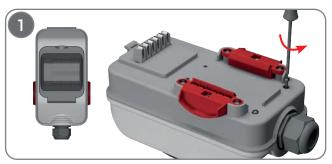
Spring type parts located on the edges of the tap off plug should be installed by pressing to the busbar by making sure of its totally merged.

(Caution: Make sure fixing the plug to the busbar properly.)

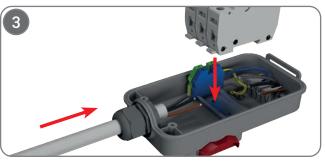
#### ▶► Miniature Circuit Breaker (MCB) Tap-Off Box Installation



**Note:** Miniature circuit breaker (MCB) is not included in the product and is supplied as an empty DIN rail box. MCB must be ordered separately.

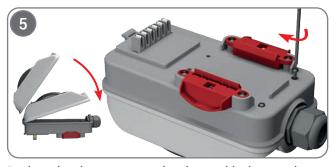


Turn the box to be used upside down and remove two screws at bottom.



Pass the cable through the cable gland that provides IP protection to the box. Install the miniature circuit breaker (MCB) not exceeding the maximum 32A on the existing DIN rail in the box.

(MCB should be in the "off" position.)

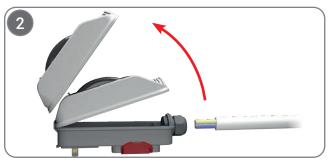


Replace the plug cover, turn the plug upside down and replace the two screws on the back.

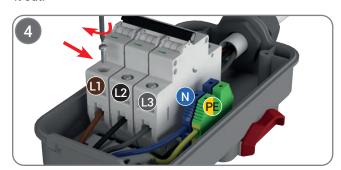


Spring type parts which located on the edges of the tap off box should be installed by pressing to the busbar by making sure of its totally merged.

(Caution: Make sure fixing the tap off box to the busbar properly.)



Open the cover of the box as shown in the figure and take it out.



Please connect the yellow protective conductor to the earthing (PE) terminal, the blue neutral conductor cable to the neutral (N) terminal, and the other cables to the relevant phase (L1, L2, L3) terminals. Connect the existing cable ends from the contacts to the input terminals of the MCB in the same way. Complete the operation by tightening the cable gland sufficiently. (Caution: Make sure that the terminal screws are tightened enough.)



Open the closed plug-in opening on the busbar. The insertion direction of the box should be as shown in the figure. Tabs which located on the edge of the tap off box must be installed to the current output windows which located on busbar itself with an angular position. Tap off box should be positioned parallel to the busbar.

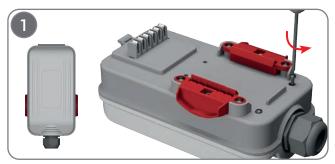


Switch miniature circuit breaker (MCB) to "ON" position and close the transparent cover.

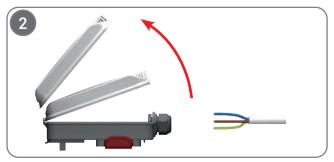
#### ▶▶Tap-Off Box with Cartridge (Cylindrical) Fuse Installation



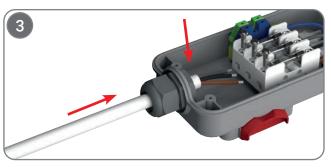
**Note:** In boxes with cartridge (cylindrical) fuses, a 10x30mm fuse base is included in the product, but the fuse cartridge is not included. The cylindrical fuse cartridge must be ordered separately.



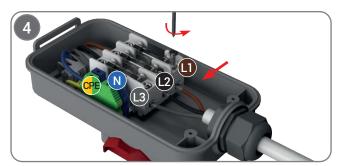
Turn the box to be used upside down and remove two screws at bottom.



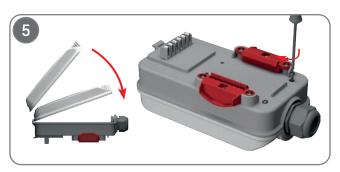
Open the cover of the box as shown in the figure and take it out.



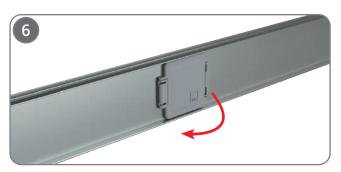
Pass the cable through the cable gland that provides IP protection to the box. Install cartridge (cylindrical) fuses up to a maximum of 32A on 10x38 mm bases.



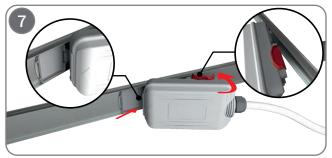
Please connect the yellow protective conductor to the earthing (PE) terminal, the blue neutral conductor cable to the neutral (N) terminal, and the other cables to the relevant phase (L1, L2, L3) terminals. Complete the operation by tightening the cable gland sufficiently. (Caution: Make sure that the terminal screws are tightened enough.)



Replace the box cover, turn the box upside down and replace the two screws on the back.



Open the closed plug-in opening cover on the busbar.



The tap off box should be installed in the direction as stated in the figure. Tabs which located on the edge of the tap off box must be installed to the current output windows which located on busbar itself with an angular position. Tap off box should be positioned parallel to the busbar.



Spring type parts which located on the edges of the tap off box should be installed by pressing to the busbar by making sure of its totally merged.

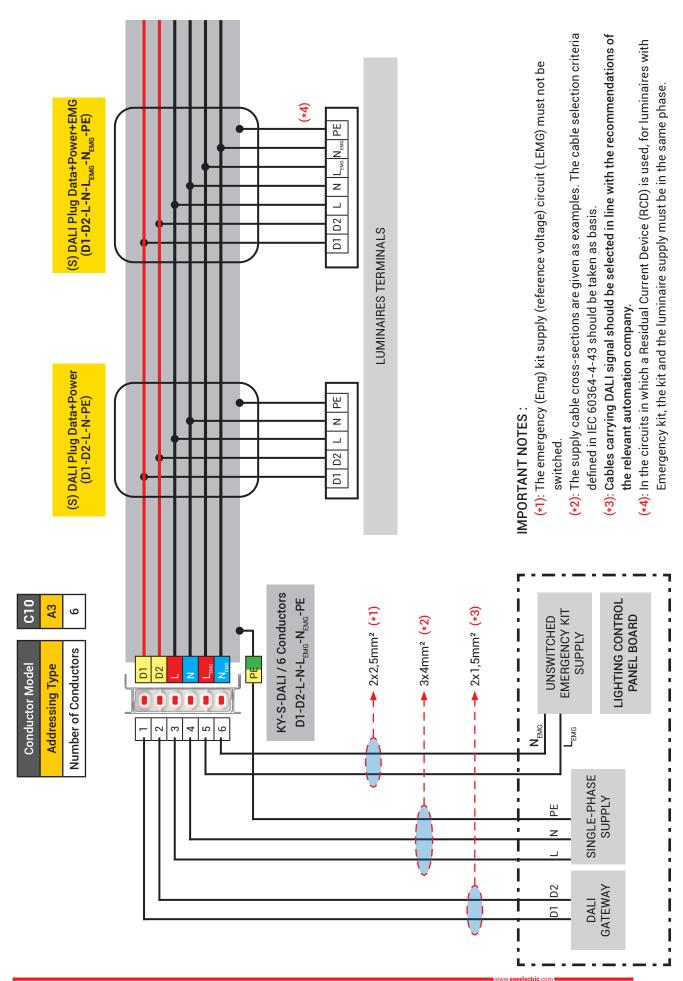
(Caution: Make sure fixing the tap off box to the busbar properly.)



**ELINE KY-S** ▶▶KY-S BUSBAR KY-S BUSBAR (5 CONDUCTORS/L1-L2-L3-N-LEMG-PE housing) PRINCIPLE CONNECTION CIRCUIT DIAGRAM (Common Neutral) WITH RESIDUAL **CURRENT DEVICE (RCD)** circuit, each line miniature circuit breakers (MCB) should be installed after the RCD as seen in the (L1-L2-L3-N-L<sub>EMG</sub>-PE) L<sub>EMG</sub> PE Power + EMG Branch (\*5): In the circuits in which a Residual Current Device (RCD) is used, for luminaires with Emergency (\*1): When using the common neutral busbar, if a residual current device (RCD) is to be used in the **BRANCH BUSBAR** \*4): The cable cross-sections are given as examples. The selection criteria defined in IEC 60364 (\*3): For "MCB" and "RCD" types and current-voltage values, the selection criteria defined in IEC z F3 L2 CAUTION: If there is a Residual Current Device (RCD) in the circuit!.. (\*2): The emergency kit reference voltage (LEMG) must not be switched. kit, the kit and the fixture supply must be in the same phase. Power Plug (L1-N-L<sub>EMG</sub>-PE) Power Plug (L2-N-L<sub>EMG</sub>-PE) Power Plug (L3-N-L<sub>FMG</sub>-PE) H 60364-4-43 should be taken as basis. z [] **LUMINAIRES TERMINALS** should be taken as basis. Power Plug (L3-N-PE) Power Plug (L2-N-PE) Power Plug (L1-N-PE) PE IMPORTANT NOTES z Ξ (L1-L2-L3-N-L<sub>EMG</sub>-PE) 90 **A2** 2 KY-S/5 Conductor CONTROL PANEL RCD / Type A (\*3) (Common N) LIGHTING BOARD **Number of Conductors** Addressing Type Conductor Model i MCB / Type B (\*3) 7 4 က 2 7 (+) 4x4mm<sup>2</sup> (\*4 i ı 2x2,5mm<sup>2</sup> 







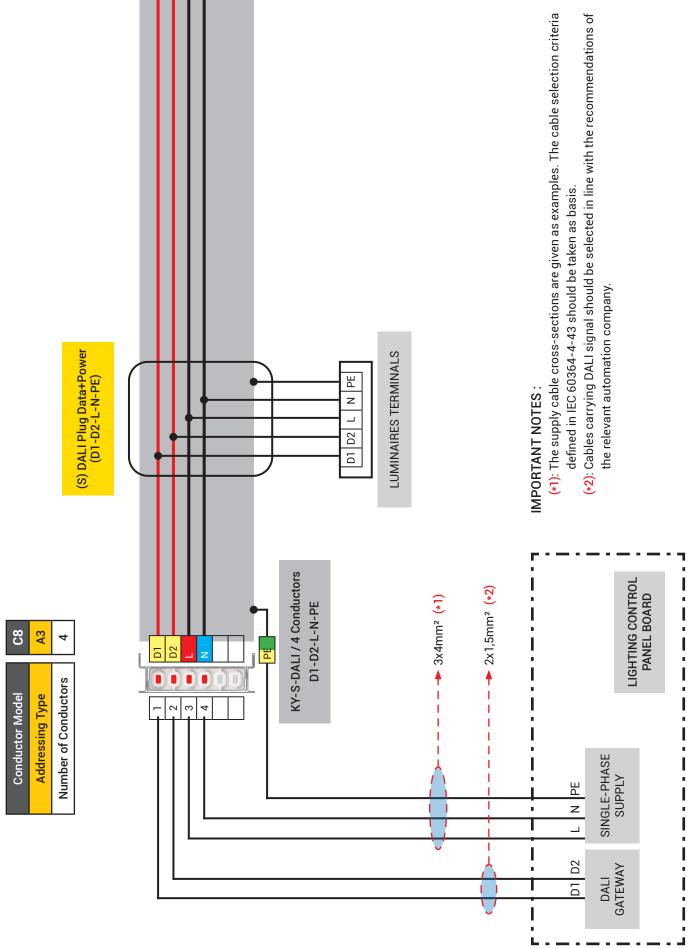
EAE

►►KY-S-DALI BUSBAR (5 CONDUCTORS/D1-D2-L-N-LEMG-PEhousing) PRINCIPLE CONNECTION CIRCUIT DIAGRAM (Common Neutral) WITH RESIDUAL CURRENT DEVICE (DCD)

(RCD) \*2): The supply cable cross-sections are given as examples. The cable selection criteria defined (\*1): The emergency (Emg) kit supply (reference voltage) circuit (LEMG) must not be switched. If a residual current device (RCD) is to be used in the panel board, this supply must be taken (\*3): Cables carrying DALI signal should be selected in line with the recommendations of the (\*4): In the circuits in which a Residual Current Device (RCD) is used, for luminaires with (S) DALI Plug Data+Power+EMG (\*4 (D1-D2-L-N-L<sub>EMG</sub>-PE) Н Emergency kit, the kit and the luminaire supply must be in the same phase. z \_ D2 CAUTION :: If there is a Residual Current Device (RCD) in the circuit!.. D1 **LUMINAIRES TERMINALS** in IEC 60364-4-43 should be taken as basis. (S) DALI Plug Data+Power Ы (D1-D2-L-N-PE) relevant automation company. z \_ after the "RCD" output. D2 **A3** 65 2 П MPORTANT NOTES: Number Of Conductors Addressing Type **Conductor Model KY-S-DALI / 5 Conductors** D1-D2-L-N-L<sub>EMG</sub>-P 2x1,5mm<sup>2</sup> D2 CONTROL PANEL LIGHTING RCD / Type A (\*3) BOARD 4 GATEWAY DALI MCB / Type B ᇫᆲ . L3 4x4mm<sup>2</sup>

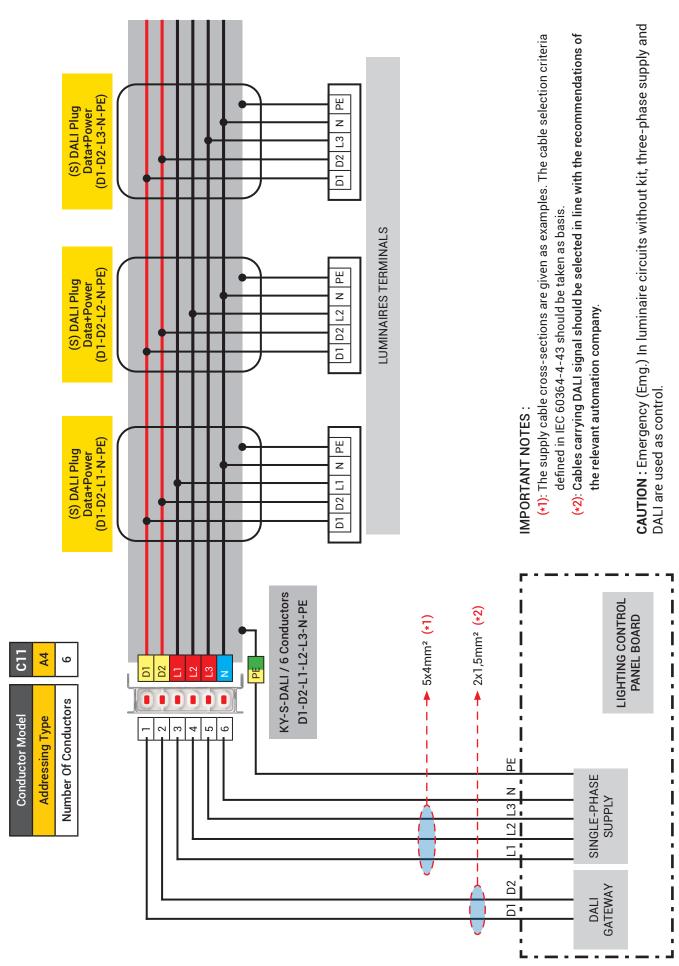






▶▶KY-S-DALI BUSBAR (6 CONDUCTORS / D1-D2-L1-L2-L3-N-PE housing ) PRINCIPLE CONNECTION CIRCUIT DIAGRAM







#### Product Overview



#### E-LINE KY-S 25-40-63A PLUG-IN BUSBAR SYSTEM PRODUCT OVERVIEW

- 1- KY-S Busbar system is manufactured in accordance with the international IEC 61439-6 standard. It has type test certificates from international test laboratories for each Current Rating.
- 2- Nominal isolation voltage of the busbar duct system is 690 V.
- 3- KY-S Busbar system tin-plated electrolytic copper with 25-40-63 A current values.
- 4- KY-S Busbar system conductors are insulated completely with "halogen free" and flame retardant plastic material. The plug-in opening points are stripped to create a connection area.
- 5- KY-S Busbar system is manufactured in standard lengths of 3m and 1m, with 3 and 1 plug-in openings in total on one side. The number of openings can be increased on special requests. In addition, there is a sealed and hinged, halogen-free and flame-proof plastic protection cover that provides IP55 protection on the plug-in openings
- 6- KY-S Busbar system is manufactured with different functions in various conductor numbers up to 6 (six) conductor structures independent from each other and with tap-off from one side. The number of conductors, phase and functional configuration alternatives are as follows;
  - a) 2 Conductor configuration: L-N-PE (housing) (Addressing type-A1)
  - b) 3 Conductor configuration: L-N-CPE (Addressing type-A1)
  - c) 4 Conductor configuration: L1-L2-L3-N-PE (housing) (Addressing type-A1) L-N-LEMG-NEMG-PE (housing) (Addressing type-A2)
  - d) 5 Conductor configuration: L1-L2-L3-N-CPE (Addressing type-A1) L1-L2-L3-N-LEMG-PE (housing) (Addressing type-A2)
  - e) 6 Conductor configuration: L1-L2-L3-N-LEMG-NEMG-PE (housing) (Addressing type-A2)
- 7- There are special insulator fixing pieces suitable for the housing structure to accommodate the conductors at the plug-in current points.
- 8- KY-S Busbar system joints are in a plug-in structure. The joint contacts of conductors are silver-plated. With the double-sided spring (jawed contact) pressure method, the joint is prevented from loosening. The joint structure with terminals that will allow loosening is not used. In addition, the plug-in type joint cover, which prevents the joints from stretching and deflection, can be easily installed without screws and without the need for any hand tools.
- 9- KY-S Busbar trunking is in IP 55 protection degree and IK07 mechanical impact withstand class.
- 10- The housing of KY-S Busbar system is 0.50 mm thick as standard and is manufactured from galvanized sheet metal. On request, it can also be manufactured with electrostatic oven painted in RAL 7038 or other colours on galvanized sheet.
- 11- The contacts of tap-off plugs and boxes are silver-plated, they have a structure to press the conductors inside the busbar from both sides, and the steel spring protected jawed contact structure that prevents loosening.
- 12- The KYS Busbar system has standard fixing apparatus and fixing elements suitable for its external structure and is produced by the manufacturer. Fixing elements can also carry 50 mm cable duct at the same time by using additional small pieces.

The cross-sections of Phase and Neutral conductors are manufactured as follows;

- 2.5 mm<sup>2</sup> for 25A; 4.9 mm<sup>2</sup> for 40A;
- 8 mm<sup>2</sup> for 63A
- PE (Housing) is used as the housing protection conductor and the equivalent copper cross-sectional area is 7.60 mm<sup>2</sup>.
- · CPE (Clean Earth-Clean Protection Conductor) is a separate and independent conductor and its cross-sectional area is same with the ones of phase conductors.
- 13- KY-S-DALI model is used in lighting automation circuits with "DALI" communication protocol, in "DALI" ballast control applications at the same time with luminaire supply.
- 14- In KY-S-DALI model, the number of conductors, phase and functional configuration alternatives are as follows;
  - a) 4 Conductor configuration: D1-D2-L-N-PE (housing) (Addressing type-A3)
  - b) 5 Conductor configuration: D1-D2-L-N-LEMG-PE (housing) (Addressing type-A3)
  - c) 6 Conductor configuration: D1-D2-L-N-LEMG-NEMG-PE (housing) (Addressing type-A3)
  - d) 6 Conductor configuration: D1-D2-L1-L2-L3-N-PE (housing) (Addressing type-A4)
- 15- The lower housing-ear, upper housing and cable gland colours and physical addressing structures (housing tabs) of the tap-off plugs and boxes to be installed in KY-S busbar and Dali and Emergency Kit (Emergency) plugs are manufactured as "different" to prevent misuse. It is possible to distinguish easily which phase the power is supplied from, the control function, plug and box types from these colours on them.
- 16- KY-S busbar can be hung with 1.5m, 2m and 3m hanger intervals, not exceeding the maximum permissible payload weights that can be applied from single or multiple points, including joints. Busbar, transport and lateral vibration and seismic hangers are manufactured originally. All of these original hangers must be used, taking into account the region, area, busbar structure and lengths used.



#### Declaration

## **CE DECLARATION OF CONFORMITY**

**Product Group** E-Line KY-S Busbar Systems

Manufacturer EAE Elektrik Asansör End. İnşaat San. ve Tic. A.Ş.

Akçaburgaz Mahallesi, 3114. Sokak, No:10, 34522

Esenyurt - İstanbul

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

#### Standard:

IEC 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 Asansör End. İnşaat San. ve Tic. A.Ş. Akçaburgaz Mahallesi, 3114. Sokak, No:10 34522 Esenyurt-İstanbul

Emre GÜRLEYEN

Date

**Document Authorized Signatory** 

10.10.2021

Elif Gamze KAYA OK Deputy General Manager

## ▶▶KY-S Busbar Product Group



## **KY-S Busbar**



- KY-S
- KY-S DALI

## **KY-D Busbar**



- •KY-D
- •KY-D DALI

## **KY-DAB Busbar**



- TRI DAD OIL
- KY-DAB-PE/CPE

## **PRODUCT TYPES**

AUSTRIA RAQ MAURITIUS GREECE

LAND SERBIA OMAN**SPAIN**AMEROON PAKISTAN BAHRAIN
TAN CYPRUS BELARUS AZERBAIJAN

**BUSBAR ENERGY DISTRIBUTION SYSTEMS CABLE TRAYS** TROLLEY BUSWAY ENERGY DISTRIBUTION SYSTEMS INDOOR SOLUTIONS SUPPORT SYSTEMS

> EGYPT VIETNAM SWITZERLAND

VAM SOUTH KOREA HUNGARY CAMEROON YEMEN U. A. EMIRATES CHILE LUXEMBOURG LITHUANIAMACEDONIA TANZANIA MACEDONIA MA

LUXEMBOURG

CAMEROON

U. A. EMIRATES BULGARIA SOUTH AFRICA QATARTURKEYGRI VIETNAMNORWAYSERBIANORWAY **SPAIN** FRANC

#### EAE Elektrik A.S. Head Office

Akcaburgaz Mahallesi, 3114. Sokak, No:10 34522 Esenyurt - Istanbul - TURKEY Tel: +90 (212) 866 20 00 Fax: +90 (212) 886 24 20

#### EAE DL 3 Factory Busbar

Makine Ihtisas Organize Sanayi Bolgesi Mahallesi, 6. Cadde, 8. Sokak, No:6 41455 Dilovası - Kocaeli - TURKEY Tel: +90 (262) 502 05 65 Fax: +90 (262) 502 05 70

Please visit our website for the updated version of our catalogues. www.eaeelectric.com



Catalogue 51-Eng.. / Rev 00 0000 pcs. 30/03/2022 D.S.

EAE has full right to make any revisions or changes on this catalogue without any prior notice.

