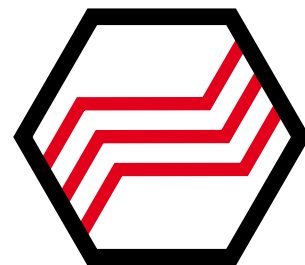


MITEX – Your partner in hazardous area



Explosion protected electrical equipment Edition E





(1) **Production Quality
Assessment Notification**

(2) Equipment or protective systems or components intended for use in potentially explosive atmospheres – Directive 94/9/EC

(3) **Notification number: TÜV 03 ATEX 2259 Q**

(4) Productcategory	Principle of protection
Electric or electronic control panels and control combinations	Flameproof enclosure
	Intrinsic safety
	Increased safety
	Powder filling
	Molding
	Protection by housings

(5) Applicant: Mitex Handels- und Prod. GmbH
Holsteinstraße 32
23812 Wahlstedt

(6) Actual manufacturer: Mitex Handels- und Prod. GmbH
Holsteinstraße 32
23812 Wahlstedt

Order number: 8000556073

Date of issue: 30.01.2013

First certification: 05.01.2004

Valid to: 05.01.2016

(7) The TÜV NORD CERT GmbH & Co. KG, TÜV CERT-Certificate authority, Notified Body No. 0044 in accordance with Article 9 of the Council Directive 94/9/EC of March 23, 1994 notifies the applicant that the actual manufacturer has a production quality system in compliance with the Annex IV to the Directive.

(8) This notification is based on the confidential audit report No. 13 202 115046, issued on 30.01.2013. This notification can be withdrawn if the actual manufacturer no longer satisfies the requirements of Annex IV. Results of periodical reassessments of the quality system are part of this notification.

(9) According to Article 10 (1) of Directive 94/9/EC the CE marking shall be followed by the identification number 0044 of TÜV CERT GmbH & Co. KG as the Notified Body.

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, benannt durch die Zentralstelle der Länder für Sicherheitstechnik (ZLS), Ident. Nr. 0044, Rechtsnachfolger der TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

Der Leiter der Zertifizierungsstelle

Schwedt

Geschäftsstelle Hannover, Am TÜV 1, 30519 Hannover, Fon +49 (0)511 986 1455, Fax +49 (0)511 986 1590

Diese Anerkennung darf nur unverändert weiterverbreitet werden.
Auszüge oder Änderungen bedürfen der Genehmigung der TÜV NORD CERT GmbH



Technically competent explosion protection of Mitex GmbH

The progress in the industry always requires better solutions in the field of explosion protection.

Especially the large industrial plants pose a high hazard potential for people and things, and therefore it needs a competent security technology.

The products of Mitex GmbH will help you optimally align your explosion protection and thereby ensure the necessary security.

Range of products for a safe explosion protection.

Cover the entire explosion protection area: This is the philosophy of our specialist company that we operate with great commitment and high expertise.

Our extensive portfolio offers:

- Control and distribution
- Terminal boxes
- Control and signal units
- Warning horn and flashing lights in various Ex-types
- Indicators from the BEKA program

The certification individually assembled equipment value our customers as well as our years of experience in all aspects of explosion protection.

We manufacture and distribute our high-quality products to companies and refineries from the following industries:

- Chemicals and petrochemicals
- Pharmacy
- Gas
- and suppliers

Take advantage of our high level of expertise and good contacts with many certification bodies. This allows us to safely, flexibly and quickly to accomplish your security projects.

When can we ensure your safety in the explosion protection area?

These are the specialists for your explosion protection

Mitex GmbH - that represents the owner Wolfgang Michaelson and his highly trained team.

Mr. Michaelson is fully committed for over three decades in hazardous areas and thus operates a very qualified contact for all questions concerning explosion protection.

He attaches great importance to a good and competent customer support, which serves a high security in the final analysis of the company.

In our workshop the team of experienced specialists manufactures the products according to customer specifications and the ATEX - Guidelines. Here are, in spite of the high quality requirements, very short planning and delivery times the rule, after which the entire Mitex team is very proud.



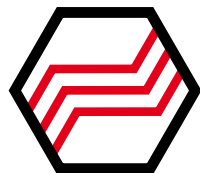
The company Mitex was founded in 1987 in Hamburg.

The move to Wahlstedt, in a more than 400-square-foot building, was carried out 1998th

There, in the heart of Schleswig-Holstein, you will find the spacious workshop, office and residential premises of the company.

For your explosion protection and safety, specialists of Mitex GmbH are happy with full commitment there.

Contact Us



Ex - guide

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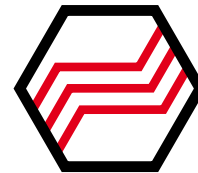
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Ex-guide

Hazardous locations are classified into zones according to the probability of a potentially explosive atmosphere occurring.

Zone 0 Gas / Zone 20 Dust

Covers areas, in which an explosive gas atmosphere is present continuously or for long periods.

Example: Inside of containers.

Zone 1 Gas / Zone 21 Dust

Covers areas, in which an explosive gas atmosphere can be expected to be present occasionally.

Example:

Areas surrounding Zone 0 or areas surrounding fitting and draining facilities.

Zone 2 Gas / Zone 22 Dust

Covers areas, in which an explosive gas atmosphere can be only be expected very occasionally and if it does occur it will exist for a short period only.

Example: Areas surrounding Zone 0 and 1

The following information should be known when Ex-equipment to be ordered:

- 1) Zone where the devices are used (see above).
- 2) Temperature class
- 3) material designation of the combustible medium for Group Discovery

Classification according to EN 60079-0 for gas

The Ex identification (gas) with an example

Ex de IIC T3 Gb

↓ ↓ ↓ ↓
A B C D

A

Symbols	Protection measure -protection degree	Norm
d	Flameproof enclosure - Gb	EN 60079 - 1
e	Increased safety -Gb	EN 60079 - 7
ia	Intrinsic safety - Ga	EN 60079 - 11
ib	Intrinsic safety - Gb	EN 60079 - 11
q	Powder filling - Gb	EN 60079 - 5
px, py	Pressurized apparatus - Gb	EN 60079 - 2

B

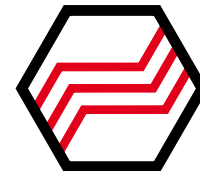
Grouping	Gas
IIA	e.g. Propane
IIB	e.g. Ethylene
IIC	e.g. hydrogen

C

Temperature classification	Max. surface temperature
T1	450°C
T2	300°C
T3	200°C
T4	135°C
T5	100°C
T6	85°C

D

Device protection degree	Execution device
Ga	"Very high" level of protection
Gb	"High" level of protection
Gc	"Enhanced" level of protection



Classification according to EN 60079-0 for dust

The Ex identification (dust) with an example

Ex tb IIIC T200°C Db

↓ ↓ ↓ ↓
E F Max. G
 surface
 temperature
 in C°

E

Symbols	Protection measure-protection degree
ta	Protection provided by enclosures -Da
tb	Protection provided by enclosures -Db
tc	Protection provided by enclosures -Dc
ia	Intrinsic safety - Da
ib	Intrinsic safety - Db
ma	Encapsulation -Da
mb	Encapsulation -Db
p	Pressurized apparatus - Db,Dc

F

Grouping	Dust
IIIA	combustible lint
IIIB	non-conductive dust
IIIC	conductive dust

G

Device protection degree	Execution device
Da	Device with "Very high" level of protection
Db	Device with "high" level of protection
Dc	Device with "Enhanced" level of protection

Additional information Labeling according to Directive 94/9EG

standing in front of the ex-Labeling and looks like this:



II 2G Ex de IIC T3 Gb

or



II 2D Ex tb IIIC T200°C Db

Device Groups above ground

Equipment category	
1	G for gas
2	D for dust
3	

Further information must be provided on the nameplate:

- Testing
- Year of approval
- Ongoing registration number

In special circumstances this is characterized by the addition

X = can be used directly, but note conditions

U = part certifies incomplete equipment will be tested with equipment,
e.g. Line bushings



Junctionbox Polyester

Robust junction or terminal box made of high quality glass reinforced polyester (GRP). Some types of housings can be linked with each other. Suitable for use in harsh industrial environment, also corrosion free for marine or platform applications. UV stable, high mechanic durability.

Technical specifications

Explosion protection

Ex II 2 GD Ex de [ia] IIC T6

Norm

EN 60079-7, EN 60079-11,
EN 60079-31

Protection

IP66

Material

Glass reinforced polyester

Ambient temperature

-25° C to +40° C

Coversealing

Nitrile

Colors

Dark gray, similar to RAL 7024

Certificate

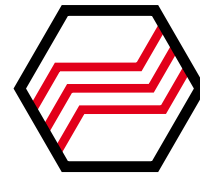
PTB 01 ATEX 1016
TÜV 04 Atex 2472



Double pole terminals can be built in most of this housings. If cable glands shall be mounted on more than one side of the housing, the maximum number of terminals can be reduced.

The types can be linked to each other with frames. The maximum number of terminals, or min block terminals and cable glands is seen in the following table.

Maximum number of terminals						Dimensions W x H x D [mm]	Type
2,5	4	6	10	16	35		
19	16	12	9	–	–	170 x 170 x 91	8146 / .051 P - 051
28	24	17	14	–	–	227 x 170 x 91	8146 / .061 P - 061
51	42	31	25	–	–	340 x 170 x 91	8146 / .S71 P - S71
51	42	31	25	20	–	340 x 170 x 150	8146 / .073 P - 073
153	84	62	50	–	–	340 x 340 x 91	8146 / .081 P - 081
153	84	62	50	22	16	340 x 340 x 150	8146 / .083 P - 083
306	168	124	100	–	–	680 x 340 x 91	8146 / .091 P - 091
204	168	124	100	–	–	680 x 340 x 131	8146 / .092 P - 092
Attention: The number of terminals partly refers to 2- or 3- row construction							



Junctionbox Alloy

Connection and distribution aluminum housing with IP65 protection. These rugged housing types can be combined together with each other to provide the right solution for every application.

Especially suitable for high mechanical loads in the toughest conditions. These enclosures can be equipped by order specifications.

If the cable entries are used on more than one side, the maximum number of terminals may be reduced.

Technical specifications

Explosion protection

Ex II 2 GD Ex de [ia] IIC T6

Norm

EN 60079 - 7, EN 60079 - 11

EN 60079-31

Protection

IP65 (Higher protection on request)

Material

Cast aluminium alloy 231

Coversealing

Neoprene

Colour

RAL 7001 (Silvergrey)

Certification

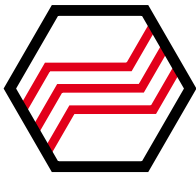
TÜV 04 Atex 2472

Ambient temperature

-20° C to +40° C / max + 55° C



Maximum number of terminals						Dimensions W x H x D [mm]	Type
2,5	4	6	10	16			
16	15	12	9	8		160 x 160 x 90	A - 270
33	30	25	19	16		260 x 160 x 90	A - 300
44	40	34	26	11		200 x 230 x 110	A - 350
44	40	34	26	11		200 x 230 x 180	A - 360
70	64	52	42	18		280 x 230 x 110	A - 370
86	86	64	52	22		330 x 230 x 110	A - 380
108	100	41	66	27		330 x 230 x 180	A - 390
174	160	65	104	44		600 x 230 x 110	A - 420
162	150	82	99	54		402 x 310 x 110	A - 450
162	150	82	99	54		402 x 310 x 180	A - 460
261	240	130	156	88		600 x 310 x 110	A - 470
261	240	130	156	88		600 x 310 x 180	A - 480
Attention: The number of terminals partly refers to 2- or 3- row construction							



Cable glands polyamide

The cable glands are used in enclosures with type of protection increased safety. You can use the full diameter size of the gland without dismantling. A dust protection is in each cable gland, with you pressed out with the cable by installation. Sealed with a sealing lip on the underside of the gland. Its also lock against rotation

Technical specifications

Explosion protection

Ex II 2 G Ex e IIC Gb
Ex II 2 D Ex tb IIC Db

Certificate

PTB Nr. 00 ATEX 3119X
or IEC Ex PTB 130034X
PTB 13 Atex 1015X

Material

Polyamide flame retardant
Seal: EPDM

Protection

IP68 (6 bar for 24 hours)

Colour

Black or
blue for intrinsically safe circuits.

Operational temperature

-40° C to +75° C

Accessories

Special key for cable gland.

Three sizes:

M16 - M20 - M25 - M32 - M40

Plugs for closing unneeded cable glands

Material:

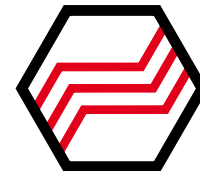
Polyamid red

Diameter 8, 12 and 18 mm

Spezial glands with kink protection are available in M12 to M32.



Cable dia. size [mm]	Entries	Thread size metric	Width across flat [mm]	Thread length	
				short	long
3 - 6	1	M12 x 1.5	16	9	15
5 - 9	1	M16 x 1.5	20	9	15
7 - 13	1	M20 x 1.5	24	10	15
10 - 17	1	M25 x 1.5	29	10	15
3 - 6	4	M25 x 1.5	29	10	15
13 - 21	1	M32 x 1.5	36	11	15
5 - 7	4	M32 x 1.5	36	11	15
17 - 28	1	M40 x 1.5	46	14	18
23 - 35	1	M50 x 1.5	55	14	18
34 - 48	1	M63 x 1.5	68	15	18



Cable glands from metal

Cable gland: Ex e or Ex d off brass type PNE, PNA are used for unarmoured cable with outer sealing ring. Also available for armoured cable.

Technical specifications

Explosion protection

Ex II 2 GD Ex d IIC

Norm

EN 60079 - 1, 60079 - 7

Protection

IP66

Material

Brass (brass nickel plated, alloy or stainless steel on request)

Certificate

INERIS 03ATEX0140X



Cable [mm]	Thread size UNI 6125 NPT	Thread size metric
5.5 - 8	1/2"	M20 x 1.5
8 - 10.5	1/2"	M20 x 1.5
10.5 - 13	1/2"	M20 x 1.5
10.5 - 13	3/4"	M25 x 1.5
13 - 15.5	3/4"	M25 x 1.5
15.5 - 18	3/4"	M25 x 1.5
15 - 18	1"	M32 x 1.5
18 - 21	1"	M32 x 1.5
21 - 24	1"	M32 x 1.5
21 - 24	1 1/4"	M40 x 1.5
24 - 27	1 1/4"	M40 x 1.5
27 - 30	1 1/4"	M40 x 1.5
24 - 27	1 1/2"	M50 x 1.5
27 - 30	1 1/2"	M50 x 1.5
30 - 33	1 1/2"	M50 x 1.5
33 - 36	1 1/2"	M50 x 1.5

Installation equipment

Distribution panels

Signal units

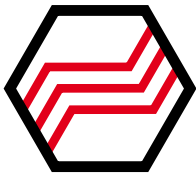
Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



Reducers and enlargement in polyamid metric

To adjust existing cable glands by too small or too large cable, these reducers or enlargement are needed. These adapters are suitable for use in zones 1 and 2 as well as 21 and 22. They are only for Ex e enclosure. For Ex d housing on request. The screwing together several reductions is not allowed.

The following versions are available:

Technical specifications

Explosion protection

Ex II 2 G Ex e II

Ex II 2 D Ex tD A21 IP66

Ambiente temperature

-20° C to +70° C

Protection

IP66

Material

Polyamid PA6

Certificate

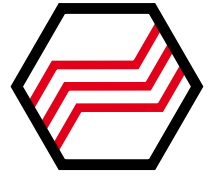
PTB 99 ATEX 3128X



Reducers											
External thread	M50	M50	M40	M40	M32	M32	M25	M25	M20	M20	M16
Internal thread	M40	M32	M32	M25	M25	M20	M20	M16	M16	M12	M12



Enlargement				
External thread	M32	M25	M20	M16
Internal thread	M40	M32	M25	M29



Installation switches Series 8030

Explosion protection to –
CENELEC – IEC.

Can be used in Zone 1 and Zone 2.

Degree of protection IP 65. Robust moulded plastic enclosure. Large switch lever with phosphorescent in-laid strip.

The 8030 series of installation switches are used for lighting installations. For greater clarity when the lighting fails, a phosphorescent strip is inlaid in the switch lever.

The switch position is shown unambiguously by the 90° action. This is especially convenient if lights and switch are in different rooms.

Technical specifications

Explosion protection

EX II 2 G Ex de IIC T6

Certificate

PTB 02 ATEX 1026

IEC Ex - PTB06.0074

Other certificates

FM(USA), BKI(Hungary)

VNIIEF(Russia)

Enclosure material

Polyester, Cover in polyamide

Cover fixing M5, Cheese head screws

Rated voltage

500 V AC, 250 V DC

Protection

IP65

Connection

2.5 mm² screw terminals

Cable entries

1 x gland M25 x 1.5

2 x plug M25 x 1.5



Junction Boxes Series 8102

Explosion protection to –
CENELEC – IEC.

Can be used in Zone 1 and Zone 2.

Equipped with 4 hood type terminlas and 1 PE connection.

Cable diameter range:

2 x 4 mm², single wire.

Robust polyester resin enclosure .

Degree of protection

IP 66 / IP 67.

The 8102 series of junction boxes is used for carrying and distributing electrical power in hazardous areas.

The boxes are made of glass fibre reinforced polyester resin.

Technical specifications

Explosion protection

Ex II 2 G Ex e II T6/T5

Certificate

PTB 01 ATEX 1136

Other certificates

FM(USA), BKI(Hungary)

VNIIEF(Russia)

Series

Ex e- and for series Ex i-circuits

Enclosure material

Polyester cover

M4 Cheese head screw

Rated voltage

690V AC, rated current max. 27 A

Terminal assets

4 Terminals, 1 PE Terminal

For 2 x 4 mm², solid

Terminal

Coat terminal

Cable entries

3 x integral sealing glands M20 x 1.5

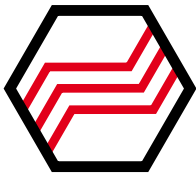
Ambient temperature

– 20° C to + 75° C (T6)

Protection

IP66





Control Device System Series 8040/ 1180- 1380

The control device system makes it possible to assemble different control units.

Due to the three available sizes and the modular design, the devices can be combined into larger units. Enclosure made of glassfibre reinforced polyester resin. As an option, flanges made of brass or polyester resin, metal plates for the assembly of cable entries and an attachable equipment identification plate are available.

Available build-in components

- Push buttons
- Double push buttons
- Mushroom, stay put
- Mushroom, stay put key release
- Indicators
- Selection switch
- Control switch
- Potentiometer

Up to 3 mounting locating can be used for each place

Technical specifications

Explosion protection

EX II 2 G Ex dem IIC T4 - T6

Certificate

PTB 01 ATEX 1105

IEC Ex PTB 06 0025

Rated voltage

max. 690 V AC

Protection

IP66

Ambiente temperature

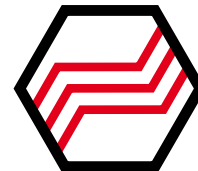
-20° C to +40° C

-50° C to +60° C

Material

Polyester resin





Plugs and sockets CES - System Series 8570, 8571, 8575, 8579, 8581

Explosion prediction according to CENELEC - IEC - NEC

Available from 16A to 125A.

Easily inserted and withdrawn. Optimal contacting by means of laminated contacts. Individual encapsulation of pins, flexibly embedded for tolerance compensation. Operation of switch by means of large switch handle.

Lockable in 0 and 1 position.

Clear indication of switching duty of switch AC23 (IEC 158-1).

Available with auxiliary contact for control purpose.

Designation label for circuit used. Plugs available in identification colours for voltage and frequency according to CEE-Publication 17. The small socket 16A has switching AC23 to DIN VDE 0660 T107 (IEC 947-3). The interlock switch is integrated in the bush carrier. Plugging the explosion predicted plug into a non-explosion predicted socket is possible, whereas a non-explosion predicted plug cannot be inserted into the explosion predicted socket.



Rated current / Number of poles	Rated voltage color	Socket Order Nr.	Plug Order Nr.	Certification
	16A, 3 pole 220-240V, 50/60Hz, blue	8570/11 - 306	8570/10 - 306	PTB 03 ATEX1227
Switch socket 16A, 3Pol.+PE	16A, 4 pole 380-415V, 50/60Hz, red	8570/11 - 406	8570/12 - 406	PTB 03 ATEX1227
Switch socket 16A, 3Pol.+N+PE	16A, 5 pole 220-415V, 50/60Hz, red	8570/11 - 506	8570/12 - 506	PTB 03 ATEX1227
Switch socket 32A, 3Pol.+PE	32A, 4 pole 380-415V, 50/60Hz, red	8571/11 - 406	8571/12 - 406	PTB 04 ATEX1060
Switch socket 32A, 2Pol.+N+PE	32A, 5 pole 380-415V, 50/60Hz, red	8571/11 - 506	8571/12 - 506	PTB 04 ATEX1060
Switch socket 63A, 3Pol.+PE	63A, 4 pole 380-415V, 50/60Hz, red	8579/31 - 406	8579/12 - 406	PTB 01 ATEX1150
Switch socket 63A, 3Pol.+N+PE	63A, 5 pole 220-415V, 50/60Hz, red	8579/31 - 506	8579/12 - 506	PTB 01 ATEX1150
Switch socket 125A, 3Pol.+PE	125A, 4 pole 380-415V, 50/60Hz, red	8581/31 - 406	8581/12 - 406	PTB 01 ATEX1150
Switch socket 125A, 3Pol.+N+PE	125A, 5 pole 220-415V, 50/60Hz, red	8581/31 - 506	8581/12 - 506	PTB 01 ATEX1161

Installation equipment

Distribution panels

Signal units

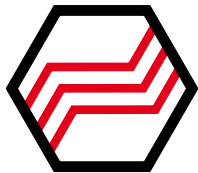
Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



Ex d enclosure GUB

The enclosures of GUB series of aluminium are suitable for Ex- ne 1 and 2. They can be fitted with nearly all electrical equipment. Normally they are supplied unpainted. Drillings, cable gands, fittings are supplied on request.

Technical specifications

Explosion protection

Ex II 2 GD Ex d IIC T6

Ex DA 21 IP66 T85°C-T200°C

Rated voltage

12-440 V DC 24-690 V AC

Frequenz

50/60 Hz

Protection

IP66

Material

Alloy (copper free)

Cerificate

BKI 06 Atex 0051

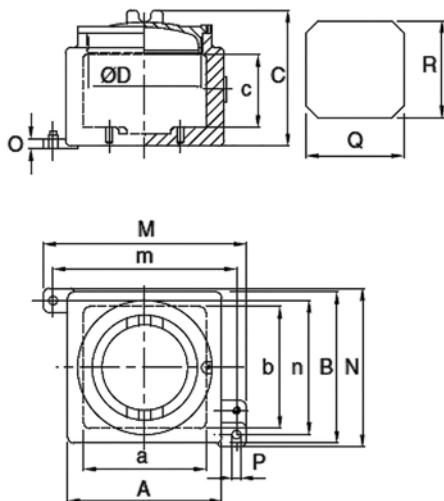
Temperatur range

-60° C to +130° C GUB

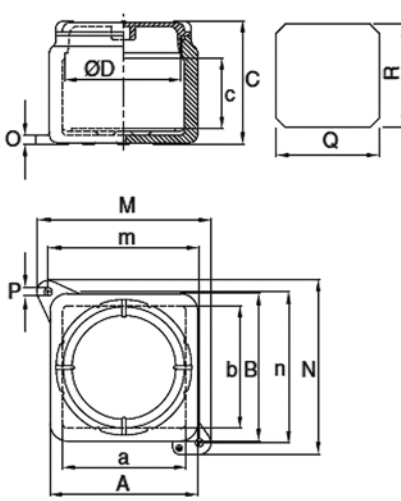
-50° C to +130° C GUBW

GUBW's are with window

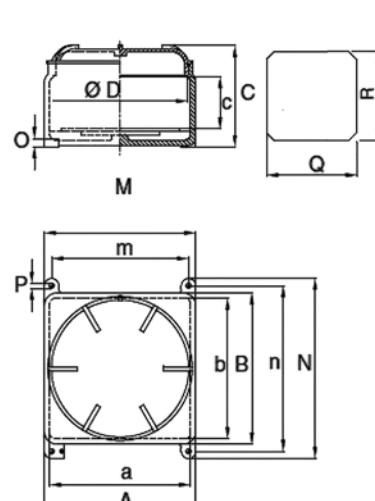
GUB00



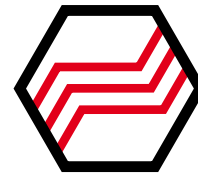
GUB0 - GUB1 - GUB23



GUB02 - GUB23 - GUB4 - GUB5



		GUB00	GUB0	GUB1	GUB02 GUBW02	GUB23 GUBW23	GUB03 GUBW03	GUB04 GUBW04	GUB5
Dimensions [mm]	A	126	168	196	230	270	305	420	600
	a	100	140	170	200	242	273	390	550
	B	126	168	198	230	315	280	420	600
	b	100	140	170	200	282	248	390	550
	C	112.5	138.5	150	165	181	238	281	365
	c	52	81	87.5	98	101.5	127	147.5	207.5
	Ø D	91	133.5	158,5	196	220	246	373	543
Attachment [mm]	M	166	198	226	230	310	305	500	600
	m	150	172	200	195	275	270	460	550
	N	130	198	226	302	350	338	420	675
	n	110	172	200	265	315	308	380	630
	O	8	10	12	12	14	25	34	25
	P	7	9	9	12	12	13	14	10
Grandplate [mm]	Q	80	110	144	150	154	220	280	490
	R	80	110	144	150	154	200	280	490
Weight [Kg]		2.0	3.5	5.0	7.0	10.5	10.5	60.0	77.0



Ex d Enclosure EJB

Enclosures of EJB series in aluminium are certified for use in Zone 1 and 2 (Zone 21 and 22). They can be fitted with nearly all electrical equipment.

Technical specifications

Explosion protection

Ex de IIB T3-T4-T5

Ex DA21 IP 66 T85° C - T200° C

Rated voltage

max. 500 V

Rated current

max. 310 A

Protection

IP66

Material

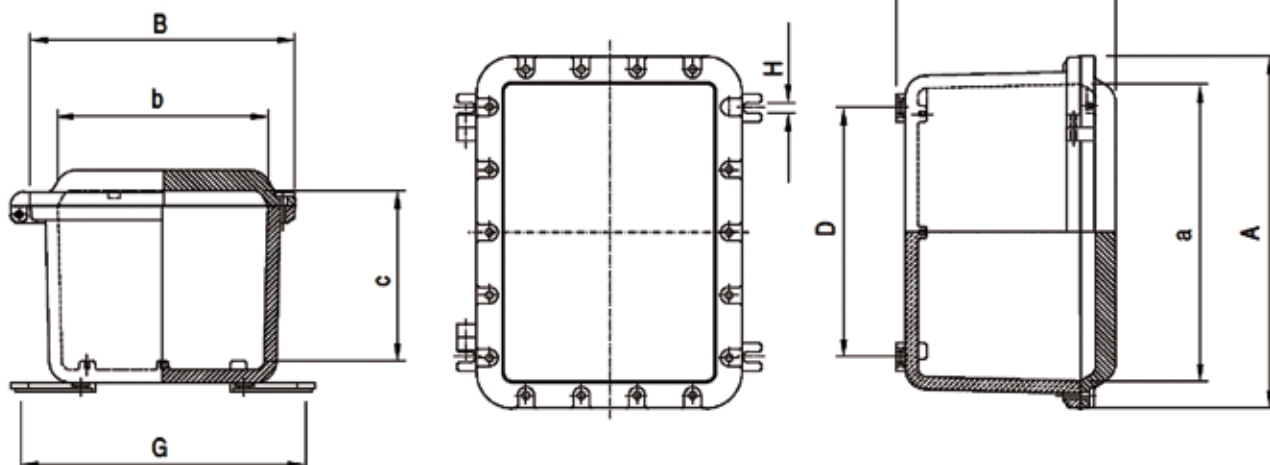
Aluminium

Certification

CESI 02 ATEX 075

Norm

EN 60079-1



	EJB 11	EJB12	EJB123	EJB13	EJB15	EJB16	EJB21	EJB22	EJB23	EJB30	EJB31	EJB41	EJB51	EJB61	EJB63	EJB64	EJB81	EJB91
A	175	173	300	260	240	164	285	300	310	410	415	440	566	670	670	660	872	963
B	175	111	111	200	150	114	245	200	260	315	315	210	366	470	470	460	264	660
C	132	106	104	91	70	53	179	234	185	178	259	126	269	372	245	208	202	472
a	115	143	270	200	200	134	220	235	250	351	351	410	500	550	600	600	820	844
b	115	81	81	140	110	84	180	135	196	251	251	180	300	400	400	400	210	544
c	93	76	79	56	56	38	133	178	145	119	210	100	207	320	188	151	155	369
D	173	195	330	162	–	171	160	195	198	294	294	470	360	500	500	500	176	700
G	78	83	83	195	–	–	245	188	250	295	295	180	336	440	440	455	885	650
H	13	10	10	12	–	7	13	13	12	13	13	12	13	13	13	13	13	18
Kg	4	5	6	7	3	2	13	10	15	20	24	12	36	58	49	47	36	214

Installation equipment

Distribution panels

Signal units

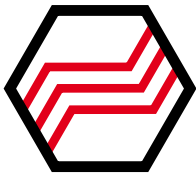
Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



Ex - Control units

In order to monitor and control large plants and machinery in hazardous areas, control boxes made of polyester or aluminum are essential. These can be configured according to customer requirements. The number of slots depends on the size of the housing. Individual control boxes are combined via connecting flanges. Five different versions out of polyester are available in various heights. In aluminum housing 8 sizes with various heights are available.

Equipped with:

- Control devices
- Control switches
- Poti's
- Indicator lights
- Illuminated pushbuttons
- Measuring instruments

Options:

- Cover hinge
- Flanges

Technical specifications

Certification

Ex dem IIC T4 - T6
Ex tD A21 IP65 T80° C

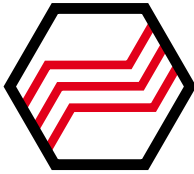
Protection

IP65 / IP66 auf Anfrage

Material

Polyester, Alloy





Ex de custom control

Customer made switch-, control- and distribution housings Ex II2G. The type and size of the housings will be planned by customers informations. In the Ex d housings type GUB (gas group IIC) and EJB (gas group IIB) can be built in most of standard industrial electrical switch- and control parts. The housings can also be fitted with windows in the cover to make possible further display features. For electrical wiring we use certified line bushings. The complete control system can also built in a protection housing of different materials as GRP or stainless steel. It is recommended to be mount control switches and pilot lamps then in the door of this housing.

Available accessories:
lid hinge, viewing window on request

Technical specifications

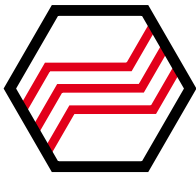
- Explosion protection**
Ex II 2 G Ex de IIB/C T4...T6.
Depending on fittings
- Certificate**
TÜV 04 ATEX2472
- Rated current GUB**
Max. 125 A
Depending on size of housing
- Rated voltage GUB**
12 – 440 V DC, 24 – 690 V AC
- Rated Current EJB**
Max. 610A
Depending on size of housing
- Rated voltage EJB**
750 V
- Connection**
Wiring on terminals
- Protection**
IP66
- Dissipated power**
Individual to temperature class and size
- Material**
Ex d = Alloy(copper free) or stainless steel
Ex e = Glass reinforced polyester or Alloy(copper free)

- Fittings in Ex d housing**
- Contactors to 400 A
 - Fuses to 400 A
 - Motor protection relays to 200 A
 - Transformer to 2000 VA
 - Power supply, logik relay, programmable logic controller, electronic parts, auxiliary relay, intrinsically safe switching amplifiers.

- Fittings in Ex e housing**
- Switch and display parts, meters, terminal strips, cable glands



Installation equipment
Distribution panels
Signal units
Lighting
Indicators
I.S. and safe indicators
Special solutions
Accessories



Ex p special solutions

Pressurization by IEC 60079 - 3 EN 60079 - 2

The function of purged Ex proof is explained as follows:

Accumulation of an explosive atmosphere is prevented by a low overpressure from inside to outside the housing.

The housing is filled and purged with any inert gas or dry clean air, nitrogen. The certified electronic control unit is responsible for power cut off if the pressure difference becomes too small, also for start after power on. In cases when Ex d will be to go to a great extent, or when the space is too poor, could a purged cabinet be an attractive solution. Complete switchgears with power supply, control units, PLC, switches, pilot lamps, displays in standard version will be built in special purged cabinets with a high ingredient protection class.

During operation the inside of the airtight Ex p enclosure must have a minimum 0.5hpa overpressure to prevent penetration of the hazardous gas. If the pressure difference falls below this, the controller automatically disconnects power from the equipment inside the enclosure via a contactor. This contactor may be mounted outside the hazardous area, or in an Ex d enclosure close to the Ex p enclosure. At start-up, before the controller applies power to the equipment inside the Ex p enclosure, the enclosure is automatically purged with at least five times the volume of the housing to remove all remnants of the hazardous gas.

When the purge is complete, the controller applies power to the equipment inside the Ex p enclosure. Afterwards the main power supply will be switched on. If the pressure difference between housing and environment falls below the critical value of 0,5 Hpa, or the free flow of inert gas is disturbed, the main lines will be cut off.

The Ex system controls all of this functions and controls the main supply i. E. via an airbrake contactor. This contactor can be mounted outside of the hazardous area or in an Ex d housing near or in the Ex p cabinet.

Main functions of Ex p systems:

- a) Small control unit with a digital display for remain purging time.
- b) Ex-valve for control of gas or air
- c) For purge gas can be used clean air or any non inflammable gas.

Technical specifications

Explosion protection

Ex de [ib] IIC T4

Certificate

TÜV 02 ATEX 1801

Voltage

230 V 50 Hz, 115 V oder 24 V

Current

0.03 A at 230 V

Contact load

230 V, 4 A, cos = 1

This purged cabinets are special customer made in IP 55 up to IP 65 with special seals to hold the leakage small.

The size can be 6000 liters and more. Complete control houses are available, for the staff they need personal door locks.

The Ex p control unit can be used in two various ways:

- 1. – Only refill of leakage quantity.
- 2. – Steady purging with high flow for cooling.





Siemens Logo in hazardous areas

Ex-Logo, programmable from outside in Ex-Area possible! Standardversion with 8 inputs and 4 output contacts. Max version with 24 inputs and 16 outgoing contacts. Special units with analog inputs or outputs, PT 100 and communication module is also possible. The power supply with Logo Power from 100 to 240 VDC with current from 1.3 A ; 2.5A or 4 A.

Difference size of flameproof enclosure varied of Logo components. Programmable with 6 pushbuttons on frontside, display behind window. Programmable as timer, counter or control unit.

Technical specifications

Explosion protection

Ex II 2 GD Ex de IIC T5

Certification

TÜV 04 ATEX 1024

Protection

IP65

Operating Voltage

24 V AC/DC, 115 V AC to 230 V AC

Connection

Wiring on terminals

Material

Ex d = Alloy (Copper free)

Ex e = Glass reinforced polyester



Installation equipment

Distribution panels

Signal units

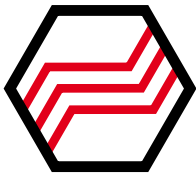
Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



Roof mounted air cooling unit for zone 2

The Mitex roof mounted cooling unit offers a cost effective alternative to chemical plants or refineries in zone 2 for 20 and 40 foot containers with process measurement technology for air conditioning. The robust housing made of stainless steel (V4A) is ideally suited to this area and can be completely removed for maintenance via quick release buckles. The fan hat two stages to allow different fan air service.

Technical specifications

Explosion protection

Ex 3 II G Ex nA de [ia] IIB T3 X

Certification

TÜV 04 Atex 2472 + Certificate of compliance and acceptance testing by GL

Operating Voltage

220 - 240 V, 50 Hz

Max. Fuse

16 A delay

Cooling power

3.95 kW (13,500 BTU/h)

Coolant

R 407 C

Ventilation

2 - stage

Max. air flow rate

544 cm³/h

Wall thickness

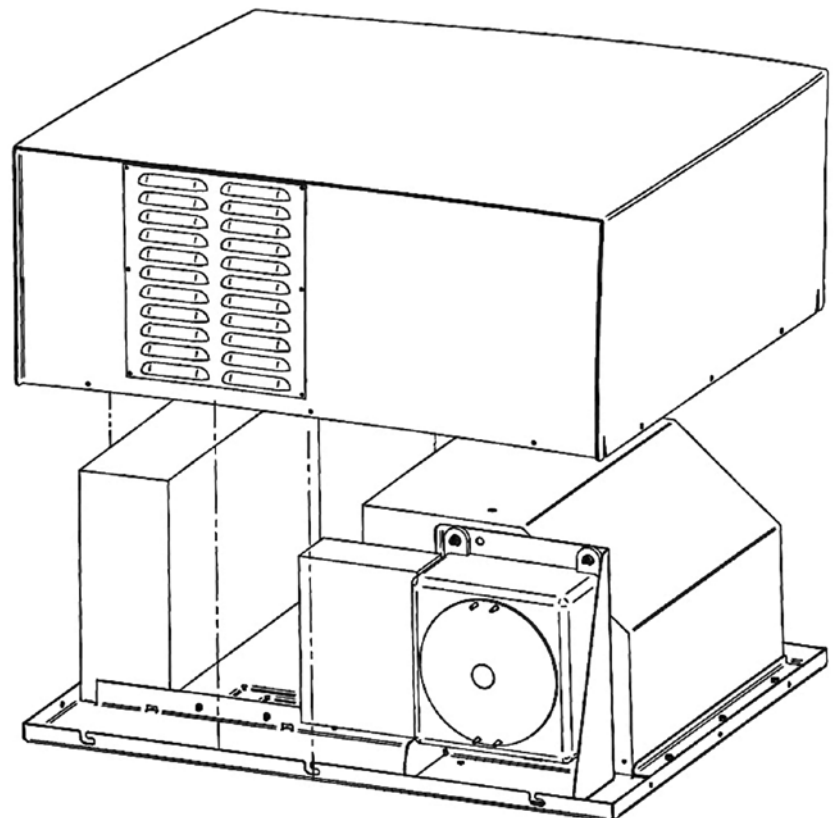
Up to 15 cm

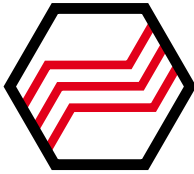
Weight

Approximately 60 kg

Dimensions

845 mm x 362 mm x 920 mm
(W x H x L)





Miniature beacon

The mini-flash is a small high-intensity beacon indicator for mounting on- or inside a device. It is using for signaling in a loud environment, where an acoustic alarm cannot be heard or if it is undesired in a control room. Moreover, the position of a flashlight can be found more easily than that of an acoustic source. The high intensity flashtube and the electronics are incorporated in a very small, hermetically sealed Ex d housing. The electrical connection is via cable ends. The device is maintenance free and long life. Spare parts are not required. A fuse is built in. Additional to the 230 V AC version a 24 V AC/DC version is also available.

The following mounting possibilities are provided for:

1. Screwed on the wall of a control cabinet, or
2. By means of a mounting bracket (to be ordered separately), up to three mini-flashes can be mounted side by side on a wall, or
3. Inserted in a drilled hole in the front panel. With this kind of mounting, only the lens and the supporting frame (standard dimension 48 mm x 48 mm) can be seen from outside. The mounting set for this kind of mounting must be ordered separately.

The device is fixed with four M3 screws.

Technical specifications

Explosion protection

Ex d IIC T6
CE 0032 II 2 GD T80°C IP68
PTB 03 ATEX 1131

Operating Voltage

230 V AC

Consumption

Approx. 0.03 A

Functional limit

150 V AC

Flash energy

2.5 J (Ws)

Flash frequency

1 Hz (60 Blitze/Min.)

Operating time

100% (continues operation)

Life expectancy

8000000 flashes with
-3dB luminous intensity

Ambient temperature

-20° C to + 40° C

Protection

IP68 (IEC 144)

Housing

Al hardcoated, plastic dome, shock resistance 7Nm

Colour

clear, yellow red or green

Weight

Approx. 250gr (8.8oz)

Connection

Cable tail 3 x 0.75 mm² 1.5 m long (3m, 5m or longer)



Installation equipment

Distribution panels

Signal units

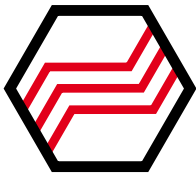
Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



Xenon Beacons

Ex d. Weatherproof XB9

These compact and lightweight beacons have been designed for use in potentially explosive atmospheres and harsh environmental conditions. The beacon housing, including the flame paths, is manufactured completely from a UV stable glass reinforced polyester which is ideally suited for use offshore and onshore. Stainless Steel screws and mounting bracket are incorporated ensuring a totally corrosion free unit.

Units can be painted to customer specification and supplied with identification labels.

- For Zone 1 & 2 Ex d IIC T6
- ATEX Certification Ex II 2G
- CENELEC Certification
- BASEEFA Certification
- More on request
- IP66 & IP67
- Temperature range: -55°C to +55°C
- Protected against corrosion
- GFK Version
- Different signal colors available
- Additional glass bowl guard available
- Optional cable gland with pre-assembled cable
- Stainless steel screws and holder
- Replaceable Flash Tube

Technical specifications

Certification

BASEEFA Ex d II CT6 (T5)
Zert.-NR.BAS00ATEX2031
Zone 1 and 2

Material

Housing and cover:
Glass reinforced Polyester
Lens: tempered glass
Cover screws and mounting bracket
316 stainless steel

Paintwork

Natural black or according to customer specifications

Electrical data

DC			AC 50 / 60Hz	
12 V	24 V	48 V	110 V	240 V
max. 0.74 A	max. 0.32 A	max. 0.18 A	max. 0.1 A	max. 0.06 A
9 W	8 W	9 W	11 W	15 W

Flash energy

5 Joule (Ws)

Effektive intensity

29 Cd

Maximum intensity

22213 Cd

(Intensity applies to colorless lens at 1 Hz flash rate. A report can be requested)

Lenses factor for color

Red about 0.15, blue about 0.12, amber about 0.51, green about 0.49, yellow about 0.86

Weight

1.6 Kg

Temperature range

-55° C to +40° C (T6),
-55° C to +55° C (T5)

Protection

IP66 and IP67

Connection

3 x 2.5 mm²

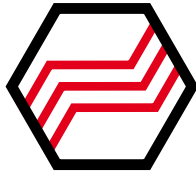
Mounting

Wall construction with back-mount

Cable entry

1 x M20 or PG 13.5 optional
1 x 3m pre-assembled cable with cable gland





Combination of Beacon and sounder Ex

With growing automation of plants is often asked for alarm units for non normal conditions. A combination of an acoustic and visual alarm is recognized as the most effective way of attracting an operator's attention, particularly when the operator is not close to the alarm.

This product consists of a sounder and a beacon plus a sounder silence relay contained in one package which is easy to install in a hazardous area. After the alarms have been activated, to avoid disturbance the sounder can be silenced for the alarm duration by operating an external pushbutton which may be located close to the combined alarm. This combination makes possible to give both signals in a hazardous area.

It consists of beacon, sounder and quit relay in only one complete ready for connect unit. For fast low cost installation there is only one cable to be mounted. In the terminal room are fitted the terminals, fuses and relay. The quit pushbutton shall be mounted near to the beacon and sounder combination

Technical specifications

Explosion protection

Ex de IIC T5

Certificate Beacon

BAS00ATEX2031

Certificate Sounder

BAS00ATEX2097X

Certificate Terminal

TÜV 04 Atex 2472

Electrical data

24VDC, oder 230VAC

Connection

Terminal strip

Protection

IP65

Enclosure material:

Glass reinforced polyester

Colors

Clear, yellow, orange, red, green, blue

Flash energy

5 Joule (Standard)
Optional: 10 Joule , 15 Joule

Volume

118dB(A) in 1m distance

Dimensions

Approx. 535 x 210 x 400 (HxWxD)

Attachment

6 Screws 6.5 through
ground plate

Fixing

190 x 320 mm



Installation equipment

Distribution panels

Signal units

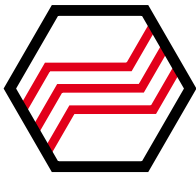
Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



Sounder Ex d/ Ex de weatherproof Series DB3 and DB3P

This range of light weight all GRP, flameproof sounders is intended for use in potentially explosive gas and dust atmospheres and has been designed with high ingress protection to cope with the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries. The flame paths, flare and the body, are manufactured completely from a UV stable glass reinforced polyester. Stainless steel screws and sinter are incorporated thus ensuring a corrosion free product.

A tapered flame path is used to overcome the problems of assembly of parallel spigot flame paths.

An optional Ex e terminal chamber is available. An uncertified version is available for use in non explosive atmospheres.

Zone 1, Zone 2 and non-Ex use.

- Exde IIC T5.
Optional Exe terminal chamber.
- CENELEC -and
BASEEFA certified.
- IP66 and IP67.
- All GRP corrosion free flamepaths.
- Up to 118dBA output.
- 27 tones, user selectable.
- Tones comply with
UK00A/PFEER guidelines.
- Any two tones may be switched
via the external voltage supply.
- Tones may be programmed to
customer specification.
- d.c. version accepts any voltage
between 12V d.c. and 48V d.c.
- End of line resistor option.

Technical specifications

Certification

BAS 00 ATEX 2097 X
BAS 00 ATEX 2098 X

Material

Material: Body & horn in anti-static, UV stable, glass reinforced polyester. Swivel bracket & captive cover screws in stainless steel.

Color

Body and horn, natural black or epoxy paint coated to client's color requirements.

Sound output

115dB(A) ± 3dB(A) (tone dependent)

Weight

Approx. 1.5 Kg depending on Typ.
(plus 0.5 Kg for Ex e Version)

Ambient temperature

-55° C to +70° C

Protection

IP66 and IP67

Power supply

Up to 48V DC, up to 254V AC

Voltage	Current consumption [mA]	Fuse rating [A]
12 V DC	760	2.5
24 V DC	380	1.5
48 V DC	190	0.5
110 V AC	135	0.4
120 V AC	124	0.4
220 V AC	68	0.2
240 V AC	62	0.2
254 V AC	59	0.2

Terminals

4 x 2.5 mm² (AC),
6 x 2.5 mm² (DC)

Grounding

Available for Ex de version

Installation

Mounting bracket with locking device

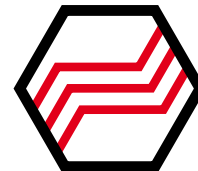
Label

Custom labeling

Cable entry

1 x 20 mm Ex d.
2 x 20 mm Ex de.





LED Traffic light Eco-friendly and energy saving

Maintenance free.

As an alternative to filament bulbs in hazardous areas, we offer this LED lamp which is usable as a traffic or status light. A cluster of 48 LED's provides high brightness which enables the light to be visibility from more than 100 meters. Combinations of two or three lights with different colors can be assembled.

The cable entry at the individual unit from above or below. Twin and triple units have a rear junction box which contains terminals and cable glands.

As an option, for twin and triple combinations we offer a mounting bracket which allows the direction of maximum light output to be adjusted.

Now with:

- 48 bright LEDs
- By request in the execution „super bright“. Power consumption 5VA at 24 V DC 200mA
- doubling the luminous area
- 10-times brighter
 - red ~ 250000mcd
 - green ~ 150000mcd
- Power consumption 2.3VA
- Current is reduced to less than 100mA at 24V DC
- 5 years warranty
- Electronics repairable
- Available colors: red, green, yellow, green, blue, white

Technical specifications

Explosion protection

Ex de IIC T 6

Certificate

TÜV 04ATEX 2472

Voltage

220 - 240 V AC or 24 V DC

Current

0.2A (DC) / 0.023 A (AC)

Fuse

0.25A (DC) / 0.1A (AC)

Power

2.3VA, Super bright 5VA

Protection

IP65

Temperature range

-20°C to +50°C

Weight

1 light ~6 kg
2 lights ~16 kg
3 lights ~24,5 kg

Dimensions

1 light 180x180x155mm
2 lights 250x380x205mm
3 lights 250x560x205mm

Cable entry

M20 x 1.5 for cable dimensions from 5.5 to 8mm, 8 to 10.5mm or 10.5 to 13mm

Cable

1 light H07RN-F 3x1
2 lights H07RN-F 4x1
3lights H07RN-F 5x1

Colors

1 light by request
2 lights red/green
3 lights red/yellow/green



Installation equipment

Distribution panels

Signal units

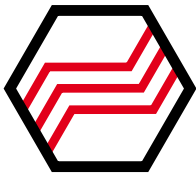
Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



RF - Motion detector or terrorist guardian in hazardous areas

Invisible installation behind non-conducting walls (glass, wood, plastic, masonry). As a result, vandalism and sabotage secured.

The motion detector captured movements only and is not sensible to heat or light sources.

Robust aluminum housing with polycarbonate window.

With IP68 flooding is possible.

Use in Zone 1, 2 (gas- Ex) and Zones 21 and 22 (dust explosion).

Technical specifications

Explosion protection

Ex d IIC T5/T6,
0032 II GD T80 / 95° IP68
PTB 03 ATEX 1131

Operation voltage

230 V AC \pm 15%, 50-60Hz

Current consumption

Approx. 30 mA

Switching capacity

250 V , 8 A, 2 KVA (changer)

Reach

1 to 8 m smooth

Dawn setting

2 to 2000 lux

Follow-up time

10 seconds to 30 minutes

Angle of coverage

160°

Opening angle

140°

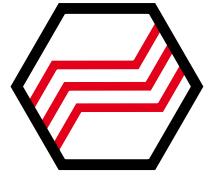
Ambient temperature

-20° C to +50° C

Accessories

Mounting kit made of stainless steel,
horizontal and vertical adjustment





RF motion detector with terminal box for zone 1, 2, 21 and 22

RF - Motion or terrorist guards in Ex-area for switching fluorescent lamps. Invisible installation behind non-conducting walls is possible (glass, plastic, wood, masonry), because of that the motion detector is vandal and tamper-proof.

Includes only movements and is insensitive to heat and light sources. Robust aluminum housing with sight glass, connection compartment made of fiberglass or aluminum.

Technical specifications

Explosion protection

Ex II 2 GD Ex ed IIC T6

Protection

IP65

Certification

TÜV 04 ATEX 2472

Operating voltage

400 V AC \pm 15%,
50 - 60 Hz
or 230 V AC

Current consumption

Approx. 30mA

Switching capacity

3 Outputs; AC1 = 16A
Lamps with EVG: 11 x (2x36W)
or 8 x (2 x 58W), each output

Reach

1 -8 m smooth

Dawn settings

2 to 2000lux

Follow-up time

10 seconds to 30minutes

Angle of coverage

160°

Opening angle

140°

Ambient temperature

-20°C to +50°C

Accessories

swivel mounting frame of galvanized steel.



Installation equipment

Distribution panels

Signal units

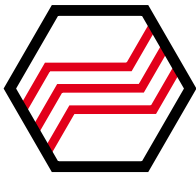
Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



RF -radar- presence detector 12/24VDC for zone 1, 2, 21 and 22

Special design for alarm systems RF radar presence detector or terrorist guards in hazardous areas for switching alarm circuits.

Invisible installation behind non-conducting walls is possible (glass, plastic, wood, masonry), because of that the motion detector is vandal and tamper-proof.

Includes only movements and is insensitive to heat and light sources. Robust aluminum housing with sight glass, connection with Ex d Cable gland M20 x 1.5.

Technical specifications

Explosion protection

Ex II 2 GD Ex d II C T5

Certification

TÜV 04 ATEX 2472

Operating voltage

12 / 24 V DC

Switching capacity

1 changer 250 V / 6 A

Reach

4 to 15 m smooth

Settings

The sensitivity of the module can be set via the potentiometer.

Turn clockwise to increase the sensitivity.

Frequency

24.0 - 24.5 Ghz

Opening angle

Horizontal 80° vertical 32°

Ambient temperature

-20° C to +60° C

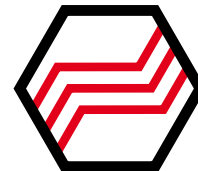
Accessories

Swivel mounting frame of galvanized steel

Attention

The proximity of fluorescent lamps can lead to incorrect triggering, so do not install in the immediate vicinity.





Ex - spotlight for zone 1

EX II 2 GD Ex d IIB T6 IP65 T 85°C

For the use in hazardous areas in refineries, chemical plants and oil rigs. Especially for mobile applications, shockproof.

Benefits:

- Light box with LED technology, absolutely free of buzzing and flickering
- No maintenance required
- high shock and vibration resistance

Technical specifications

Certification

TÜV 04 ATEX 2472

Rated voltage

100 – 230 V AC oder 24 V DC

Protection

IP65

Housing material

Alloy Copper free

Radiation power

20 W

Color temperature

2600 - 4000 K (warm white)

Beam angle

15° or 30°

Light output

76 Lm / W

Lifetime

60000h

Dimensions

380 x 190 x 135 mm (L x W x H)

Weight

Approx. 9 Kg

Temperature range

-25°C to +50°C



Installation equipment

Distribution panels

Signal units

Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



Ex - spotlight for zone 2

EX II 3 G Ex nA IIC T3

Advantages:

- Major energy savings
- Considerable decrease of maintenance costs
- Long life LED's (Approx. 60000h)
- White light improves color recognition
- Low generation of heat
- Solid metal cooling element with mounting bracket
- Assembled 230 V - 24V DC mains supply circuit
- Absolutely free of buzzing and flickering
- High resistance to shock and vibration
- Light field in LED technology
- Product „made in Germany“

Fields of applications

- Illuminates halls, container, stations, underpasses, platforms, petrol stations and much more.
- Suitable for indoor and outdoor usage.
- Large free space illumination, also applicable as mobile LED spotlight.

Technical specifications

Light output

80 lm/W

Color temperature

5.200 K to 6.250 K

Beam angle

120°

Lifetime LED

60.000 h

Protection

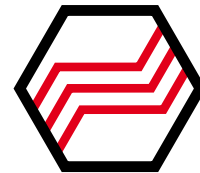
IP65

Temperature range

-25° C to 50° C



Power consumption by 230 V AC [W]	illuminance [Lumen]	illuminance [Lux] in			Weight [kg]	Dimensions (L x W x H) [mm]
		2 m	4 m	6 m		
20	1,700	147	36	16	ca. 5	150 x 150 x 65
40	3,400	249	62	27	ca. 7	273 x 200 x 80
60	5,200	440	104	54	ca. 7	273 x 200 x 80
100	7,800	615	163	73	ca. 7	273 x 200 x 80



6 - Digit Ex-LED-counter Ex d IIBT6 or Ex de IIBT6 with 57mm high digits

A) Counter with junction box TYP EA-08/270-D657

Dimensions (WxHxD):

540x170x135,5

For 18 terminals max. 2.5sqmm and 6x entries M20 x 1.5

B) Counter with directly cable entry Typ E-08-D657

Dimensions (WxHxD):

380x170x135.5 mm

max. 2x directly cable entries possible.

- Certificate number TÜV 04 Atex 2472
- Counter and/or measured value display
- All inputs electrically isolated
- Power supply 16-35VDC or 100-240VAC
- Serial interface RS485
- Frequency 0.01Hz to 5KHz max.
- Data back up by power failure
- Inputs: Switch contact, namur, frequency or Voltage pulse.
- Digital inputs based on DIN 43864 class B, max. 15V and max. 15mA
- Reset-input
- Analog input 0(4)-20mA. Lineariser to compensate any non-linear variable
- Bus. Modbus RTU, master or slave operation possible

Technical specifications

6-digits - red seven-segment LED
57mm high
(yellow or green optional)

Operating temperature

-40° C to +55° C

Power supply

16-35 V DC or
100-240 V AC; 9.6VA

Protection

IP65

Weight

Approx. 12 Kg

Housing material

Aluminum (copper free)

Location

Ex-Zone 1 - 2 - 21 - 22

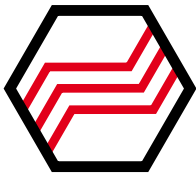
Options

Inputs for max. 6 external Push-buttons. Modbus display for up to 128 addresses programmable via 8 positions dip switch.

Programmable by external push-buttons.

Alarm output optoelectronic solid state or relay or volt free contact.





Display devices BR 323 4-20mA alu or stainless steel

The BR 323 is a loop powered 4-20mA indicator with a 2.3V drop. There are two version with different housing types.

- a. Aluminum housing
- b. Stainless steel housing

The display is installed in a flameproof enclosure that meets IP66 and can be used in Zone 1.

The display can be adjusted with a software which is compatible with windows.

The software is available free of charge.

Technical specifications

- Loop powered
- 5-digits with a high of 10mm
- IP66 protection

Housing material

AL = Aluminum

SS = Stainless steel

Cable entry

2 x M20 x 1.5 or 2 x 1/2 NPT

Atex and FM Certificated

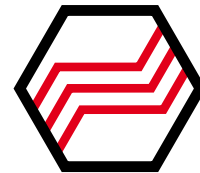
Temperature range

-20°C to +60°C

Explosion protection

Ex d IIC T6





4 -20 mA Indicators for panel mounting

This fourth-generation device, in a new robust housing is IP66, suitable for panel mounting under the harshest environmental conditions. Through the rear terminals which are removable, all the wiring can take place before installation. The devices are available in two sizes with 4- or 5 digit displays in different heights, with which can any physical unit can be displayed. This setting is done via the 4 front buttons. Optional backlight is possible. The device can be powered with a separately power supply or loop powered. Two alarm outputs are possible. On all devices, there are 3 year warranty.

The equipment for hazardous areas are ATEX and IEC Ex-Approved. Further approvals.



Operation temperature

-40°C to +70°C

Type	Ex- device	Industrial design	Display Digits	Display height [mm]	Dimensions [mm]
BA 307E	Ex [ia] IIC T5 Ga Ex [ia] IIC T 80°C DA IP20	–	4 Digits	15	96 x 48
BA 327E	Ex [ia] IIC T5 Ga Ex [ia] IIC T 80°C DA IP20	–	5 Digits Bargraph 31 Segments	11	96 x 48
BA 308E	Ex [ia] IIC T5 Ga Ex [ia] IIC T 80°C DA IP20	–	4 Digits	34	144 x 72
BA328E	Ex [ia] IIC T5 Ga Ex [ia] IIC T 80°C DA IP20	–	5 Digits Bargraph 31 Segments	29	144 x 72
BE 507E	–	x	4 Digits	15	96 x 48
BE 527E	–	x	5 Digits Bargraph 31 Segments	11	96 x 48
BA 508E	–	x	4 Digits	34	144 x 72
BE 528E	–	x	5 Digits Bargraph 31 Segments	29	144 x 72

Installation equipment

Distribution panels

Signal units

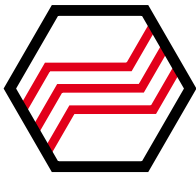
Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



4 -20mA Indicator for wall mounting

A new generation loop powered display devices for field installation. These devices of the latest generation, in a new rugged enclosure IP66 are suitable for field mounting under harshest environmental conditions.

The separate terminal contained in the housing makes installation and assembly much easier. Screw terminals and cable entries are accessible from the front, allowing quick and easy wiring.

The housing of the display electronics no longer needs to be opened for installation and connection of the device. In order to prevent inadvertent changes to the display values, the calibration is behind an additional cover in the terminal area.

The 5 digit version can be supplied with external buttons for frequent adjustments. The settings are then protected with a security code. The intrinsically safe models are ATEX certified and can be used all over Europe. The two 4 - 20 mA input terminals correspond to the conditions for simple devices and can be connected without additional approval in most intrinsically safe circuits.

The type with nL certificate corresponds to the new European standard EN 60079 and the ATEX Category 3 - thus the models BA304NE and BA324NE can be installed in Zone 2 without zener barriers or galvanic isolation. The type of protection „nL“ (energy-limited device) allows security at an affordable price.

BA 304E

4 digits Ex - [ia] IIC T5 Ga
ATEX certified

BA324E

5 digit Ex - [ia]IIC T5 Ga
ATEX certified

BA304NE

4 digits Type n 3G Ex - n Aic IIC T5 Ga
ATEX certified

BA324E

5 digits Type n 3G Ex - n Aic IIC T5 Ga
ATEX certified

BA504D

4 digits industrial version

BA 524E

5 digits industrial version

More types on request - request a detailed catalog of BEKA.





4-20mA
setpoint generator

The new generation of setpoint generators for panel mounting. The main task of this unit is the setting of a 4 - 20 mA parameter. This can be used as a donor for a speed controller or to position a valve with 4-20mA input. The device has a five digit display plus a bar graph with which any physical unit can be displayed. Five preset output values can be selected quickly and easily from the front panel. The 11 mm high LCD display provides maximum contrast, allows a wide viewing angle. Optional backlight is possible. High degree of protection IP66 after installation from the front. Removable terminals enable the wiring before installing the unit. Connecting an external setpoint generator is possible. DIN case 96 x 48 mm
3 year warranty.

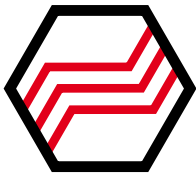
Operating temperature:
-40°C to +70°C

BA 427E:
5 digits with 11 mm high Displays
31 segment bargraph
Ex [ia] IIC T5 Ga
Ex [ia] IIC T80°C Dq IP20
Atex and IEC Ex certification

BA 627E:
5 digit industrial version for
secure area



Installation equipment
Distribution panels
Signal units
Lighting
Indicators
I.S. and safe indicators
Special solutions
Accessories



Serial text display BA 484 D

Inexpensive user interface.

Ideal for simple machines and process control applications in hazardous, as well in normal areas, graphic display with high contrast and back-light, operator buttons, and 2 outputs, selectable Modbus, BEKA or Legacy protocol. Display can display up to four process variables in one of eleven standard masks. Some with bar graph display. Atex and FM - approval.

About two separators the BA 201 and MD 5051 up to two displays can be operated via RS 232 or RS 485.

In a B-line system up to four displays can be operated.

Free software for simulation of mask creation can be downloaded.

IP66 - housing for field mounting, 3 years warranty.

Technical specifications

Explosion protection

- Ex [ia] IIC T5 Ga
- Ex [ia] IIIC T 80°C Da

Certification

- ITS 02 ATEX 2035
- All gas and dust zones

Protection

- IP66

Display size

- 120x64 pixel/ 86,5 x 45mm

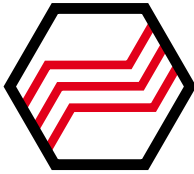
Data transmission speed

- 0,3; 0,6; 1,2; 2,4;
- 4,8; 9,6 or 19,2k bps

Ambient temperature

- 40° C to +60° C





**Quantities and
flow indicator
BA 454 D and BA 456 C**

Easy to use flow meter for liquids, solids or partial payment. Intrinsically Safe ATEX or industrial design, field devices or panel mounted instruments graphic display with high contrast and backlight. User interface in English, French or German impulse or 4 / 20mA input, three configurable outputs prepared for external push-buttons

Options

- Backlight
- Alarm outputs
- Pulse output
- Current output

Technical specifications

Explosion protection

- Ex [ia] IIC T5 Ga
- Ex [ia] IIIC T 80°C Da

Certification

- TTS 00 ATEX 2009/10
- ITS 01 ATEX 2001/2
- All gas and dust zones

Protection

- IP66 Field device/IP65
- Build-in appliances

Ambient temperature

- 20° C upto +60° C



Installation equipment

Distribution panels

Signal units

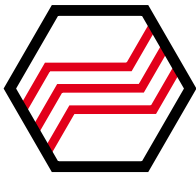
Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



Counter, timer, tachometer and clock

A variety of FM and ATEX certified displays many different functions can be realized with them. They can be used as a counter, timer, tachometer or watches. They have two inputs.

As a result, they can be used for counting interval measurements, speed and quadratic input signal evaluation. Limit messages are available as an option.

Atex and FM intrinsically safe or type nL (zone 2) two separate displays, two inputs make it possible to evaluate quadratic input signals and display speed and position control. Stable field GRP housing with separate terminal compartment IP66. Panel mounted instruments IP65 (front).

Option: backlight, pulse and 4 / 20mA outputs.

Technical specifications

Explosion protection

Ex [ia] IIC T4

Certification

ITS 01 ATEX 2003/4

All gas and dust zones

Protection

IP66 Field device/ IP65 Build-in appliances

Power supply via a safety barrier or galvanic isolator min 10V

Current

12mA

Input signal

A+B switch closed smaller 100Ω
open bigger then 1kΩ

Proximity switch

Two wire namur

Magnetic switch

40mV pulse to pulse

Voltage signal(Pulse)

Low 1 V

High 3V

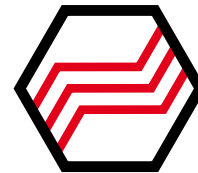
Frequency switch

Max. 100Hz

Inis max 5 kHz



Type	Mounting	Input	Supply	Certification
Intrinsically safe for use in gas and dust Ex-areas.				
BA 334D	Field device	Pulse	external	ATEX Gruppe II Categorie 2G Ex [ia] IIC T5
BA 338C	Panel mounting	Pulse	external	
BA 344D	Field device	Pulse	Internal battery	
BA 354D	Field device	4/20 mA	Current curcuit	
BA 358C	Panel mounting	4/20 mA	Current curcuit	
Type nL for use in gas and dust Ex zone 2				
BA 334ND	Field device	Pulse	external	ATEX Gruppe III Categorie 3G Ex [ia] IIC T5
BA 354ND	Field device	4/20 mA	Current curcuit	
General Purpose				
BA 354D	Field device	Pulse	external	
BA 538C	Panel mounting	Pulse	external	
BA 544D	Field device	Pulse	Internal battery	
BA 554D	Field device	4/20 mA	Current curcuit	
BA 558C	Panel mounting	4/20 mA	Current curcuit	



Intrinsically safe sounders BR 385

49 different tones three-stage alarms up to 103dB (A). Sound pressure satisfies PFEER regulations. IP66 enclosure can be operated individually or with BR386 strobe light.

Technical specifications BR 385

Explosion protection

Ex [ia] IIC T4 Ga

Electrical data

Min. 16 V DC via safety barrier

28V 93mA

Attention without safety barrier the sounder can be damaged.

Rated current

25mA by 24V DC via safety barrier

Safety Specifications

$U_o = 28V$ DC, $I_o = 93mA$,

$P_o = 0,66W$

Intrinsically safe LEDs indicator BA 386

Red, yellow, green, blue and white alone installation or together with horn. Adjustable horn acknowledgment, after new alarm. IP56 housing.

Technical specifications BA 386

Explosion protection

Ex [ia] IIC T4

Electrical data

Min. 10 V DC via safety barrier

28V 93mA

Attention without safety barrier the Indicator can be damaged.

Rated current

25mA or 40mA in combination with BA 385

Flash energy

0,5 Joule

Frequency

2 Hz

Safety specifications

$U_o = 28 V$ DC, $I_o = 110mA$,

$P_o = 0,8W$



Installation equipment

Distribution panels

Signal units

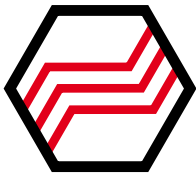
Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



Ex i combined detectors for intrinsically safe circuits

With increasing automation, warning devices for abnormal or dangerous operating conditions are always required. To achieve attention about some distance, a simultaneous visual and acoustic warning is the best choice. The audible alarm can be acknowledged and turns off after the pre-set time.

If the audible alarm is still on, it has to be acknowledged again. The visual alarm remains as long as the alarm conditions persist. The flash frequency goes back to 1 Hz when the audible alarm sounds.

Complete, ready device for quick and easy installation. It is to be laid only one line. The supplied mute button should be mounted next to the device to turn off the sound generator.

This combination alarm can be connected directly to each SPS output over a safety barrier.

Technical specifications

Explosion protection:

Ex [ia] IIC T4 Ga

Certificate Flash:

ITS 02 Atex 2006

Certificate Sounder:

Sira 06 Atex 2032X

Electrical specification:

min. 16 VDC about a safety barrier
28V 93mA, rated current 40mA.

Attention: Without a safety barrier you will destroy the combined detector.

Connection type:

Terminals in indicator

Protection:

IP66

Color Flashlight:

white, yellow, red, green, blue

Flash energy:

0.5 joule

Loudness sounder:

Max 101dB(A) in 1 meter distance
49 different tones

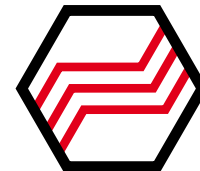
Dimensions:

400 x 161 x 137 (H x W x D)

Ambient temperature:

-40° C to +60° C





LED signal lamp bundle

Bright inexpensive installation signal lamp with a lifespan of more than 10 years. Intrinsically Safe certified according to ATEX and FM or in industrial design in red, yellow, green, blue and white.

BA 390 has 20mA constant current.

BA 390S has full brightness even at 4mA. Connection at the terminals at the back of the cabinet doors.

For applications with high degree of protection of the connection points of view, there is an option a screw-on accessory kit BA 599, which guarantees the protection IP65.

Technical specifications

BA 390 / BA 390S

Explosion protection

Ex [ia] II C T4 (Zone 0, 1 and 2)

Certification

BAS 01 ATEX 1062X

Voltage

14V / 8V

Current

20mA / 4 mA

Technical specifications

BA 590 / BA 591 / BA 592

Voltage

24V DC / 115 V AC / 230V AC

Current

20mA

Protection

Front IP66



Ex i area		Secure area			Colour	Lux	S - type lux
20 mA	4 mA	24 V DC	115 V AC	230 V AC			
BA 390R	BA 390RS	BA 590R	BA 591R	BA 592R	Red	190	60
BA 390G	BA 390GS	BA 590G	BA 591G	BA 592G	Grün	150	38
BA 390A	BA 390AS	BA 590A	BA 591A	BA 592A	Gelb	250	42
BA 390B	BA 390BS	BA 590B	BA 591B	BA 592B	Blau	150	46
BA 390W	BA 390WS	BA 590W	BA 591W	BA 592W	Weiß	300	56

Installation equipment

Distribution panels

Signal units

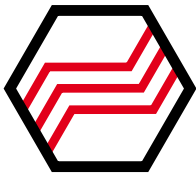
Lighting

Indicators

I.S. and safe indicators

Special solutions

Accessories



Self-developed special solutions

Many other special solutions are possible.

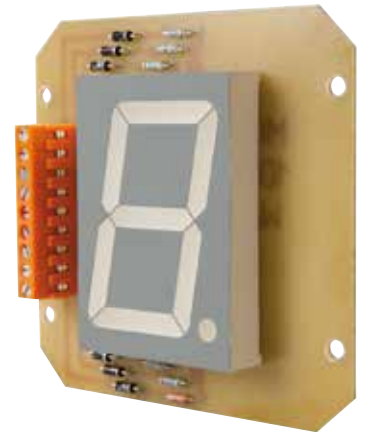
Mitex developed for customer inquiries right solution both for hazardous areas as well as for the industrial sector.

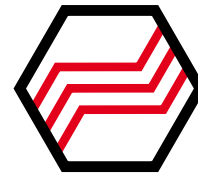
Examples from the hazardous area:

- Temperature fuse 72 ° C or 77 ° C with 1.5m - Power Cord
- Status - Detector intrinsically safe
- SEL indicator for Zone 2
- Controls for dust - EX
- Main and repair switch for zone 21 and 22
- Controllers and control boxes for zone 21 and 22
- LED indication arrow

Grounding Control Devices Examples from the industrial area:

- LED - indicator for rail mounting
- Large - LED 40mm Ø
- Indicating Lamp Series SEL
- Lamp test modules
- PCB Prototyping

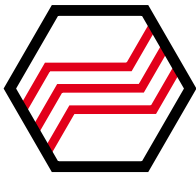




Ex i - marking tape for identifying intrinsically safe circuits

- Identification made easy
- Selfglue
- Roll size 66 m
- Width 19 mm or 50 mm
- Consistent Text imprint
- Light blue film, black text, trilingual





Installation equipment
Distribution panels
Signal units
Lighting
Indicators
I.S. and safe indicators
Special solutions
Accessories

Floor marking zoning

- Forklift truck - traversable (no rotary or steering movements)
- Cleaning machines - traversable
- Pallet truck - traversable
- self-adhesive
- easy to clean
- immediately passable
- almost residue-free removal when necessary
- silicone-free
- according to BGV A8
- scratchproof

Technical specifications

Material

PVC

Colours

Black, yellow, white

Roll size

5m

Roll width

100mm (Standart)

Total thickness

0.5mm including adhesives

Ambient temperature

-40°C to +80°C

The material is resistant to commercial cleaning agents that are used in cleaning machines.

The film can **not** charge dangerous, because the thickness of the explosion group II A and II B <2mm.

The usability must be individually determined and approved for the explosion group IIC.

The film must not be used to an area (eg 50 x 50 cm or 100 x 100 cm) to glue the entire surface.

Attention

Note processing instructions.

Available titles

Ex zone

Ex Zone 1

Ex Zone 2

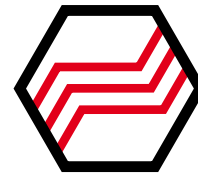
Ex zone 1 and 2

Ex zone 21

Ex zone 22

Ex zones 21 and 22





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Seminar offers

We offer individually to their needs-oriented seminars on explosion protection.

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