

BETA SWITCHES FOR HAZARDOUS AREA

BETA offers complete line of switches for (classified) hazardous locations!

The "BETA Switch", well known as a safety instrument, adds an extra dimension to industrial safety by having area approval up to the highest classification by ATEX, IECEx,

- Worldwide agency approvals.
- "User Friendly" Modifications – Standard features incorporated for your safety.
- Very wide rangeability with 100% accuracy over the full range –
Fewer switches required to meet customers specifications / requirements / needs.
- Only 3 process wetted parts.
- Very high overrange pressures – No setpoint shift or damage to sensor.
- No maintenance.
- Wetted parts to NACE standard available.

For W-Series

ATEX: CERT.: ITS 09 ATEX16437

Ex II 2 G Ex d IIC T6 (-60 to +70 °C)...T5 (-60 to +80 °C)/ 100 °C.

Ex II 2 D Ex tD A21 IP6X T 100 °C.

IECEx: CERT.: KEM 07.0034

Ex d IIC T6...T5

Ex tD A21 T 100°C IP66

Amb. Temp.: T6/-40 to +70 °C, T5/ -40 to +80 °C

-40 to +80 °C for T 100 °C

CSA: CERT.:1873316 acc. to Class 2258-02

Class I, Div. 1, Groups B, C, D T6/ -40 to +70 °C, T5/-40 to +80 °C

Class II, III, Div.1, Groups E, F and G

Ex d IIC T6...T5

Enclosure Type 4X, IP66

FM: CERT.:3028962

Class I, Div. I, Groups A, B, C and D, T6 Ta = -40 to +70 °C, T5 T1 = -40 to +80 °C

Class I, Zone I, AEx d IIC, T6 Ta = +70 °C, T5 Ta = +80 °C

DIP, Class II/III, Div.1, Groups E, F and G, T6 Ta = +70 °C, T5 Ta = +80 °C

Enclosure Type 4X, IP66

For C-Series Intrinsically safe

ATEX: CERT.: KEMA 02 ATEX 1190X

Ex II 1 G Ex ia IIC T4...T6 or

Ex II 2 G Ex ib IIC T4...T6

Ex II 1 D Ex iaD 20 IP66 T 85°C or

EX II 2 D Ex iaD 21 IP66 T 85 °C

Amb. Temp.: -60 °C to +80 °C

FM: Cert. No. 3031247

IS Class I, II and III, Div. 1, Groups A, B, C, D, E, F, G

Class I, Zone 0, AEx ia IIC T6, -40 °C <Ta < +80 °C

Type 4x

IECEx: CERT.: KEM 07.0024X

Type of protection: ia and iaD

Zone 0 Ex ia IIC T6

Ex iaD 20 IP66 T85 °C

Amb. Temp.: -40 to +80 °C

For Z-Series

ATEX: CERT.: KEMA 02ATEX 2187

Ex II 2 G Ex de IIC T6 (-55 to +65 °C).

CSA: CERT.:1891054 acc. to Class 2258-04

IS Class I, II, III, Div.1, Groups A, B, C, D, E, F and G

Ex ia IIC T6 T85 °C

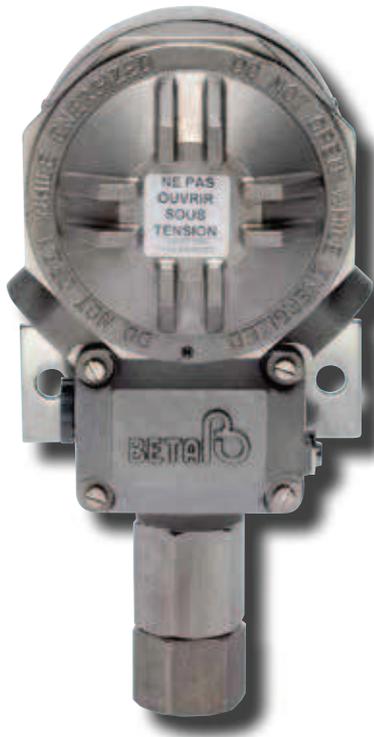
Amb. Temp.: -40 to +80 °C

Enclosure Type 4X

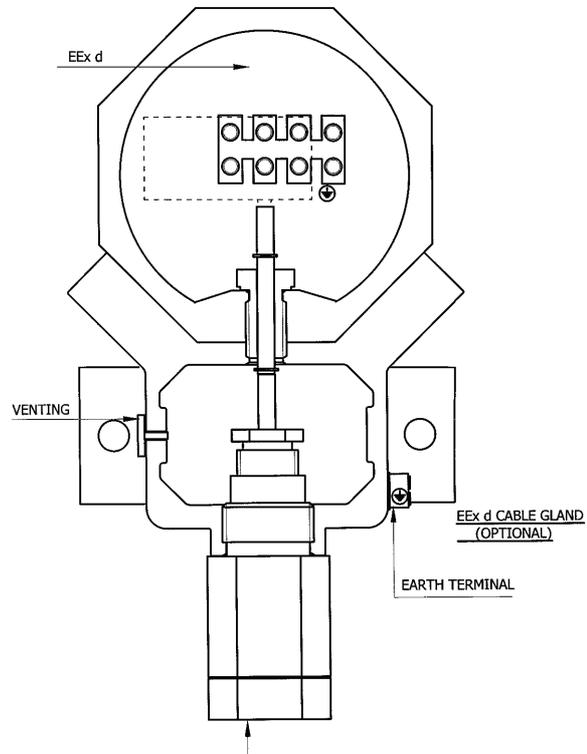
BETA SWITCHES FOR HAZARDOUS AREA



W-Series -ATEX, IECEx, CSA and FM approved.



"W"-Series



"W"-Series

The "W"-series is a worldwide best seller.

Separate adjustment compartment allows easy field calibration.

Due to the wide selection of materials and components parts, virtually all applications can be covered.

ATEX approved: ITS O9 ATEX 16437

- * For Gas : Ex II 2 G Ex d IIC T6...T5
- For Dust : Ex II 2 D Ex tD A21 IP6X T100°C

IECEx No.: KEM07.0034

- Ex d IIC T6...T5
- Ex tD A21 T100 °C IP66

(For more information see also page 22)

- Aluminium with -Extremely rugged powder coated enclosure which is suitable for tough offshore applications-. (1000 hrs. Salt spray test acc. to DIN 50021, IEC 60068-2-11 or ASTM B117-90)
- Or 316 SS enclosure.
- Separate adjustment compartment.
- Available as Pressure-, Hydraulic-, Vacuum-, Differential pressure- and Temperature switch.
- All ranges available.
- Highest overrange protection.
- Excellent for field mounting. (2" Pipe SS mounting bracket available), see page 30.
- Extremely rugged powder coated enclosure which is suitable for tough offshore applications. (1000 hrs. Salt spray test acc. to DIN 50021, IEC 60068-2-11 or ASTM B117-90)
- Epoxy coating optional.

BETA SWITCHES FOR HAZARDOUS AREA

C-Series (Intrinsically safe) -ATEX, IECEx, CSA and FM approved.

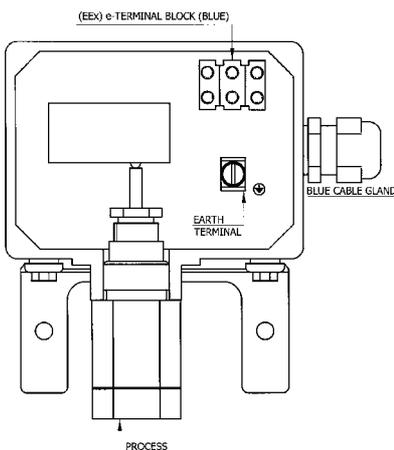
(see also page 22)



“C” -Series

BETA “C” - Series with option “I” for intrinsically safe systems

BETA has its “C”-Series switches with option “I” certified by DEKRA acc. to NEN EN 60079-0 / EN 60079-11 for **II 1 G Ex ia IIC-T4...T6** or **II 2 G Ex ib IIC-T4...T6** or **II 1 D Ex iaD 20 IP66 T85°C** or **II 2 D Ex ibD 21 IP66 T85°C**



“C”-Series (Intrinsically safe application EEx i).

ATEX approved: KEMA 02 ATEX 1190X (-60 to +80°C)
IECEx approved: KEM 07.0024X (-40 to +80°C)
CSA approved: Cert.No.: 1891054 (-40 to +80°C)
FM Approved: Cert. No.: 3031247 (-40 to +80°C)
(For more information see also page 22)

This option includes all required installation materials including a blue colored EEx e approved terminal block and the - (standard) earth - terminal.

Option “I” in accordance with art. 9 of the ATEX Directive 94/9/EC (Ex ia/ib IIC) which are related to insulation, clearance, creepage distances and enclosure type whereby a max. peak voltage of 90 V or 3,3A is allowed.

Please note the following:

When switch is ordered with cable gland (option “C”) we will automatically install the EEx i blue cable gland (see drawing). Due to low current used in I.S. systems we recommend the use of switching elements with gold contacts (code “G1,” “O1” or “Y1”). It is how ever not mandatory.

BETA SWITCHES FOR HAZARDOUS AREA

Z-Series - ATEX, IECEx, CSA and FM approved.

(see also page 22)



"Z" -Series

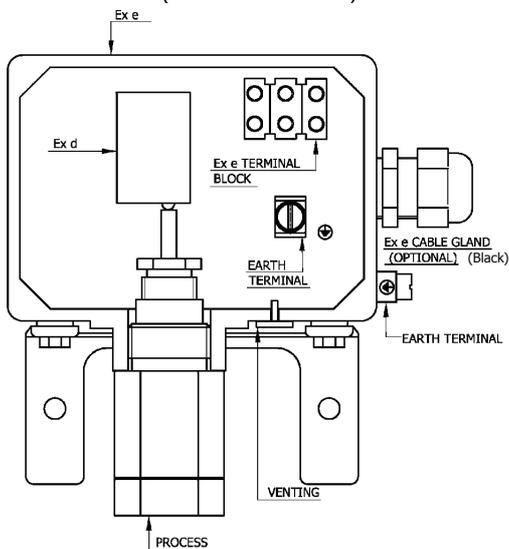
BETA "Z" - Series, the economical explosion-proof switch.

BETA has its "Z"-Series switches, **ATEX approved: KEMA 02ATEX 2187**

(-55 °C to + 65 °C/ T6)

acc. to NEN EN 60079-0 / NEN EN 60079-1/ NEN EN 60079-7 for **II 2 G Ex de IIC T6**.

" Z "- SERIES (II 2 G Ex de IIC T6)



- Available in Aluminium or SS 316 (for offshore applications).
- Available as Pressure-,Hydraulic-, Vacuum-, Differential pressure (not on "D..D"- serie) and temperature switch.
- All ranges available (except for P301L and P302L).
- Limited to "R1/ R2" switching element.
- High overrange.
- Simple and quick electrical connection.

BETA PRESSURE & TEMP. SWITCH - CERTIFICATIONS

EXPLOSIONPROOF CERTIFICATIONS

- ATEX – Ex II 1/2 G Ex d IIC T6...T5 for W-Series.
 Ex II 1/2 D Ex tD A21 IP6X T100 °C
- ATEX – Ex II 1 G Ex ia IIC T4...T6 for C-Series (intrinsically safe).
 Ex II 2 G Ex ib IIC T4...T6
 II 1D Ex iaD 20 IP66 T85°C
 II 2D Ex ibD 21 IP66 T85°C
- ATEX – Ex II 2 G Ex de IIC T6 for Z-Series.
- ATEX – Ex II 2 G c T6 for Air Relay SA/SB.
- FM – AEx d IIC T6...T5 for W-Series.
- CSA – Ex d IIC T6...T5 for W-Series.
- CSA – Ex ia IIC T6 T85 °C (T85 °F) for C-Series (intrinsically safe).
- FM – A Ex ia IIC T6 for C-Series (intrinsically safe).
- IECEX – Ex d IIC T6...T5 for W-Series.
 Ex tD A21 T100 °C (T212 °F)
- IECEX – Zone 0 Ex ia IIC T6 for C-Series intrinsically safe.
 Ex iaD 20 IP66 T85 °C (T125 °F)

And more available for different countries like Japan, Korea, South-Africa, Russia etc..

Safety Exida SIL3 capable.

MARINE APPROVALS

RINA for B- and C-Series.

FOR GAS, FUEL, WATER AND STEAM

PED CE 0035 - C-and W-Series.

More certificates/reports are available. Please consult your BETA Switch Representative.

