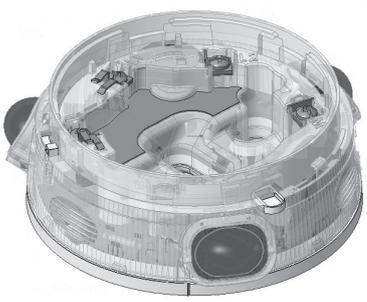# FIRECLASS

Visual Alarm Device Sounder Beacon Series

The Visual Alarm Device (VAD) Sounder Beacons are loop powered units that are driven from an addressable controller panel. They are available in ceiling and wall mounted variants, including an outdoor wall version.

The ceiling mounted variants provide a base for fitting a fire detector. Alternatively, a blanking cap is fitted.

All VAD Sounder Beacons have a built-in two port loop short circuit isolator.

Settings for tones, volume, beacon flash and status monitoring are configurable using the control panel.

Selectable flash rates are:
- 1Hz (one flash every second)
- 0.5Hz (one flash every two seconds)

Summary of the range

Product	Details	Order number	In scope/fitted
Base variant			
FC440AVB	Addressable Base Sounder Beacon VAD Standard Power	576.440.006	☐
FC441AVB	Addressable Base Sounder Beacon VAD High Power	576.440.014	☐
Wall variant			
FC440AVW	Addressable Wall Sounder Beacon VAD White Housing	576.440.007	☐
FC440AVR	Addressable Wall Sounder Beacon VAD Red Housing	576.440.008	☐
FC445AVR	Addressable Wall Sounder Beacon VAD Weatherproof	576.440.009	☐
Accessories			
B-CAP	Blanking Cap For Sounder / VID / VAD Bases	557.080.001	☐
A-CON	Conduit Adaptor For Sounder / VID / VAD Bases	557.080.002	☐
S-BOXR	Shallow Surface Back Box for Indoor Wall Sounder/VAD/VID Red	557.080.007	☐
S-BOXW	Shallow Surface Back Box for Indoor Wall Sounder/VAD/VID White	557.080.008	☐
A-BOX	Flush Back Box Adaptor For Indoor Wall Sounder/VAD/VID	557.080.010	☐
D-BOXR	Deep Surface Back Box for Indoor Wall Sounder/VAD/VID Red	557.080.011	☐
D-BOXW	Deep Surface Back Box for Indoor Wall Sounder/VAD/ VID White	557.080.012	☐

Performance characteristics

	FC440AVB	FC441AVB	FC440AVW	FC440AVR	FC445AVR
Mounting orientation	Ceiling		Wall		
Indoor type A/Outdoor type B	Indoor				Outdoor
Weight (g)	178	188	202	202	380
Housing material	PC		PC-ABS		
Housing colour	Clear		White	Red	
Operating temperature (°C)	-25 to +70		-10 to 55		-25 to +70
Storage temperature (°C)	-25 to +70				
Humidity	Up to 95% non-condensing				
Pressure	Sounder SPL output quoted for 1000 mBar				
Sounder volume settings	2				
EN54-17 isolator	Yes				
EN54-3 sounder	Yes				
EN54-23 visual alarm	Yes				
Vibration, shock, corrosion, EMC	Complies with EN54 series requirements				
Beacon flash rates	0.5 and 1 Hz				
Beacon intensity settings	2				
Ingress protection rating	IP21C				IP55
Typical Sounder output at 1 metre					
High volume	90 dBA		100 dBA		
Low volume	70 dBA		90 dBA		
Beacon performance					
Flash colour	White				
Beacon intensity low (open class)	Open class (O-2.1-7.0)	Open class (O-2.7-8.5)	Open class (O-1.6-5.1)		
Beacon intensity high	C-3-8	C-3-15	W-2.4-7.5		
Electrical characteristics					
Addressable loop voltage	20 V - 40 V, 35 V Typical				

Note 1: The open class settings have the same volumetric shape as the equivalent wall or ceiling class but with the revised parameters specified.
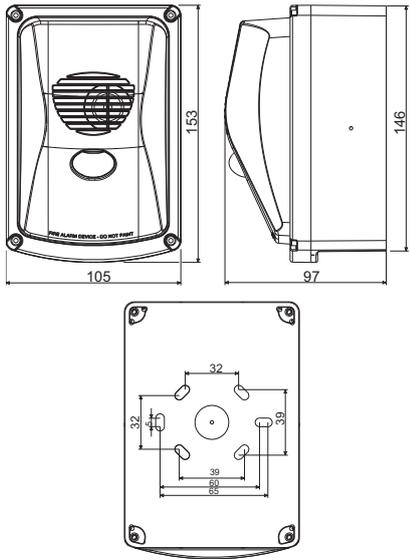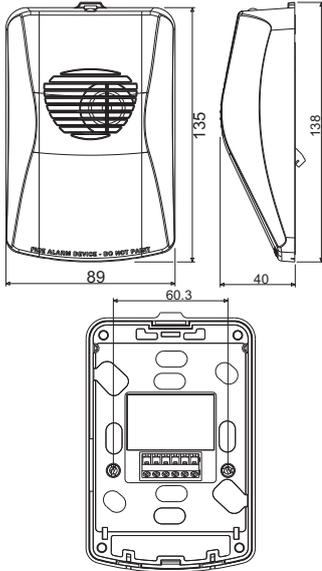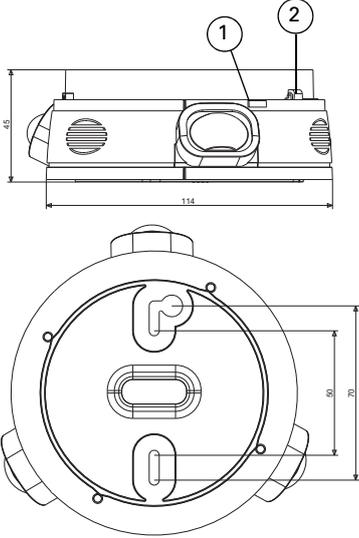**Note 2**: For IP21C protection a fire detector or blanking cap must be fitted to the base variants.
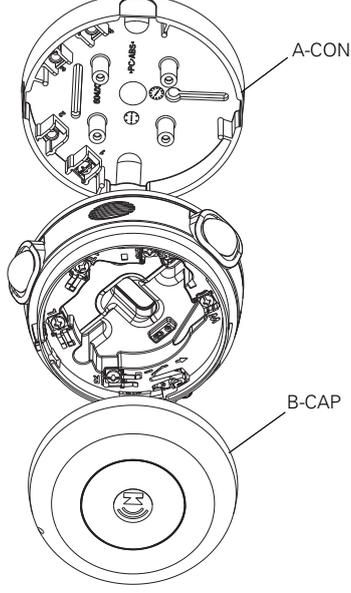
Address programming
Default address = 255. Set the address before installation using the FC490ST service tool with its ancillary lead. Remove the front cover to access the programming port on wall devices.
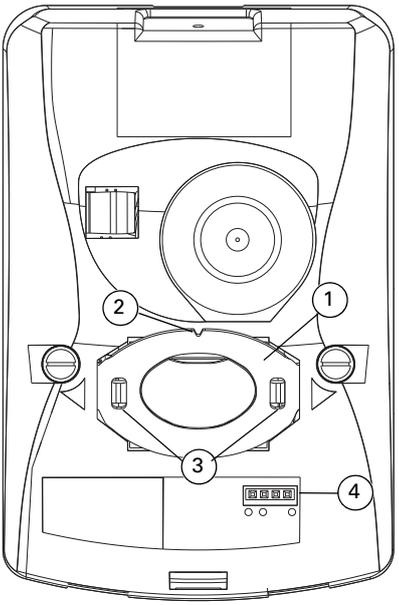
Installation information
Dimensions

Weatherproof wall units	Indoor wall units	Base units
Fig. 1: Sounder Beacon VAD	Fig. 2: Sounder	Fig. 3: Base unit 1– Temporary park plunger and indicator (yellow) for short circuit isolator. 2– Address flag holder.

Mounting and fixing

Weatherproof wall units	Indoor wall units	Base units
These units are supplied with their own back box and special front cover. A sealing ring is supplied fitted on this front cover. See item 1 in Fig 4. 1 Fix the back box to the wall. Drill positions for glands on the top, bottom, and sides, see item 2 in Fig 4. 2 Slide the wall unit into place in the front cover as shown and then push down until it clips in. 3 Secure the front cover (including the wall unit) to the back box with the four supplied screws (M3.5 hex head) using the supplied Allen key. **Note:** To maintain the IP rating, use suitably rated cable glands and sealant as required.	1 Unclip the front cover from the wall unit. using the screwdriver slot on the top. The front cover is hinged at the bottom of the unit. 2 Use the two supplied screws to either fix the unit to the optional back box (with knockouts for conduit connections) or to the optional adaptor plate or to a back box with suitable mating fixings. 3 Refit the front cover, engaging the clips on the bottom first. 4 Secure the front cover with either the supplied self-tapping screw or nylon plug. **Note:** If using the adaptor plate a suitable recess is required for the connector block protruding from the rear of the wall unit.	These units either fit directly to the ceiling or to an optional ceiling adaptor. The ceiling mounted variants provide a base for fitting a fire detector. Alternatively, a blanking cap is fitted. See Fig 6. See Fig 8 for fitting the locking pin. To remove a detector from a base with a locking pin, complete these steps: 1 Insert a suitable tool into the access hole to depress the locking pin in the detector cover. 2 Rotate the detector to remove. These units can be used with the Ceiling Tile Adapter (CTA) kit (517.050.060) by using the CTA Adaptor Plate, CTA-AP (517.050.058). Use the knock outs for the cabling as required.
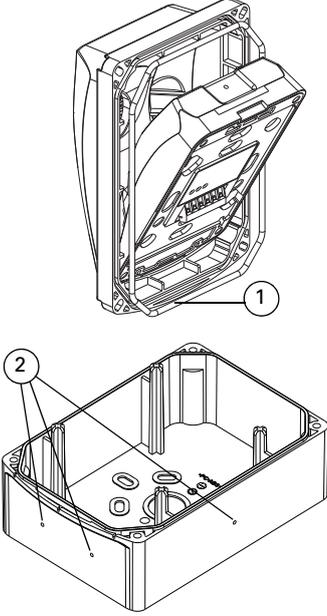
Fig. 4: Fitting weatherproof wall units
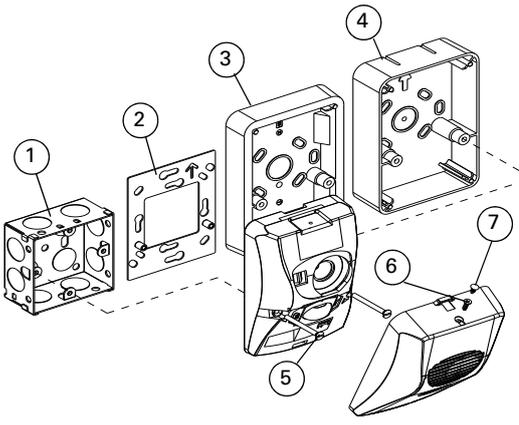
Fig. 5: Indoor wall units
1– Single gang flush back box
2– A-BOX
3– S-BOX
4– D-BOX
5– M3.5 screw x 2
6– Self-tapping screw
7– Nylon plug

Fig. 6: Fitting base units

Weatherproof wall units	Indoor wall units	Base units

Fig. 7: Checking the gasket
1 Check that the gasket (item 1) is seated correctly before fitting the front cover.
2 Note "v" notch (item 2) on the upper side and gasket retained by the hooks on both sides (items 3).
3 Item 4 is the programming port.

Fig. 8: Fitting the locking pin

Beacon performance

Wall	x (m)	y (m)
Open class (O-1.6-5.1)	1.6	5.1
W-2.4-7.5	2.4	7.5

Fig. 9: Beacon performance – wall devices

Ceiling	x (m)	y (m)
Open class (O-2.1-7.0)	2.1	7.0
C-3-8	3.0	8.0
Open class (O-2.7-8.5)	2.7	8.5
C-3-15	3.0	15.0

Fig. 10: Beacon performance – ceiling devices

Cabling and wiring

Wall variant wiring	Base variant wiring		Contact	Function
			L	Not used
			L1	Positive Line In and Out
			L2	Negative line (isolator In or Out)
			M	Negative Line (isolator In or Out)
			R	Remote LED Out, wired only if a remote indicator is required
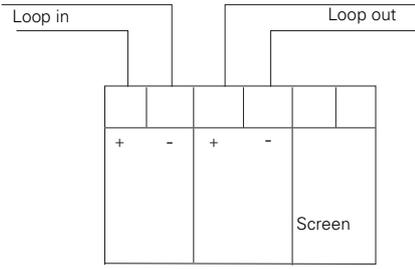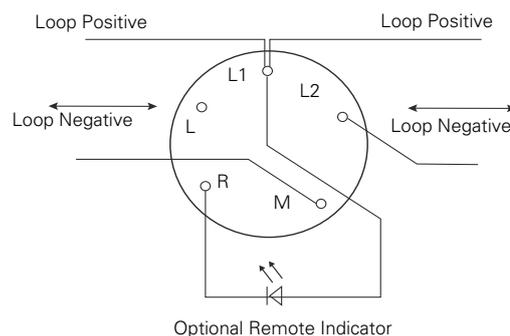
Fig. 11: Wall variant wiring

Fig. 12: Base variant wiring

Wiring notes

■ All wiring must comply with local installation regulations and local fire system design requirements.
■ Ensure all conductors are free of earths.
■ Verify correct wiring and wiring polarity before connecting the devices to the addressable loop.

Isolator characteristics

Parameter	Isolator	
V_{min}, V_{max}, V_{nom}	Line voltage range	20V-40V, 35V nominal
$V_{SO\ min}$.$V_{SO\ max}$	Isolator trip threshold range	18.5V - 19.99V
$V_{SC\ min}$, $V_{SC\ max}$	Isolator recovery threshold	2.9V, 3.5V
$I_{C\ max}$	Maximum rated continuous current	1.1A
$I_{L\ max}$	Leakage current into short circuit (isolated tripped)	10 mA
$I_{S\ max}$	Maximum rated switching current	1.1A non-inductive
$Z_{C\ max}$	Maximum series impedance	0.5Ω
$Z_{C\ typ}$	Typical series impedance	0.25Ω

Sounder tones and performance

Tone name	Tone description			Configurable/monitored (only if volume is 80 dB or above)	
	Pattern	Frequency	Rate	Wall	Ceiling
Dutch Slow Whoop	Sweep	500 to 1200	Rising over 3.5 s, 0.5 gap	Yes/Yes	Yes/Yes
7 Hz Fast Sweep	Sweep	800 to 970	142.8 ms ramp 7 Hz	Yes/Yes	Yes/Yes
BS 1 Hz Sweep	Sweep	800 to 970	1 Hz	Yes/Yes	Yes/Yes
2 Tone	Alternating	660 / 880	500 ms per tone	Yes/Yes	Yes/Yes
Temporal 4	Intermittent	880	500 ms On 500 ms Off x 4 then 1 second gap	Yes/Yes	Yes/Yes
Temporal 3	Intermittent	880	500 ms On 500 ms Off x 3 then 1 second gap	Yes/Yes	Yes/Yes
March Time Beep	Intermittent	880	500 ms On 500 ms Off	Yes/Yes	Yes/Yes
Continuous 970	Continuous	970	Steady	Yes/Yes	Yes/Yes
Continuous 850	Continuous	850	Steady	Yes/Yes	No/No
DIN 1 Hz Sweep	Sweep	1200 to 500	Falling over 1 s	Yes/Yes	Yes/Yes
Banshee LF Buzzer	Sweep	800 to 950	120 Hz	Yes/Yes	Yes/Yes
3 Hz Banshee	Sweep	800 to 950	3 Hz	Yes/Yes	Yes/Yes
9 Hz Banshee	Sweep	800 to 950	9 Hz	Yes/Yes	Yes/Yes
Alternating	Alternating	554/440	554 Hz for 100 ms and 440 Hz for 400 ms	Yes/Yes	Yes/Yes
Yodalarm	Alternating	800/1000	250 ms for each frequency	Yes/Yes	Yes/Yes
Conventional Bell	Continuous	1450	Steady	Yes/Yes	Yes/Yes

Note 1: If the pulse pattern is assigned by the control panel, then only continuous tones can be configured.
Note 2: The conventional bell is a simulated tone with limited bandwidth. It is not advisable to mix conventional bells with electronic sounders producing a simulated bell tone.

Loop loading

Sounder volume	Beacon flash rate	Beacon intensity	Wall VAD FC440AVW, FC440AVR, FC445AVR	Base VAD standard power FC440AVB	Base VAD high power FC441AVB
OFF	OFF	N/A	0.475 mA	0.475 mA	0.50 mA
HIGH	OFF	N/A	8.5 mA	4.3 mA	4.3 mA
HIGH	0.5 Hz	Low	391 mW	275 mW	404 mW
HIGH	1 Hz	Low	473 mW	393 mW	628 mW
HIGH	0.5 Hz	High	471 mW	395 mW	629 mW
HIGH	1 Hz	High	637 mW	608 mW	1119 mW

Note: Please refer to the loop loading calculator for these units.

Sounder performance Volume HIGH- ceiling devices FC440AVB, FC441AVB

Volume HIGH		Ceiling devices - sound performance horizontal (dBA at 1 m)							Ceiling devices - sound performance vertical (dBA at 1 m)					
	Angle	15°	45°	75°	105°	135°	165°		15°	45°	75°	105°	135°	165°
Tone														
Dutch Slow Whoop	40V	> 95	> 87	> 83	> 82	> 80	> 80		> 94	> 87	> 82	> 81	> 84	> 87
	20V	> 93	> 86	> 82	> 80	> 78	> 78		> 92	> 83	> 80	> 79	> 82	> 87
7 Hz Fast Sweep	40V	> 93	> 85	> 81	> 79	> 77	> 78		> 92	> 85	> 81	> 80	> 81	> 87
	20V	> 91	> 83	> 79	> 77	> 76	> 76		> 90	> 82	> 79	> 78	> 80	> 86
BS 1 Hz Sweep	40V	> 94	> 86	> 82	> 81	> 78	> 79		> 93	> 86	> 82	> 80	> 83	> 88
	20V	> 92	> 85	> 81	> 79	> 77	> 77		> 91	> 83	> 79	> 79	> 82	> 86
2 Tone	40V	> 94	> 86	> 83	> 82	> 76	> 80		> 94	> 86	> 82	> 80	> 84	> 88
	20V	> 93	> 85	> 82	> 80	> 76	> 78		> 91	> 83	> 79	> 79	> 82	> 85
Temporal 4	40V	> 98	> 90	> 87	> 85	> 80	> 84		> 97	> 89	> 84	> 84	> 88	> 92
	20V	> 93	> 87	> 84	> 82	> 77	> 81		> 95	> 87	> 79	> 79	> 82	> 89
Temporal 3	40V	> 98	> 90	> 87	> 85	> 80	> 84		> 97	> 90	> 84	> 84	> 88	> 92
	20V	> 95	> 87	> 84	> 82	> 77	> 81		> 95	> 88	> 82	> 82	> 85	> 89
March Time beep	40V	> 98	> 90	> 87	> 85	> 80	> 84		> 97	> 90	> 84	> 84	> 87	> 91
	20V	> 95	> 87	> 84	> 82	> 77	> 81		> 96	> 88	> 81	> 81	> 87	> 91
Continuous 970 Hz	40V	> 92	> 82	> 79	> 77	> 77	> 74		> 92	> 83	> 79	> 76	> 79	> 83
	20V	> 91	> 79	> 77	> 75	> 75	> 72		> 90	> 81	> 79	> 75	> 79	> 83
DIN 1 Hz Sweep	40V	> 94	> 86	> 81	> 79	> 78	> 78		> 93	> 86	> 81	> 81	> 82	> 87
	20V	> 91	> 83	> 79	> 77	> 75	> 75		> 91	> 83	> 80	> 79	> 81	> 86
Banshee LF Buzzer	40V	> 94	> 86	> 81	> 79	> 77	> 77		> 93	> 85	> 81	> 80	> 82	> 87
	20V	> 91	> 84	> 78	> 75	> 75	> 73		> 91	> 84	> 79	> 79	> 80	> 85
3 Hz Banshee	40V	> 94	> 86	> 82	> 82	> 77	> 78		> 93	> 85	> 81	> 80	> 82	> 87
	20V	> 91	> 83	> 79	> 77	> 75	> 76		> 91	> 83	> 79	> 78	> 81	> 86
9 Hz Banshee	40V	> 94	> 85	> 81	> 78	> 76	> 77		> 92	> 85	> 81	> 80	> 81	> 87
	20V	> 92	> 83	> 79	> 76	> 74	> 75		> 90	> 83	> 79	> 78	> 80	> 85
Alternating	40V	> 95	> 86	> 82	> 80	> 78	> 79		> 94	> 87	> 81	> 81	> 84	> 87
	20V	> 91	> 84	> 79	> 76	> 76	> 76		> 92	> 85	> 79	> 79	> 82	> 86
Yodalarm	40V	> 94	> 85	> 81	> 78	> 76	> 78		> 93	> 86	> 81	> 80	> 81	> 87
	20V	> 90	> 82	> 78	> 76	> 75	> 75		> 90	> 83	> 79	> 79	> 80	> 85
Conventional Bell	40V	> 91	> 83	> 78	> 79	> 76	> 77		> 91	> 83	> 81	> 79	> 81	> 86
	20V	> 89	> 81	> 78	> 77	> 75	> 76		> 89	> 82	> 80	> 78	> 79	> 84

Sounder performance Volume LOW- ceiling devices FC440AVB, FC441AVB

Volume LOW		Ceiling devices - sound performance horizontal (dBA at 1 m)							Ceiling devices - sound performance vertical (dBA at 1 m)					
	Angle	15°	45°	75°	105°	135°	165°		15°	45°	75°	105°	135°	165°
Tone														
Dutch Slow Whoop	40V	> 77	> 69	> 64	> 63	> 61	> 62		> 75	> 68	> 64	> 62	> 66	> 71
	20V	> 77	> 69	> 64	> 63	> 61	> 62		> 75	> 68	> 64	> 62	> 66	> 71
7 Hz Fast Sweep	40V	> 71	> 63	> 59	> 59	> 59	> 65		> 70	> 63	> 59	> 59	> 61	> 66
	20V	> 71	> 63	> 59	> 59	> 59	> 65		> 70	> 63	> 59	> 59	> 61	> 66
BS 1 Hz Sweep	40V	> 71	> 64	> 60	> 60	> 61	> 66		> 71	> 62	> 62	> 58	> 57	> 55
	20V	> 71	> 64	> 60	> 60	> 61	> 66		> 71	> 62	> 62	> 58	> 57	> 55
2 Tone	40V	> 72	> 65	> 59	> 59	> 61	> 66		> 73	> 63	> 61	> 59	> 57	> 56
	20V	> 72	> 65	> 59	> 59	> 61	> 66		> 73	> 63	> 61	> 59	> 57	> 56
Temporal 4	40V	> 80	> 72	> 67	> 66	> 62	> 65		> 79	> 71	> 66	> 66	> 69	> 73
	20V	> 80	> 72	> 67	> 66	> 62	> 65		> 79	> 71	> 66	> 66	> 69	> 73
Temporal 3	40V	> 80	> 72	> 67	> 66	> 62	> 65		> 79	> 71	> 66	> 66	> 69	> 73
	20V	> 80	> 72	> 67	> 66	> 62	> 65		> 79	> 71	> 66	> 66	> 69	> 73
March Time beep	40V	> 79	> 72	> 69	> 67	> 62	> 65		> 79	> 72	> 65	> 65	> 70	> 73
	20V	> 79	> 72	> 69	> 67	> 62	> 65		> 79	> 72	> 65	> 65	> 70	> 73
Continuous 970 Hz	40V	> 72	> 62	> 60	> 60	> 59	> 61		> 72	> 61	> 59	> 59	> 59	> 61
	20V	> 72	> 62	> 60	> 60	> 59	> 61		> 72	> 61	> 59	> 59	> 59	> 61
DIN 1 Hz Sweep	40V	> 73	> 66	> 61	> 61	> 62	> 67		> 74	> 66	> 62	> 61	> 63	> 68
	20V	> 73	> 66	> 61	> 61	> 62	> 67		> 74	> 66	> 62	> 61	> 63	> 68
Banshee LF Buzzer	40V	> 71	> 63	> 59	> 59	> 60	> 65		> 72	> 63	> 61	> 59	> 57	> 57
	20V	> 71	> 63	> 59	> 59	> 60	> 65		> 72	> 63	> 61	> 59	> 57	> 57
3 Hz Banshee	40V	> 71	> 63	> 59	> 59	> 60	> 65		> 72	> 63	> 62	> 59	> 57	> 57
	20V	> 71	> 63	> 59	> 59	> 60	> 65		> 72	> 63	> 62	> 59	> 57	> 57
9 Hz Banshee	40V	> 70	> 63	> 59	> 58	> 59	> 65		> 72	> 62	> 61	> 59	> 57	> 56
	20V	> 70	> 63	> 59	> 58	> 59	> 65		> 72	> 62	> 61	> 59	> 57	> 56
Alternating	40V	> 76	> 68	> 64	> 64	> 65	> 70		> 76	> 69	> 64	> 63	> 66	> 70
	20V	> 76	> 68	> 64	> 64	> 65	> 70		> 76	> 69	> 64	> 63	> 66	> 70
Yodalarm	40V	> 70	> 63	> 60	> 60	> 61	> 63		> 72	> 65	> 60	> 61	> 61	> 66
	20V	> 70	> 63	> 60	> 60	> 61	> 63		> 72	> 65	> 60	> 61	> 61	> 66
Conventional Bell	40V	> 70	> 63	> 61	> 58	> 59	> 65		> 71	> 62	> 62	> 58	> 57	> 55
	20V	> 70	> 63	> 61	> 58	> 59	> 65		> 71	> 62	> 62	> 58	> 57	> 55

Sounder performance Volume HIGH- wall devices FC440AVW, FC440AVR, FC445AVR

Volume HIGH		Wall devices - sound performance horizontal (dBA at 1 m)							Wall - sound performance vertical (dBA at 1 m)					
	Angle	15°	45°	75°	105°	135°	165°		15°	45°	75°	105°	135°	165°
Tone														
Dutch Slow Whoop	40V	> 91	> 95	> 95	> 95	> 95	> 91		> 91	> 95	> 95	> 95	> 95	> 91
	20V	> 89	> 93	> 93	> 93	> 93	> 89		> 89	> 93	> 93	> 93	> 93	> 89
7 Hz Fast Sweep	40V	> 87	> 94	> 94	> 94	> 94	> 87		> 87	> 94	> 94	> 94	> 94	> 87
	20V	> 85	> 92	> 92	> 92	> 92	> 85		> 85	> 92	> 92	> 92	> 92	> 85
BS 1 Hz Sweep	40V	> 91	> 95	> 95	> 95	> 95	> 91		> 91	> 95	> 95	> 95	> 95	> 91
	20V	> 87	> 93	> 93	> 93	> 93	> 87		> 87	> 93	> 93	> 93	> 93	> 87
2 Tone	40V	> 88	> 94	> 94	> 94	> 94	> 88		> 88	> 94	> 94	> 94	> 94	> 88
	20V	> 87	> 93	> 93	> 93	> 93	> 87		> 87	> 93	> 93	> 93	> 93	> 87
Temporal 4	40V	> 89	> 95	> 95	> 95	> 95	> 89		> 89	> 95	> 95	> 95	> 95	> 89
	20V	> 87	> 94	> 94	> 94	> 94	> 87		> 87	> 94	> 94	> 94	> 94	> 87
Temporal 3	40V	> 89	> 96	> 96	> 96	> 96	> 89		> 89	> 96	> 96	> 96	> 96	> 89
	20V	> 87	> 94	> 94	> 94	> 94	> 87		> 87	> 94	> 94	> 94	> 94	> 87
March Time beep	40V	> 89	> 96	> 96	> 96	> 96	> 89		> 89	> 96	> 96	> 96	> 96	> 89
	20V	> 87	> 94	> 94	> 94	> 94	> 87		> 87	> 94	> 94	> 94	> 94	> 87
Continuous 970 Hz	40V	> 87	> 90	> 90	> 90	> 90	> 87		> 87	> 90	> 90	> 90	> 90	> 87
	20V	> 84	> 88	> 88	> 88	> 88	> 84		> 84	> 88	> 88	> 88	> 88	> 84
Continuous 850 Hz	40V	> 89	> 94	> 94	> 94	> 94	> 89		> 89	> 94	> 94	> 94	> 94	> 89
	20V	> 88	> 92	> 92	> 92	> 92	> 88		> 88	> 92	> 92	> 92	> 92	> 88
DIN 1 Hz Sweep	40V	> 89	> 94	> 94	> 94	> 94	> 89		> 89	> 94	> 94	> 94	> 94	> 89
	20V	> 88	> 92	> 92	> 92	> 92	> 88		> 88	> 92	> 92	> 92	> 92	> 88
Banshee LF Buzzer	40V	> 89	> 94	> 94	> 94	> 94	> 89		> 89	> 94	> 94	> 94	> 94	> 89
	20V	> 87	> 92	> 92	> 92	> 92	> 87		> 87	> 92	> 92	> 92	> 92	> 87
3 Hz Banshee	40V	> 89	> 94	> 94	> 94	> 94	> 89		> 89	> 94	> 94	> 94	> 94	> 89
	20V	> 87	> 92	> 92	> 92	> 92	> 87		> 87	> 92	> 92	> 92	> 92	> 87
9 Hz Banshee	40V	> 88	> 93	> 93	> 93	> 93	> 88		> 88	> 93	> 93	> 93	> 93	> 88
	20V	> 86	> 91	> 91	> 91	> 91	> 86		> 86	> 91	> 91	> 91	> 91	> 86
Alternating	40V	> 89	> 94	> 94	> 94	> 94	> 89		> 89	> 94	> 94	> 94	> 94	> 89
	20V	> 87	> 92	> 92	> 92	> 92	> 87		> 87	> 92	> 92	> 92	> 92	> 87
Yodalarm	40V	> 89	> 93	> 93	> 93	> 93	> 89		> 89	> 93	> 93	> 93	> 93	> 89
	20V	> 87	> 91	> 91	> 91	> 91	> 87		> 87	> 91	> 91	> 91	> 91	> 87
Conventional Bell	40V	> 86	> 90	> 90	> 90	> 90	> 86		> 86	> 90	> 90	> 90	> 90	> 86
	20V	> 84	> 88	> 88	> 88	> 88	> 84		> 84	> 88	> 88	> 88	> 88	> 84

Sounder performance Volume LOW- wall devices FC440AVW, FC440AVR, FC445AVR

Volume LOW		Wall devices - sound performance horizontal (dBA at 1 m)							Wall - sound performance vertical (dBA at 1 m)					
	Angle	15°	45°	75°	105°	135°	165°		15°	45°	75°	105°	135°	165°
Tone														
Dutch Slow Whoop	40V	> 80	> 84	> 84	> 84	> 84	> 80		> 80	> 84	> 84	> 84	> 84	> 80
	20V	> 80	> 84	> 84	> 84	> 84	> 80		> 80	> 84	> 84	> 84	> 84	> 80
7 Hz Fast Sweep	40V	> 77	> 83	> 83	> 83	> 83	> 77		> 77	> 83	> 83	> 83	> 83	> 77
	20V	> 77	> 83	> 83	> 83	> 83	> 77		> 77	> 83	> 83	> 83	> 83	> 77
BS 1 Hz Sweep	40V	> 78	> 84	> 84	> 84	> 84	> 78		> 78	> 84	> 84	> 84	> 84	> 78
	20V	> 78	> 84	> 84	> 84	> 84	> 78		> 78	> 84	> 84	> 84	> 84	> 78
2 Tone	40V	> 77	> 84	> 84	> 84	> 84	> 77		> 77	> 84	> 84	> 84	> 84	> 77
	20V	> 77	> 84	> 84	> 84	> 84	> 77		> 77	> 84	> 84	> 84	> 84	> 77
Temporal 4	40V	> 78	> 87	> 87	> 87	> 87	> 78		> 78	> 87	> 87	> 87	> 87	> 78
	20V	> 78	> 87	> 87	> 87	> 87	> 78		> 78	> 87	> 87	> 87	> 87	> 78
Temporal 3	40V	> 78	> 87	> 87	> 87	> 87	> 78		> 78	> 87	> 87	> 87	> 87	> 78
	20V	> 78	> 87	> 87	> 87	> 87	> 78		> 78	> 87	> 87	> 87	> 87	> 78
March Time beep	40V	> 78	> 87	> 87	> 87	> 87	> 78		> 78	> 87	> 87	> 87	> 87	> 78
	20V	> 78	> 87	> 87	> 87	> 87	> 78		> 78	> 87	> 87	> 87	> 87	> 78
Continuous 970 Hz	40V	> 75	> 79	> 79	> 79	> 79	> 75		> 75	> 79	> 79	> 79	> 79	> 75
	20V	> 75	> 79	> 79	> 79	> 79	> 75		> 75	> 79	> 79	> 79	> 79	> 75
Continuous 850 Hz	40V	> 79	> 83	> 83	> 83	> 83	> 79		> 79	> 83	> 83	> 83	> 83	> 79
	20V	> 79	> 83	> 83	> 83	> 83	> 79		> 79	> 83	> 83	> 83	> 83	> 79
DIN 1 Hz Sweep	40V	> 79	> 83	> 83	> 83	> 83	> 79		> 79	> 83	> 83	> 83	> 83	> 79
	20V	> 79	> 83	> 83	> 83	> 83	> 79		> 79	> 83	> 83	> 83	> 83	> 79
Banshee LF Buzzer	40V	> 77	> 83	> 83	> 83	> 83	> 77		> 77	> 83	> 83	> 83	> 83	> 77
	20V	> 77	> 83	> 83	> 83	> 83	> 77		> 77	> 83	> 83	> 83	> 83	> 77
3 Hz Banshee	40V	> 78	> 84	> 84	> 84	> 84	> 78		> 78	> 84	> 84	> 84	> 84	> 78
	20V	> 78	> 84	> 84	> 84	> 84	> 78		> 78	> 84	> 84	> 84	> 84	> 78
9 Hz Banshee	40V	> 77	> 82	> 82	> 82	> 82	> 77		> 77	> 82	> 82	> 82	> 82	> 77
	20V	> 77	> 82	> 82	> 82	> 82	> 77		> 77	> 82	> 82	> 82	> 82	> 77
Alternating	40V	> 77	> 83	> 83	> 83	> 83	> 77		> 77	> 83	> 83	> 83	> 83	> 77
	20V	> 77	> 83	> 83	> 83	> 83	> 77		> 77	> 83	> 83	> 83	> 83	> 77
Yodalarm	40V	> 78	> 80	> 80	> 80	> 80	> 78		> 78	> 80	> 80	> 80	> 80	> 78
	20V	> 78	> 80	> 80	> 80	> 80	> 78		> 78	> 80	> 80	> 80	> 80	> 78
Conventional Bell	40V	> 73	> 77	> 77	> 77	> 77	> 73		> 73	> 77	> 77	> 77	> 77	> 73
	20V	> 73	> 77	> 77	> 77	> 77	> 73		> 73	> 77	> 77	> 77	> 77	> 73

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Approvals

		CE 18 0832 TYCO FIRE & SECURITY GMBH NEUHAUSEN AM RHEINFALL 8212 SWITZERLAND	CPR APPROVAL				EUROPEAN TYPE APPROVALS					INTERNATIONAL LISTINGS		
			EN54-3	EN54-23	EN54-17	MED	LPCB	VDS	AFNOR	FNO	DBI	FPANZ	HKFSD	TFTF
FC440AVB	DOP-2017-4235 / 0832-CPR-F2242		●	●	●		●							
FC441AVB	DOP-2017-4236 / 0832-CPR-F2243		●	●	●		●							
FC440AVW	DOP-2017-4237 / 0832-CPR-F2238		●	●	●		●							
FC440AVR	DOP-2017-4238 / 0832-CPR-F2239		●	●	●		●							
FC445AVR	DOP-2017-4239 / 0832-CPR-F2240		●	●	●		●							

All required Declarations and certificates are publically available on the website www.fireclass.co.uk and are searchable by number or model name.
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