

# 6.9

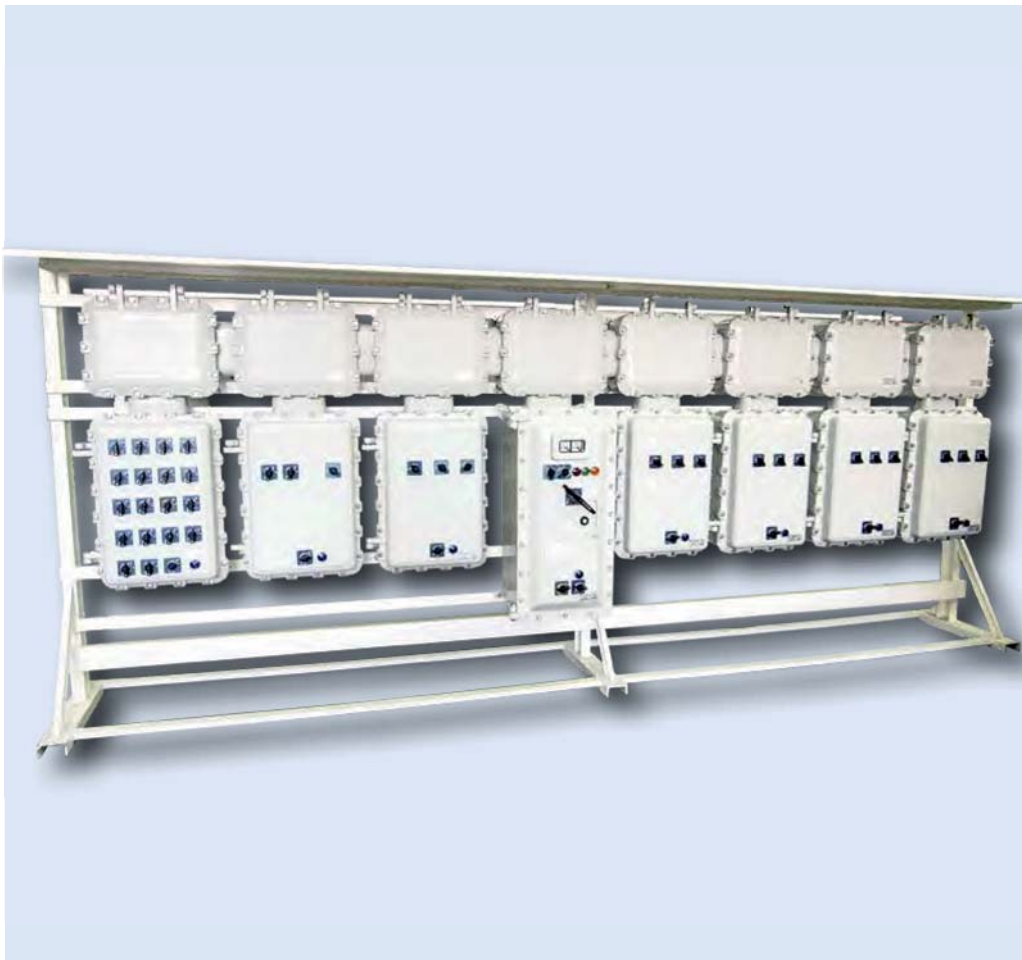
## Ex-d Distributions EJ-Series

Metal enclosures for gases in explosion group IIB with variable mounting of windows, control devices and signal lamps

### Flexible safety

Apparatus which gives off arcs or sparks can be integrated in distributions at low cost using flameproof enclosures. Built-in electrical components can be actuated by means of control units mounted from the outside on the covers.

The extensive product line for use in explosion group IIB for the hazardous areas of Zones 1 and 2 fulfils the requirements of ATEX directive 2014/34/EU. Due to the most diverse demands, individualised distribution systems can be put together. Enclosures are connected via flameproof cable entries. The design and equipment of the distributions depends on customers' requirements.



### Features

- Modular design
- Rated current up to 1200 A
- Suited for tropical and maritime climates through powder coating
- Apparatus can be operated from the outside
- Direct cable entries

### Customer specific

The distributions and built-in components are combined to customers' specifications for wall-mounting or free-standing frameworks, depending on the installation site.

Free-standing frameworks are designed according to the distributions or special apparatus required and fitted with standardised U-rails. For outdoor installations, we recommend a canopy to protect the distribution from the sun and rain.

The frameworks all feature a grey epoxy resin finish identical with that of the EJ enclosures. Hot-dip galvanised steel frameworks are available on request.

The modular design makes it possible to put together distributions and built-in components using standardised enclosure sizes.

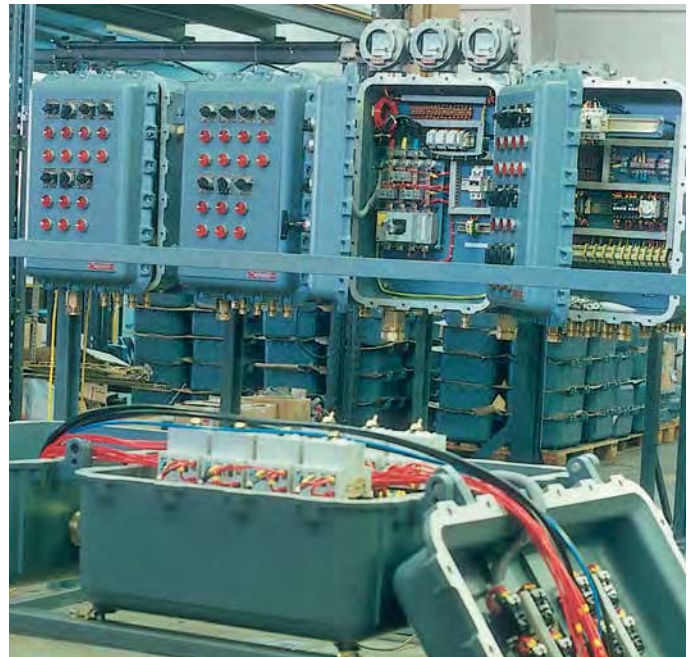
The enclosures are interconnected with cable bushings and/or bus bars and are especially designed to facilitate bus-bar allocation when putting distributions together.

Electrical components built into the enclosures can be actuated from the outside via control units mounted on the front panels. Ex-d cable entries must be used where required.

EJB enclosures are made of copper-free aluminium (<0.1%) and EJW enclosures of welded steel. All enclosures are coated with a grey epoxy resin.

Covers and enclosures are mounted on a flameproof flange plate and screwed down with stainless steel screws.

Enclosures of the types EJB 12R to EJB 23R are fitted with hinges for easy opening and closing.



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## EJB/EJW Ex-d empty enclosures



EJB 12A



EJB 14R



EJB 23R



EJB 110

### Technical data

#### Ex EJB/EJW enclosures light alloy/sheet steel

Marking accd. to 2014/34/EU	⊕ II 2 G Ex d IIB
EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature <sup>1)</sup>	-20 °C up to +40 °C
Rated voltage	690 V
Rated current	1200 A
Protection class	I
Degree of protection accd. to EN 60529	IP65
Weight	see ordering details
Enclosure material	EJB in aluminium EJB 241 M1 and M2 cast iron EJW welded steel Front panels cast iron
Enclosure colour	epoxy-resin finish, grey

<sup>1)</sup> Depend on installation



EJB 120



EJB 130



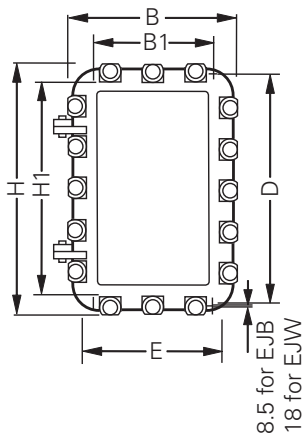
EJB 241 M1

Ordering details

Content	Power dissipation in Watt			Rated current in A	Weight kg	Rail fixing dimension mm		Enclosure size mm			Intern. space mm			Order No.
	T6	T5	T4			D	E	H	B	T	H1	B1	T1	
EJB 12 R	30	60	100	40	3.0	242	166	215	131	102	178	89	57	NOR 000 001 170 438
EJB 12 A	30	60	100	40	3.6	242	166	215	131	162	178	89	110	NOR 000 001 170 446
EJB 14 R	80	140	240	65	8.3	436	178	412	150	143	358	103	85	NOR 000 001 170 462
EJB 23 R	60	140	240	100	11.0	354	240	336	217	212	276	163	152	NOR 000 001 170 488
EJB 110	125	170	295	160	22.0	310	310	373	373	230	305	305	162	NOR 000 001 170 496
EJB 120	150	270	480	300	28.5	414	310	474	373	230	405	305	162	NOR 000 001 170 503
EJB 120 M3	150	270	480	300	28.5	414	310	474	373	230	405	305	162	NOR 000 111 170 601
EJB 120 M4	150	270	480	300	28.5	414	310	474	373	230	405	305	162	NOR 000 111 170 606
EJB 121	150	280	500	350	32.0	414	310	474	373	295	405	305	235	NOR 000 001 170 511
EJB 130	200	340	590	450	35.3	520	310	577	373	230	518	305	162	NOR 000 001 170 529
EJB 131	200	350	610	500	39.0	520	310	577	373	295	518	305	235	NOR 000 001 170 537
EJB 240	250	400	700	800	52.3	624	414	680	474	230	619	405	162	NOR 000 001 170 545
EJB 241	250	400	700	850	56.8	624	414	680	474	295	619	405	235	NOR 000 001 170 553
EJB 241 M1	250	400	700	850	54.0	624	414	680	474	295	619	405	235	NOR 000 111 170 469
EJW 250	250	340	560	1200	145.0	852	387	890	425	280	810	345	199	NOR 000 001 190 139
EJW 251	380	520	850	1200	167.0	852	387	890	425	440	810	345	320	NOR 000 001 190 197
EJW 350	380	520	850	1200	168.0	852	502	890	540	322	810	460	250	NOR 000 001 190 171
EJW 351	450	600	1000	1200	175.0	852	502	890	540	446	810	460	375	NOR 000 001 190 062
EJW 561	600	730	1000	1200	380.0	1242	687	1280	765	386	1200	685	325	NOR 000 001 190 064

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Dimension drawing



Ex-Enclosure IIB metal enclosure

## EJB-Ex-d motor starter



Motor starter

### Technical data

#### Ex EJB light-alloy motor starter

Marking accd. to 2014/34/EU	⊕ II 2 G Ex d IIB T6
EC-Type Examination Certificate	LOM 03 ATEX 2004 X
Permissible ambient temperature	-20 °C up to +40 °C
Rated voltage	690 V
Rated current	63 A
Protection class	I
Connecting terminals	up to max. 240 mm <sup>2</sup>
Degree of protection accd. to EN 60529	IP65
Dimensions (L x H x W)	see dimension drawing
Weight	see ordering details
Enclosure material	EJB in aluminium Front panels cast iron
Enclosure colour	epoxy-resin finish, grey

### Ordering details

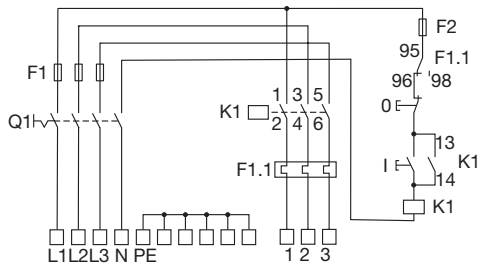
Motor capacity	Main switch	Cable gland	Weight	Module size	Order No.
<b>Type: Direct circuit</b>					
4.0 kW	25 A	2 x M 25 Ex-d	4.0 kg	1	<b>EXKO 732 101 M</b>
4.0 kW	25 A	2 x M 25 Ex-d	12.0 kg	2	<b>EXKO 732 102 M</b>
5.5 kW	40 A	2 x M 25 Ex-d	12.0 kg	2	<b>EXKO 732 103 M</b>
8.0 kW	40 A	2 x M 25 Ex-d	16.8 kg	3	<b>EXKO 732 104 M</b>
12.5 kW	63 A	2 x M 32 Ex-d	17.2 kg	3	<b>EXKO 732 105 M</b>
15.0 kW	63 A	2 x M 32 Ex-d	18.8 kg	3	<b>EXKO 732 106 M</b>
<b>Type: Star-delta starter</b>					
12.5 kW	40 A	2 x M 25 Ex-d	17.2 kg	2	<b>EXKO 732 113 M</b>
18.5 kW	40 A	2 x M 32 Ex-d	19.7 kg	2	<b>EXKO 732 114 M</b>
25.0 kW	40 A	2 x M 32 Ex-d	25.3 kg	3	<b>EXKO 732 115 M</b>
<b>Type: Reversing circuit</b>					
4.0 kW	25 A	2 x M 25 Ex-d	4.0 kg	1	<b>EXKO 732 107 M</b>
4.0 kW	25 A	2 x M 25 Ex-d	12.0 kg	2	<b>EXKO 732 108 M</b>
5.5 kW	40 A	2 x M 25 Ex-d	12.0 kg	2	<b>EXKO 732 109 M</b>
8.0 kW	40 A	2 x M 25 Ex-d	16.8 kg	3	<b>EXKO 732 110 M</b>
12.5 kW	63 A	2 x M 32 Ex-d	17.2 kg	3	<b>EXKO 732 111 M</b>
15.0 kW	63 A	2 x M 32 Ex-d	18.8 kg	3	<b>EXKO 732 112 M</b>

Other switching capacities, soft starter and variable speed drives on request

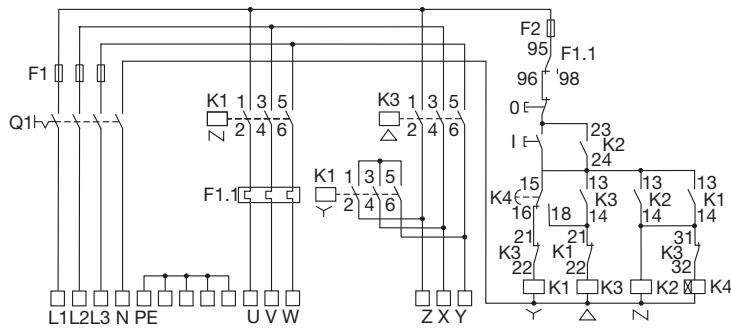


Motor starter

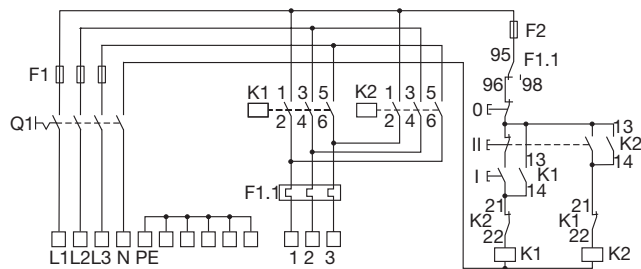
Wiring diagram | Dimension drawing



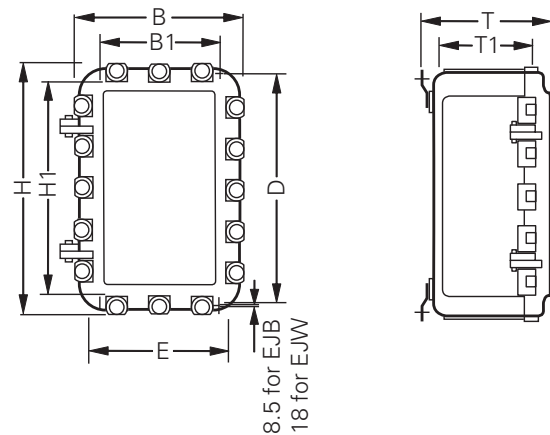
Direct on-line starter



Star-delta starter



Reversing circuit



	Version Rail fixing dimensions mm		Enclosure size mm			Internal space mm		
	D	E	H	B	T	H1	B1	T1
1	242	166	215	131	102	178	89	57
2	436	178	412	150	143	358	103	85
3	354	240	336	217	212	276	163	152

## EJB / EJW control elements - Ex-d components for cover mounting



Signal lamp



Key-operated switch



Mushroom-head pushbutton



Pushbutton

### Technical data

#### Signal lamp

Marking accd. to 2014/34/EU	⊕ II 2 G Ex d IIB
EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature <sup>1)</sup>	-20 °C up to +40 °C
Rated voltage	500 V
Rated power consumption	3 W
Connecting terminals	2 x 2.5 mm <sup>2</sup>
Degree of protection accd. to EN 60529	IP65
Weight	see ordering details
Enclosure material	body material aluminium window material white, yellow, red or green polycarbonate
Lamp cap	Ba 9 s

#### Pushbutton | Mushroom-head pushbutton | Key-operated switch

Marking accd. to 2014/34/EU	⊕ II 2 G Ex d IIB
EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature <sup>1)</sup>	-20 °C up to +40 °C
Rated voltage	500 V
Rated current	10 A
Connecting terminals	2 x 2.5 mm <sup>2</sup>
Degree of protection accd. to EN 60529	IP65
Weight	see ordering details
Enclosure material	Aluminium

<sup>1)</sup> Depend on installation



Pushbutton



Mushroom-head pushbutton



Key-operated switch



Signal lamp

### Ordering details

Description	Colour	Order No.
<b>Signal lamp</b>		
Incandescent lamp 240 V, 3 W	white, yellow, red, yellow-green	NOR 000 001 170 016
Incandescent lamp 130 V, 2.6 W	white, yellow, red, yellow-green	NOR 000 001 170 017
Incandescent lamp 24 V, 1.2 W	white, yellow, red, yellow-green	NOR 000 001 170 018
Transformer incandescent lamp 380-400/6V, 1.2 W	white, yellow, red, yellow-green	NOR 000 001 170 019
LED 230 V	white, yellow, red, yellow-green	NOR 000 001 170 116
LED 130 V	white, yellow, red, yellow-green	NOR 000 001 170 117
LED 24 V	white, yellow, red, yellow-green	NOR 000 001 170 118

Description	Colour	Inscription	Order No.
<b>Pushbutton and mushroom-head pushbutton with contact block 1NC + 1NO</b>			
Pushbutton	white	I 0 STOP START	NOR 000 001 170 004
Pushbutton lockable in pushed position with padlock	white	O STOP OFF	NOR 000 001 170 005
Pushbutton lockable in un-pushed position with padlock	white	I 0 STOP START	NOR 000 001 170 006
Mushroom-head pushbutton	red, yellow	O STOP OFF	NOR 000 001 170 007
Mushroom-head pushbutton lockable in un-pushed position with padlock	red, yellow	O STOP OFF	NOR 000 001 170 008
Mushroom-head pushbutton lockable in un-pushed position with padlock	red, yellow	O STOP OFF	NOR 000 001 170 009
Key-operated switch			NOR 000 001 170 010
Mushroom-head pushbutton with key unlocking			NOR 000 001 170 011
Pushbutton		RESET	NOR 000 001 170 012

Description	Colour	Inscription	Order No.
<b>Contact blok (without pushbutton)</b>			
1 NC			NOR 000 001 170 013
1 NO			NOR 000 001 170 014
Pushbutton label	green, red, yellow, black	II arrow ON RESET TEST	NOR 000 001 170 015

Description	Order No.
<b>Key-operated switch</b>	
0-1, 2 P 12 A	NOR 000 001 170 020
0-1, 2 P 25 A	NOR 000 001 170 021
0-1, 3 P 25 A	NOR 000 001 170 022
1-2, 1 P 12 A	NOR 000 001 170 023
1-2, 2 P 12 A	NOR 000 001 170 024
1-0-2, 1 P 12 A	NOR 000 001 170 025





Cable bushing



Rotary actuator <250 A



Rotary actuator <63 A



Window

Technical data

Window

Marking accd. to 2014/34/EU	⊕ II 2 G Ex d IIB
EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature <sup>1)</sup>	-20 °C up to +40 °C
Degree of protection accd. to EN 60529	IP65
Dimensions (L x H x W)	60 x 60 mm 75 x 75 mm 110 x 50 mm 110 x 75 mm
Enclosure material	frame material aluminium window material borosilicate glass
Enclosure colour	epoxy resin finish, grey

Rotary actuator

Marking accd. to 2014/34/EU	⊕ II 2 G Ex d IIB
EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature <sup>1)</sup>	-20 °C up to +40 °C
Rated voltage	500 V
Rated current	25 A 63 A 250 A 500 A
Degree of protection accd. to EN 60529	IP65
Enclosure material	Aluminium
Enclosure colour	stainless steel finish
Options	Locking facility for units up to 40 A. on front panel, for units > 40 A on enclosure panel.

Cable bushing

Marking accd. to 2014/34/EU	⊕ II 2 G Ex d IIB
EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature <sup>1)</sup>	-20 °C up to +40 °C
Rated voltage	690 V
Rated current	50 A 75 A 150 A
Size	4 x 10 mm <sup>2</sup> + 1 x 6 mm <sup>2</sup> up to zu 9 x 1.5 mm <sup>2</sup> + depends on use ( 50 A) 4 x 16 mm <sup>2</sup> + 1 x 10 mm <sup>2</sup> up to zu 9 x 1.5 mm <sup>2</sup> + depends on use ( 75 A) 4 x 50 mm <sup>2</sup> + 1 x 10 mm <sup>2</sup> up to zu 47 x 1.5 mm <sup>2</sup> + depends on use (150 A)
Degree of protection accd. to EN 60529	IP65
Material	bichromatised hexagonal steel
Cable sealing	high-thermal and chemical-resistant compound

<sup>1)</sup> Depend on installation



Window



Rotary actuator &lt;63 A



Rotary actuator &lt;250 A

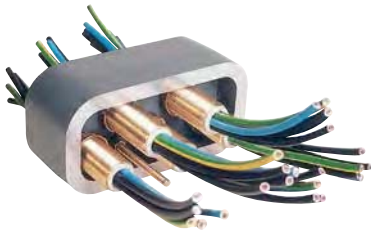


Cable bushing

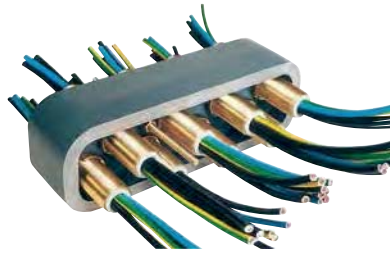
## Ordering details

Description	Order No.		
<b>Rotary switch</b>			
Rotary switch, 1-0-2, 2 P, 12 A	NOR 000 001 170 026		
Rotary switch, 0-1, 2 P, 12 A	NOR 000 001 170 027		
Rotary switch, 0-1-M, 2 P, 12 A	NOR 000 001 170 028		
<b>Rotary actuator for main switch:</b>			
Main switch, 25 A up to < 63 A	NOR 000 001 170 029		
Main switch, 63 A up to < 100 A	NOR 000 001 170 030		
Main switch, 100 A up to < 250 A	NOR 000 001 170 031		
Main switch, 250 A up to < 1000 A	NOR 000 001 170 032		
<b>Plain labels for switch</b>			
Plain labels for switch, 60 x 60	NOR 000 001 170 033		
Plain labels for switch, 70 x 70	NOR 000 001 170 034		
Plain labels for switch, 85 x 85	NOR 000 001 170 035		
<b>Rotary actuator for MCBs</b>			
Rotary actuator for MCBs 1-pole ABB	NOR 000 001 170 933		
Rotary actuator for MCBs Multipole ABB	NOR 000 001 170 925		
Rotary actuator for MCBs 1-pole M&G	NOR 000 001 170 600		
Rotary actuator for MCBs Multipole M&G	NOR 000 001 170 569		
Rotary actuator for MCBs POWER	NOR 000 001 170 565		
Thread	Content	Order No.	
<b>Cable bushing</b>			
50 A 4 x 10 mm <sup>2</sup> + 1 x 6 mm <sup>2</sup>	3/4" NPT	3P+N+PE	NOR 000 001 170 892
75 A 4 x 16 mm <sup>2</sup> + 1 x 10 mm <sup>2</sup>	1" NPT	3P+N+PE	NOR 000 001 170 909
150 A 4 x 50 mm <sup>2</sup> + 1 x 10 mm <sup>2</sup>	1 1/2" NPT	3P+N+PE	NOR 000 001 170 917
<b>Window</b>			
60 x 60 mm, Type M 6060			NOR 000 001 170 000
75 x 75 mm, Type M 7575			NOR 000 001 170 001
110 x 50 mm, Type M 11050			NOR 000 001 170 002
110 x 75 mm, Type M 11075			NOR 000 001 170 003
<b>Blanking plug</b>			
Blanking plug			NOR 000 001 170 154

## EJB / EJW interconnection bus-bar



Size 1 > 150 A ≤ 350 A



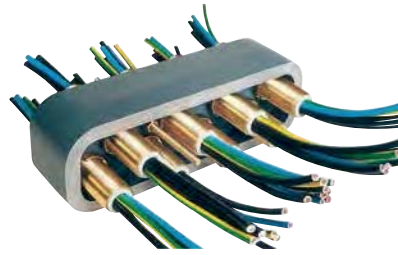
Size 2 > 630 A ≤ 800 A

### Technical data

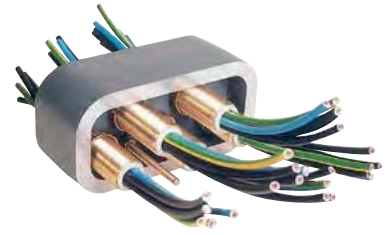
#### Bus bar for interconnection of enclosures

Marking accd. to 2014/34/EU	⊕ II 2 G Ex d IIB
6 EC-Type Examination Certificate	LOM 02 ATEX 3060 U
Application temperature <sup>1)</sup>	-20 °C up to +40 °C
Rated voltage	690 V AC
Rated current	150 A 350 A 500 A 800 A
Wire cross section	
Size 1 up to 150 A 3P+N+PE	4 x 10 mm <sup>2</sup> + 1 x 6 mm <sup>2</sup> , up to 9 x 1.5 mm <sup>2</sup> + depends on use
Size 1 up to 350 A 3P+N+PE	Aluminium coupler 208 x 102 mm, comprising 4 bars, (3P+N) 350 A, 1 auxiliary bushing max. 19 x 1.5 mm <sup>2</sup> , 1 PE-rail
Size 1 up to 500 A	Aluminium coupler 208 x 102 mm, comprising 4 bars, (3P+N) 500 A, 1 auxiliary bushing max. 19 x 1.5 mm <sup>2</sup> , 1 PE-rail
Size 1 up to 800 A	Aluminium coupler 310 x 102 mm, comprising 7 bars, (3P+N) 800 A, 1 auxiliary bushing max. 19 x 1.5 mm <sup>2</sup> , 1 PE-rail
Degree of protection accd. to EN 60529	IP65
Dimensions (L x H x W)	60 x 60 mm 75 x 75 mm 110 x 50 mm 110 x 75 mm
Enclosure material	Duroplastic
Cable sealing	high-thermal and chemical-resistant compound

<sup>1)</sup> Depend on installation



Size 2 &gt; 630 A ≤ 800 A



Size 1 &gt; 150 A ≤ 350 A

### Ordering details

Description	Enclosure size	Order No.
<b>Bus bars for interconnection of enclosures</b>		
Aluminium coupler 208 x 102 mm, comprising 4 bars, (3P+N+PE) ≤ 350 A, 1 auxiliary bushing max. 19 x 1.5 mm <sup>2</sup> , 1 PE-rail	1	<b>NOR 000 001 170 036</b>
Aluminium coupler 208 x 102 mm, comprising 4 bars, (3P+N+PE) > 350 A ≤ 500 A, 1 auxiliary bushing max. 19 x 1.5 mm <sup>2</sup> , 1 PE-rail	1	<b>NOR 000 001 170 037</b>
Aluminium coupler 310 x 102 mm, comprising 4 bars, (3P+N+PE) > 500 A ≤ 630 A, 1 auxiliary bushing max. 19 x 1.5 mm <sup>2</sup> , 1 PE-rail	2	<b>NOR 000 001 170 038</b>
Aluminium coupler 310 x 102 mm, comprising 3 x 2 + 1 bars, (3P+N+PE) > 630 A ≤ 800 A, 1 auxiliary bushing max. 19 x 1.5 mm <sup>2</sup> , 1 PE-rail	2	<b>NOR 000 001 170 039</b>

## GUB empty enclosures



GUB 00



GUB 20



GUB 30

### Technical data

#### Ex d light alloy enclosure GUB

Marking accd. to 2014/34/EU	II 2 G Ex d IIC Gb II 2 D Ex t IIC Gb
EC-Type Examination Certificate	LOM 03 ATEX 3107U
Permissible ambient temperature	-20 °C up to +40 °C -60 °C up to +55 °C (option)
Rated voltage	690 V
Rated current	max. 250 A
Protection class	I
Degree of protection accd. to EN 60529	IP67
Cable glands/enclosure drilling	<sup>1)</sup>
Dimensions (L x W x H)	<sup>1)</sup>
Weight	<sup>1)</sup>
Enclosure material	copper-free aluminium
Enclosure colour	Polyester finish grey

<sup>1)</sup> see table

### Ordering details

Type	Power dissipation <sup>1)</sup>			Rated current max.	Weight approx.	Order No.
	T6	T5	T4			
<b>Ex d light alloy empty enclosures GUB</b>						
GUB 00	60	85	150	60 A	3.20 kg	<b>NOR 000 001 160 116</b>
GUB 20	100	145	255	150 A	6.20 kg	<b>NOR 000 001 160 124</b>
GUB 30	140	200	360	250 A	10.20 kg	<b>NOR 000 001 160 132</b>
<b>Type</b>	<b>1/2"</b>	<b>3/4"</b>	<b>1"</b>	<b>1 1/4"</b>	<b>1 1/2"</b>	<b>2"</b>

#### Max. entries per side

GUB 00	4	3	2	2	2	–	–
GUB 20	6	5	3	2	2	1	1
GUB 30	10	8	5	3	3	2	2

<sup>1)</sup> Power dissipation to keep the temperature class only. Operating temperature of internal components has to be considered.

These enclosures can provide according to LOM 04 ATEX 2018 certification with the following electrical apparatus:

bus-bars, terminals, low voltage transformers, air circuit breakers, automatic circuit breakers, control and operations circuits, servomotors without ventilation, starters and ballasts for discharge lamps, electronic apparatus, associated SI apparatus, etc. according customer needs.



GUB 30

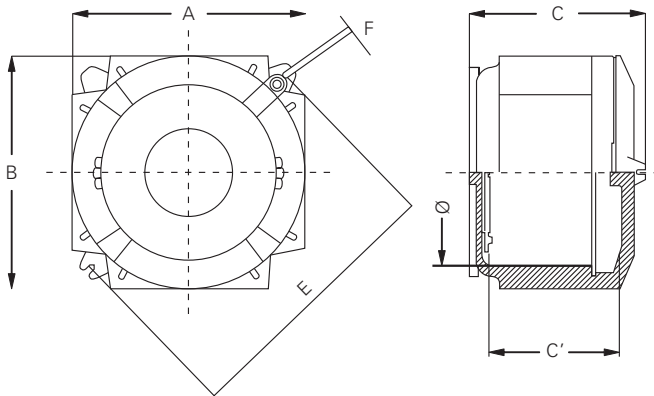


GUB 20



GUB 00

Dimension drawing



Ex d light alloy enclosure GUB

Type	External		C	Internal		Mounting	
	A	B		Ø	C'	E	F
GUB 00	170	170	135	125	74	210	9
GUB 20	215	215	195	175	139	250	11
GUB 30	333	333	180	295	120	370	11