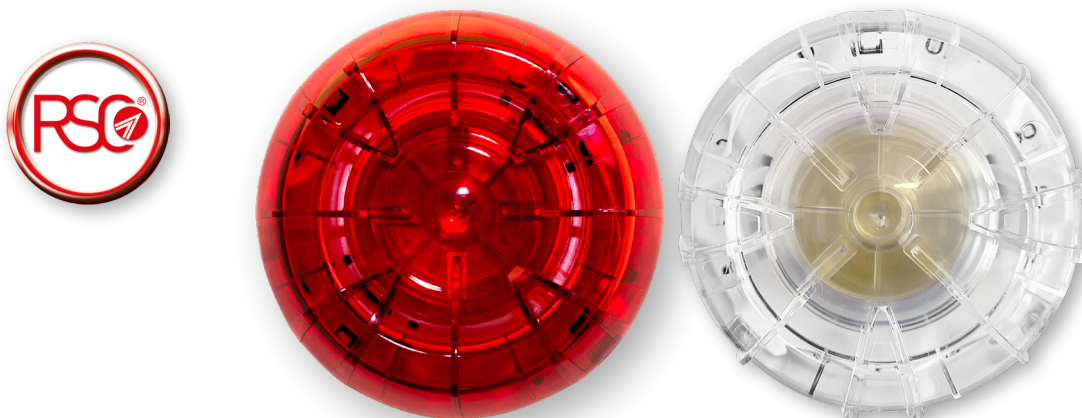


Addressable optical-acoustic alarm device



Optical-acoustic warning device for signaling fire alarm VID. Sound pressure 102dB(A) @ 1m. Type A for indoors. Dual address for operation duplication. Programmable functions: 6 operating criteria, 64 sound modes, volume adjustment 2 levels, activation time and delay, flashing excluded, activation. Signaling activation subject to formula. RSC® management: programming, remote management and control. Loop connection. Dual short-circuit isolator. Mounting with universal base TFBASE01. Protection rating IP22. Operating temperature -15°C...+70°C. PC-ABS casing. Red or white optical diffuser colour. Dimensions (D x H) 120 x 65mm. Approved EN 54-3:2001 + A1:2002 + A2:2006 - EN 54-17:2005. Certification: 1293-CPR-0422.

MODEL									
Name	Item no.								
TFIS01	TF5TFIS01	Optical diffuser red							
	TF5TFIS01W	Optical diffuser white							

OBLIGATIONS AND NOTICES

The TFIS01 siren can only be used when connected to a compatible Tecnofire control unit detection loop. In the planning and installation phases, the regulations in force must be observed and applied.

LOGIC UNITS

The TFIS01 siren can be programmed to operate as a single or dual logic unit. By programming the second logical unit, called Alias, the siren takes on two functional addresses to which two signalling modes correspond. The position of the Enable rotary switch determines the number of physical/logical units of operation. With the Enable rotary switch programmed to position 0 (zero), there is only one Main Siren operating logic unit. With the Enable rotary switch programmed to any position other than 0 (zero), there are two logical units of operation, Main Siren and Alias Siren.

ADDRESSING

The physical address of the siren module is programmed by means of two decimal rotary switches, visible on the lower face of the siren. The selectors are marked by labels indicating the position of the digits that make up the address: X10 for the tens and X1 for the units. The numerical range of addresses allowed for the modules goes from address No.01 to address No.99. The programmed address is assigned to logical unit 1 (main siren). Attention: programming address No.00 effectively excludes the siren from operation, but its absorption nevertheless burdens the Loop.

ID	Logic unit 1	
	Enable equal to 0	
SINGLE	Main siren	Physical address = XX
DOUBLE	Logic unit 1	
	Enable different from 0	
	Main siren	Physical address = XX
	Logic unit 2	
	Alias siren	Logical address = Physical address XX + 1

SHORT-CIRCUIT ISOLATOR

The siren is equipped with a line separator with double insulator. In the event of a short circuit of the Loop line, the separator intervenes by isolating the section of line affected by the fault, thus safeguarding the correct functioning of the devices connected upstream and downstream.

The intervention of the line separator preserves the smooth operation of the loop and generates the failure signal "Separator open".

NOTIFICATION PRIORITY

If the siren receives the alarm activation command for both main and alias identities, priority will be given to main siren. An alarm cycle of the alias siren stops when the main siren activates.

DIAGNOSTIC FUNCTIONS

Tecnofire control units manage a series of specialised diagnostic functions for each type of device. The diagnostic functions available for the siren module allow you to:

- Physically identify the module.
- Identify the device type.
- Identify the HW and FW version.
- Detect electrical operating data.
- Read statistics from the communication monitor.
- Activate the siren.

NOTIFICATION MODES

The siren can signal alarms in two modes:

- Acoustic mode

This is obtained by disabling the flashing light.

The siren generates the acoustic signal according to the programmed sound mode and emission level.

- Optical-acoustic mode

This is obtained by enabling the flashing light.

The acoustic signal is generated according to the programmed sound mode and emission level.

Optical signalling is generated by the flashing of the LEDs positioned around the circumference of the case.

The flashing frequencies of the main siren and alias siren are different:

- main siren 100ms ON 200ms OFF
- alias siren 100ms ON 900ms OFF

SOUND SIGNALLING MODES

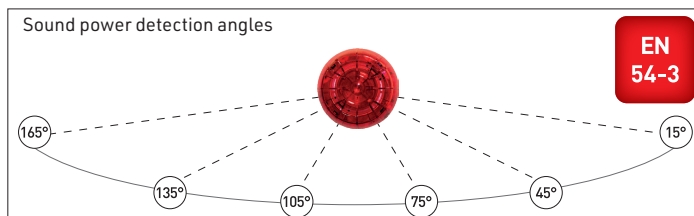
The table "SOUND TYPES" shows for each of the 64 sound modes: the frequencies, compliance with standards, maximum acoustic power detected with the 30V DC power supply and the acoustic levels detected at the angles indicated, with the 18V DC power supply.

All data were measured with the high volume setting.

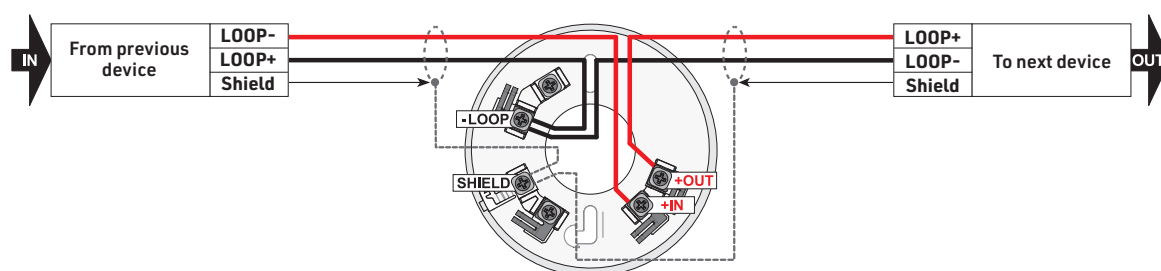
DIAGNOSTIC FUNCTIONS OF THE MODULE TECNO - siren	
Identification	Turns on the Led of the device for its identification
Self declaration	Self declaration of the module type
HW release	Self declaration of the hardware version
FW release	Self declaration of the firmware version
Level reading	Measurement of the electric values of operation
Statistic	Statistic/functional values related to communication
Activation	Allows to activate the siren

Consumption
Power supply level
Zero level
Consumption level
Loop resistance

Strings sent
Errors
Percentage of success
Percentage of errors
Latency



CONNECTION TO THE LOOP



SOUND TYPES														
Sound index	Index of matching sounds		Type	Description	Functioning			Standard	Sound level - High volume dB @ 1m					
	TFIES02 TFIES03	TFPANM BASE-SIREN							Max. @ 30V DC	@ 18V DC				
									15°	45°	75°	105°	135°	165°
1	9		Special	Tecnofire alarm (sweep up)	1000ms @ 353Hz...1950Hz + 50ms off			99	84	91	95	95	90	84
2	10		Special	Tecnofire technical alarm (sweep up)	1000ms @ 445Hz...590Hz + 50ms off			97	80	88	91	92	87	80
3	11		Special	Tecnofire failure (sweep up/down)	1000ms @ 445Hz...1000Hz + 100500ms @ 3550Hz + 700ms off			99	85	92	95	95	91	84
4	12		Special	Tecnofire prealarm (4 tone pulses)	100ms @ 1050Hz + 50ms off + 200ms @ 1300Hz + 50ms off + 100ms @ 1600Hz + 50ms off + 200ms @ 1900Hz + 50ms off			102	83	92	96	95	91	81
5	13		Bitonal	AFNOR French alarm tone	400ms @ 440Hz + 100ms @ 554Hz		NFS 32-001	96	79	87	91	91	87	81
6	14		Bitonal		500ms @ 440Hz + 500ms @ 554Hz			97	80	89	92	92	88	82
7	15		Bitonal		250ms @ 500Hz + 250ms @ 610Hz			94	78	85	89	89	85	79
8	16		Bitonal	AFNOR French alarm tone	500ms @ 500Hz + 500ms @ 1200Hz		NFS 32-001	98	84	90	92	94	90	86
9	17		Bitonal		500ms @ 580Hz + 500ms @ 1000Hz			96	82	87	91	91	85	78
10	18		Bitonal		250ms @ 628Hz + 250ms @ 925Hz			97	83	88	92	91	86	82
11					250ms @ 988Hz + 250ms @ 645Hz			96	Not compliant with EN 54-3					
12	19		Bitonal		250ms @ 670Hz + 370ms @ 845Hz			100	85	92	95	95	92	85
13	20		Bitonal		500ms @ 800Hz + 500ms @ 970Hz		BS 5839 Pt1	99	Not compliant with EN 54-3					
14	21		Bitonal		150ms @ 800Hz + 150ms @ 970Hz			98						
15				Telecom alternate tone	250ms @ 800Hz + 250ms @ 970Hz		BS 5839 Pt1 FP1063.1	98						
16	22		Bitonal		170ms @ 2400Hz + 170ms @ 2900Hz			96	82	81	91	95	85	80
17	23		Bitonal		150ms @ 2400Hz + 150ms @ 2850Hz			96	81	78	91	94	85	80
18	24		Bitonal		250ms @ 2400Hz + 250ms @ 2850Hz			96	81	80	92	95	86	81
19	25		Bitonal		250ms @ 2500Hz + 250ms @ 3100Hz			93	80	83	89	90	88	82
20	26		Pulse		600ms @ 440Hz + 600ms off			93	79	83	87	88	83	77
21	27		Pulse		250ms @ 580Hz + 250ms off			96	80	86	90	91	87	79
22	28		Pulse	Swedish alarm tone	150ms @ 660Hz + 150ms off			99	Not compliant with EN 54-3					
23					500ms @ 660Hz + 500ms off			100						
24	29		Pulse		1.8s @ 660Hz + 1.8s off			100						
25	30		Pulse		6.5s @ 660Hz + 13s off			100						
26	31		Pulse	Intermittent tone	150ms @ 925Hz + 600ms off			95	82	86	91	90	85	80
27	32		Pulse	Intermittent tone	250ms @ 925Hz + 1s off		BS 5839 Pt1	96	83	87	92	91	86	81
28	33		Pulse	Intermittent tone	250ms @ 970Hz + 1s off		BS 5839 Pt1	94	79	84	90	89	85	75
29	34		Pulse		500ms @ 970Hz + 500ms off			94	80	85	90	90	85	75
30	35		Pulse		3x (500ms @ 950Hz + 500ms off) + 1500ms off		ISO 8201 / LBS 5839 Pt1	94	80	85	90	90	85	75
31	36		Pulse	Intermittent tone	1s @ 970Hz + 1s off		BS 5839 Pt1	94	77	84	90	90	83	74
32	37		Pulse	Pelican crossing	150ms @ 2850Hz + 100ms off			85	73	78	81	81	74	71
33	38		Pulse	Backup alarm	500ms @ 2850Hz + 500ms off		HF / BS 5839 Pt1	86	72	79	82	81	74	72
34	39		Pulse		3x (500ms @ 2850Hz + 500ms off) + 1500ms off		ISO 8201 HF	86	73	79	82	81	74	71
35	40		Pulse		1000ms @ 2850Hz + 1000ms off			86	75	79	81	81	74	70
36	41		Continuous	US temporal tone 3	610Hz continuous		ISO 8201	93	76	84	86	88	85	78
37					628Hz continuous			95	Not compliant with EN 54-3					
38	42		Continuous	End of alarm or Swedish alarm tone	660Hz continuous			100						
39	43		Continuous		845Hz continuous			98	81	92	95	95	93	87
40	44		Continuous		925Hz continuous			97	83	88	92	91	87	82
41	8	8	Continuous	Evacuation alarm UNI 11744	970Hz continuous	 	UNI 1174 / BS5839 Pt1	94	77	85	90	90	83	75
42	45		Continuous		1200Hz continuous			96	81	87	92	93	86	85
43	46		Continuous	US temporal tone 3	2850Hz continuous		ISO 8201	82	74	79	81	81	74	71
44	47		Continuous		4000Hz continuous			105	73	91	101	100	96	87
45	48		Sweep		1000ms @ 300Hz...1200Hz + 0ms off			98	83	90	93	94	90	81
46	49		Sweep		3x (500ms @ 300Hz...1200Hz + 500ms off) + 1500ms off			97	81	88	92	92	88	82
47	50		Sweep		3x (500ms @ 400Hz...1200Hz + 500ms off) + 1500ms off			98	82	89	92	92	88	82
48	51		Sweep		3000ms @ 400Hz...1200Hz + 500ms off			99	84	91	94	94	91	84
49	52		Sweep		140ms @ 500Hz...1000Hz + 0ms off			97	80	87	91	91	87	80
50	53		Sweep	Slow evacuation swap	3.5s @ 500Hz...1200Hz + 500ms off		NEN 2575	100	83	92	94	94	91	84
51	54		Sweep	Slow evacuation swap	3.76s @ 500Hz...1200Hz + 250ms off		NEN 2575	100	83	91	94	94	91	84
52	55		Sweep	LF buzzer	20ms @ 800Hz...970Hz + 0ms off		BS 5839 Pt1	97	81	88	92	92	87	82
53	56		Sweep	Fast sweep	140ms @ 800Hz...970Hz + 0ms off (7Hz)		BS 5839 Pt1	98	82	90	93	93	89	83
54					800Hz...970Hz in 110ms + 0ms off (9Hz)			98	82	89	93	93	89	83
55	57		Sweep		330ms @ 800Hz...970Hz + 0ms off (3Hz)		BS 5839 Pt1	98	82	90	93	93	90	83
56	58		Sweep		500ms @ 800Hz...1000Hz + 0ms off			99	82	90	93	94	90	83
57	7	7	Sweep	Prealarm UNI 11744	1000ms @ 800Hz...970Hz + 0ms off	 	UNI 11744 / BS5839 Pt1	100	84	91	95	95	91	86
58	59		Sweep		3x (500ms @ 1200Hz...300Hz + 500ms off) + 1500ms off			96	80	87	91	91	87	80
59	60		Sweep	Evacuation tone	1000ms @ 1200Hz...500Hz + 10ms off		DIN PFEER	98	82	89	93	93	89	84
60	61		Sweep		20ms @ 2400Hz...2850Hz + 0ms off (50Hz)			95	81	83	90	92	85	77
61					2400Hz...2850Hz in 110ms + 0ms off (9Hz)			93	78	82	86	88	82	75
62	62		Sweep	Fast sweep or Australian alarm tone	140ms @ 2400Hz...2850Hz + 0ms off (7Hz)		VdS, AS 2220	94	79	83	87	89	83	76
63	63		Sweep		330ms @ 2400Hz...2850Hz + 0ms off (3Hz)			93	78	82	86	88	81	75
64	64		Sweep		1000ms @ 2400Hz...2850Hz + 0ms off			100	85	86	94	96	88	81

Accessories

	TFBASE01 Mounting base for sirens TFIS01 and TFIES02. ABS material. White colour. Dimensions (D x H) 100 x 19mm. Item no. TF6TFBASE01N
	TFIS01-PLEXI Plexiglass signage, with mounting location for TFIS01 and TFIES02 sirens. Wording "FIRE ALARM". Dimensions (L x H) 360 x 121mm. Item no. TF5TFIS01PX-UK
	TFBOX-SB Junction box for mounting base TFBASE01. Circular shape with 2 flat walls, pre-marked plugs for mounting 2 PG9 pipe sockets in opposing or side-by-side arrangement. Profile with condensation protection. Degree of protection of TFBOX-SB IP44. Casing in ABS. Colour white. Dimensions (D x H) 121 x 36mm. Item no. TF5TFBOXSB

Technical and functional specifications

General information	Addressable optical-acoustic alarm device	TFIES01
	Area of use	Type A (for indoors)
Optical characteristics	VID classification	Visual Indication Device
Acoustic characteristics	Sound level	Max .90dB(A) @ 1m
	Main sound type (compliant with EN 54-3)	Number 1
Programmable functions	Functional duplication	Principal ID + Alias ID
	Polling signaling Led	Excludable
	Polling frequency	Programmable
	Functioning criterions	6 modes
	Optical signalling	Excludable
	Acoustic signalling modes	64
	Acoustic volume adjustment	2 settings
	Activation delay	Programmable
	Activation time	Programmable
	Device activation	It can be controlled by the formula
Loop interface	Addressable module	Connection over loop
	Addressing	2 rotary switch
	Occupied addresses	Max. 2 (Double ID)
	Communication protocol	FIRE-SPEED
	Loop isolator	Double insulator

Electrical specifications	Nominal voltage	24V DC
	Operating voltage	18V...30V DC
	Consumption	520µA @ 24V DC
	Average absorption during signalling	Optics and acoustics 8.1mA @ 24V DC
Acoustic only 5.5mA @ 24V DC		
Physical specifications	Operating temperature	-15°C...+70°C
	Relative humidity (non-condensing)	10%...93%
	Protection class	IP22 (EN 60529)
	Casing	PC ABS
	Dimension (D x H)	120 x 65mm
	Weight	230g
Conformity	Standards	EN 54-3:2001 + A2:2006 EN 54-17:2005
	System compatibility	UNI EN 54-13:2020
	Certification number	1293-CPR-0422
	Year of CE marking	14
	Number of declaration of performance	006_TFIS01
	Notified body	EVPU

N.B. Declarations of conformity and performance are available on www.tecnofire.com



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