



Horn EEx d and EEx de Circuits Series BExS110/BExS120

- Explosion protection to
 - CENELEC
 - IEC
- Can be used in Zone 1 and Zone 2
- 32 different signal sequences adjustable with internal DIP switches
- 3 different signal sequences can be selected through an external switch with a given DIP switch setting
- 3 PEEFA signals (general alarm; toxic gas alarm; prepare to abandon platform)
- Volume control max. 117 dB(A)
- Robust aluminium enclosure with horn in ABS
- Tone emission synchronised with units being operated in parallel through quartz-controlled oscillators
- Option: speaker module, programmable

Selection table

Version	Description		Ordering code	Weight [kg]
	Volume	Explosion group		
Horn with adjustable tone sequence EEx d circuits	110 dB(A)	II C	BExS110 – D – <input type="text"/>	3,42
	117 dB(A)	II C	BExS120 – D – <input type="text"/>	3,88
Horn with adjustable tone sequence EEx de circuits	110 dB(A)	II C	BExS110 – E – <input type="text"/>	3,68
	117 dB(A)	II C	BExS120 – E – <input type="text"/>	4,14

Add. to ordering code:

Specify rated voltage:

12 V, DC
24 V, DC
110 V, AC
230 V, AC

Please specify thread M20, Pg13,5 or 1/2"NPT.

Note:

A programmable announcement module can be supplied.

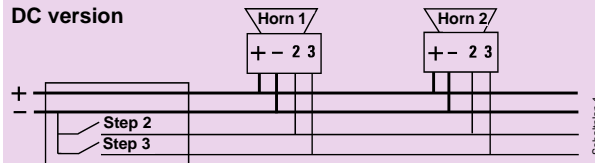
Refer to pages 9/144 ff. for adjustable tone sequences and tone sequence combinations for horns A105-IS, BExS110 and BExS120.

Zone 1 and Zone 2

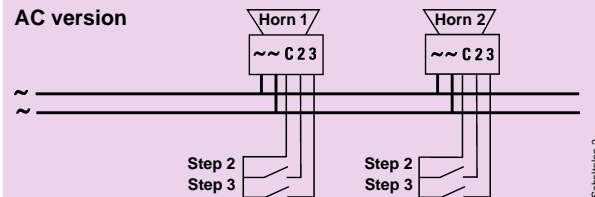
Technical data

Version	BExS110	BExS120
Explosion protection	EEx d IIC T4 EEx de IIC T4	EEx d IIC T4 EEx de IIC T4
Test certificate	KEMA Ex.97.E.4429	KEMA Ex.97.E.4429
Volume	110 dB(A), at 1 m; adjustable	110 dB(A), at 1 m; adjustable
Ton sequence and tone combinations	see table on pages 9/144 f.	see table on pages 9/144 f.
Rated voltage	DC: 12 V ± 25 % 24 V ± 25 % AC: 110 V ± 10 % 230 V ± 10 %	DC: 12 V ± 25 % 24 V ± 25 % AC: 110 V ± 10 % 230 V ± 10 %
Rated current	12 V, DC 200 mA 24 V, DC 250 mA 110 V, AC 100 mA 230 V, AC 55 mA	12 V, DC 800 mA 24 V, DC 800 mA 110 V, AC 200 mA 230 V, AC 100 mA
Material Enclosure Horn	Aluminium, colour: red ABS, colour: red	Aluminium, colour: red ABS, colour: red
Degree of protection	IP 67	IP 67
Ambient temperature	- 40° C ... + 40° C	- 40° C ... + 40° C
Cable entries	2 holes, M20, PG13,5 or 1/2"NPT specify in order	2 holes, M20, PG13,5 or 1/2"NPT specify in order
Connection	Terminals for 0,5 ... 2,5 mm ²	Terminals for 0,5 ... 2,5 mm ²

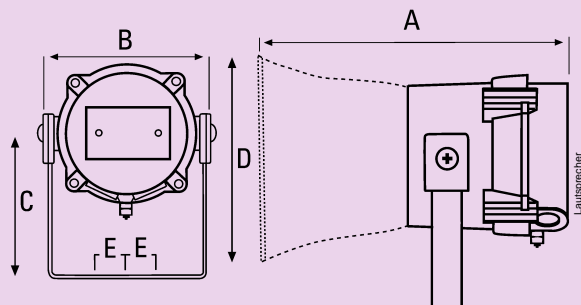
DC version



AC version



Dimensions, all dimensions in mm – subject to alteration



		A	B	C	D	E
BExS110	EEx d	282	165	145	181	30
	EEx de	275	165	145	181	30
BExS120	EEx d	313	165	145	220	30
	EEx de	326	165	145	220	30

Horn tone sequence selection table
**A105IS
BExS110
BExS120**

Tone sequence				
Version	Frequency	Interval	PEEFA signal	Tone no.
Continuous tone	440 Hz	continuous		Tone 28
	544 Hz	continuous		Tone 27
	660 Hz	continuous		Tone 20
	800 Hz	continuous		Tone 15
	1000 Hz	continuous	„Toxic Gas Alarm“	Tone 01
	2400 Hz	continuous		Tone 05
Changing tone	544 / 440 Hz	100 ms / 400 ms		Tone 17
	544 / 440 Hz	1 Hz-intervals		Tone 21
	800 / 1000 Hz	0,875 Hz-intervals		Tone 12
	800 / 1000 Hz	0,25 s-intervals		Tone 02
	2400 / 2900 Hz	2 Hz-intervals		Tone 10
Slow whoop	500 / 1200 Hz	On: 0,3 Hz, break: 0,5 s		Tone 03
Sweep	500 / 1200 Hz	On: 3,75 s, off: 0,25 s; 15 operations per min.		Tone 32
	800 / 1000 Hz	1 Hz-intervals		Tone 04
	800 / 1000 Hz	7 Hz-intervals		Tone 29
	800 / 1000 Hz	50 Hz-intervals		Tone 24
	1200 / 500 Hz	1 Hz-intervals (PAPA)	„Prepare to abandon platform“	Tone 31
	1400 Hz to 1600 Hz 1600 Hz to 1400 Hz	in 1 s; in 0,5 s		Tone 19
	2400 / 2900 Hz	1 Hz-intervals		Tone 07
	2400 / 2900 Hz	7 Hz-intervals		Tone 06
	2400 / 2900 Hz	50 Hz-intervals		Tone 25
Siren	500 / 1200 / 500 Hz	0,3 Hz-intervals		Tone 08
Saw tooth	1200 / 500 Hz	1 Hz-intervals		Tone 09
Interrupted	420 Hz	On: 0,625 s, Off: 0,625 s	„Australian alert signal“	Tone 30
	554 Hz	0,875 Hz-intervals		Tone 22
	660 Hz	On: 150 s, off: 150 s		Tone 16
	660 Hz	On: 1,8 s, off: 1,8 s		Tone 18
	800 Hz	On: 0,25 s, off: 1 s		Tone 14
	1000 Hz	0,5 Hz-intervals	„General Alarm“	Tone 11
	2400 Hz	1 Hz-intervals		Tone 13
Pulsed	800 Hz	1 Hz-intervals		Tone 23
Pulsed bell (simulated)		continuous		Tone 26

Possible sound combinations for horns
A105IS
BExS110
BExS120

Explanation	Tone sequence combinations (set with DIP switches)															
	Step 1	Step 2	Step 3													
The desired signal is set using DIP switches. 32 basic tones can be selected (table page 9/144). At a given DIP switch setting 3 tone sequences can be set which can be selected with an external switch. The tone combinations emitted simultaneously are listed in the next table.	tone 01	tone 31	tone 11													
	tone 02	tone 17	tone 05													
	tone 03	tone 02	tone 05													
	tone 04	tone 06	tone 05													
	tone 05	tone 03	tone 27													
	tone 06	tone 07	tone 05													
	tone 07	tone 10	tone 05													
	tone 08	tone 02	tone 05													
	tone 09	tone 15	tone 02													
	tone 10	tone 07	tone 05													
	tone 11	tone 31	tone 01													
	tone 12	tone 04	tone 05													
tone 13	tone 15	tone 05														
tone 14	tone 04	tone 05														
tone 15	tone 02	tone 05														
tone 16	tone 18	tone 05														
tone 17	tone 02	tone 27														
tone 18	tone 02	tone 05														
tone 19	tone 02	tone 05														
tone 20	tone 02	tone 05														
tone 21	tone 02	tone 05														
tone 22	tone 02	tone 05														
tone 23	tone 06	tone 05														
tone 24	tone 29	tone 05														
tone 25	tone 29	tone 05														
tone 26	tone 02	tone 01														
tone 27	tone 26	tone 05														
tone 28	tone 02	tone 05														
tone 29	tone 07	tone 05														
tone 30	tone 32	tone 05														
tone 31	tone 11	tone 01														
tone 32	tone 26	tone 01														
Example: Horn BExS110-230AC																
Setting: Basic tone Step 1 tone 11 („general alarm“)																
Optional tones Step 2 tone 31																
Step 3 tone 01																
Connection: AC version																
Function:	<table border="1"> <thead> <tr> <th>Switch</th> <th>Signal tone</th> </tr> </thead> <tbody> <tr> <td>Step 2</td> <td>Step 3</td> </tr> <tr> <td>open</td> <td>open</td> <td>tone 11</td> </tr> <tr> <td>closed</td> <td>open</td> <td>tone 31</td> </tr> <tr> <td>open</td> <td>closed</td> <td>tone 01</td> </tr> </tbody> </table>	Switch	Signal tone	Step 2	Step 3	open	open	tone 11	closed	open	tone 31	open	closed	tone 01		
Switch	Signal tone															
Step 2	Step 3															
open	open	tone 11														
closed	open	tone 31														
open	closed	tone 01														

