



### Horn EEx d and EEx de Series 8493

- Explosion protection to
  - CENELEC
  - IEC
- For use in
  - Zone 1 and Zone 2
  - Zone 22
- 32 different signal sequences adjustable with internal DIP switches
- Three different signal sequences can be selected through an external switch with a given DIP switch setting
- Three PFEER signals
  - „General alarm“
  - „Toxic gas alarm“
  - „Prepare to abandon platform“
- Volume control max. 117 dB(A)
- Robust aluminium enclosure with horn in ABS
- Synchronized tone sequence of parallel operated devices by quartz-controlled oscillator
- Option: speaker module, programmable

Selection table				
Version	Volume	Explosion group	Ordering code	Weight kg
EEx d version	110 dB	IIC	8493/11-11-.	3,420
	117 dB	IIC	8493/11-12-.	3,880
EEx de version	110 dB	IIC	8493/11-21-.	3,680
	117 dB	IIC	8493/11-22-.	4,140
Add. to ordering code				
		12 V DC	8493/ . . . . -1	
		24 V DC	8493/ . . . . -2	
		48 V DC	8493/ . . . . -3	
		110 V AC	8493/ . . . . -4	
		230 V AC	8493/ . . . . -6	
Note	Please specify thread M 20 or NPT 1/2"			
	A programmable announcement module can be supplied.			

### Technical Data

#### Explosion protection

Gas explosion protection  
 8493/11-1-. :  $\text{Ex}$  II 2 G EEx d IIC T4  
 8493/11-2-. :  $\text{Ex}$  II 2 G EEx de IIC T4

Dust explosion protection  $\text{Ex}$  II 3 D IP 66 T130 °C

Certificates KEMA 02 ATEX 2150

Volume  
 8493/11-1-. : 110 dB(A), at 1 m; adjustable  
 8493/11-2-. : 117 dB(A), at 1 m; adjustable

Ton sequence and tone combinations see table "Horn tone sequence selection table" and "Possible sound combinations for horns"

Rated operational voltage  $U_e$   
 DC 12 V  $\pm$  25 %  
 24 V  $\pm$  25 %  
 48 V  $\pm$  25 %  
 AC 110 V  $\pm$  10 %  
 230 V  $\pm$  10 %

Rated working current  $I_e$

8493/11-1-.	8493/11-2-.
12 VDC 195 mA	12 VDC 850 mA
24 VDC 265 mA	24 VDC 800 mA
48 VDC 130 mA	48 VDC 420 mA
110 VAC 93 mA	110 VAC 200 mA
230 VAC 56 mA	230 VAC 90 mA

#### Material

Housing Aluminium, colour: red

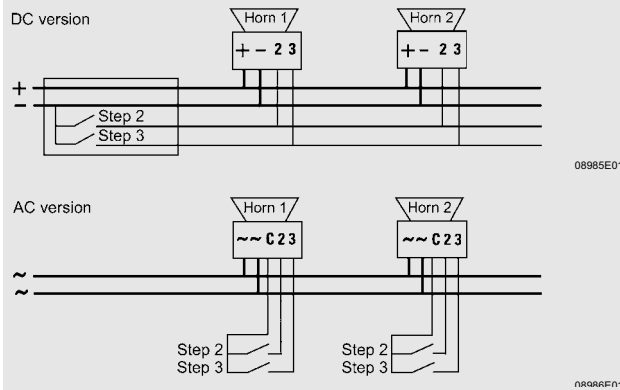
Horn Plastic ABS, colour: red

Degree of protection IP 66

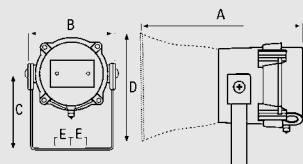
Ambient temperature - 50 °C ... + 55 °C

Cable entries 2 holes, M 20 or NPT 1/2" specify in order

Flexible lead Terminals for 0.5 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>



### Dimension drawings (all dimensions in mm) - subject to alterations



		A	B	C	D	E
8493/11-11-.	EEx d	282	165	145	181	30
8493/11-21-.	EEx de	275	165	145	181	30
8493/11-12-.	EEx d	313	165	145	220	30
8493/11-22-.	EEx de	326	165	145	220	30

Horn tone sequence selection table				
Type 8492				
Type 8493				
Tone sequence				
Version	Frequency	Interval	PFEER signal	Tone no.
Continious tone	440 Hz	continous		tone 28
	544 Hz	continous		tone 27
	660 Hz	continous		tone 20
	800 Hz	continous		tone 15
	1000 Hz	continous	„Toxic Gas Alarm“	tone 01
	2400 Hz	continous		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 Intervals 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 up to 1600 Hz 1600 Hz up 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)		continous		tone 26

**Possible sound combinations for horns**

Type 8492

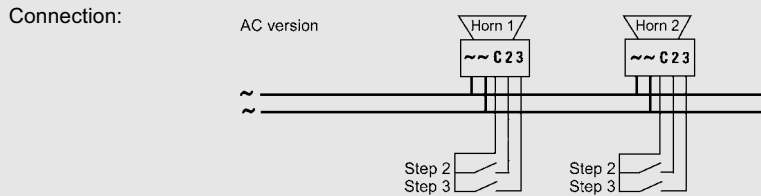
Type 8493

**Explanation**

The desired signal is set using DIP switches.  
 32 basic tones can be selected (table page)  
 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.

Example: Horn 8493/11-11-230V AC

Setting: Basic tone Step 1 Tone 11 („General Alarm“)  
 Optional tones Step 2 Tone 31  
 Step 3 Tone 01



Function:	Switch	Signal tone
	Step 2 Step 3	
	open open	Tone 11
	closed open	Tone 31
	open closed	Tone 01

**Tone sequence combinations (set with DIP switches)**

Step 1	Step 2	Step 3
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

We reserve the right to make alterations to the technical data, weights, dimensions, designs and products available without notice. The illustrations cannot be considered binding.