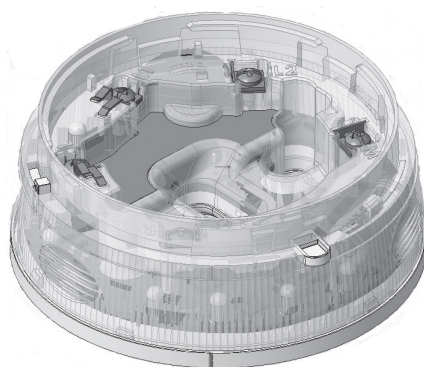
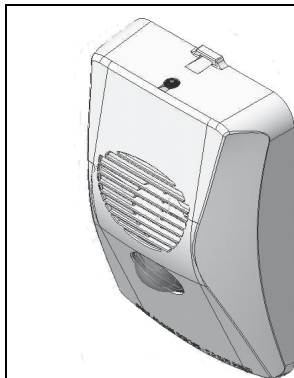


Visual Indicator Sounder Beacon Series



The Visual Indicating Device (VID) Sounder Beacons and Sounders 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.

The beacons are not EN54-23 compliant and not suitable for applications that require a VAD (Visual Alarm Device).

All VID Sounder Beacons and Sounders 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			
FC440SB	Addressable Base Sounder	576.440.002	☐
FC440AIB	Addressable Base Sounder Beacon VID	576.440.010	☐
Wall variant			
FC440SW	Addressable Wall Sounder White Housing	576.440.003	☐
FC440SR	Addressable Wall Sounder Red Housing	576.440.004	☐
FC445SR	Addressable Wall Sounder - Weatherproof	576.440.005	☐
FC440AIW	Addressable Wall Sounder Beacon VID White Housing	576.440.011	☐
FC440AIR	Addressable Wall Sounder Beacon VID Red Housing	576.440.012	☐
FC445AIR	Addressable Wall Sounder Beacon VID Weatherproof	576.440.013	☐
Accessories			
B-CAP	Blanking cap for Sounder, VID, and VAD bases	557.080.001	☐
A-CON	Conduit Adaptor for Sounder, VID and VAD bases	557.080.002	☐
S-BOXR	Shallow Surface Back Box for Indoor Wall Sounder/VID/VAD Red	557.080.007	☐
S-BOXW	Shallow Surface Back Box for Indoor Wall Sounder/VID /VAD White	557.080.008	☐
A-BOX	Flush Back Box for 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

	FC440SB	FC440AIB	FC440SW	FC440SR	FC445SR	FC440AIW	FC440AIR	FC445AIR
Mounting orientation	Ceiling				Wall			
Indoor type A/Outdoor type B	Indoor				Outdoor	Indoor	Indoor	Outdoor
Weight (g)	146	154	182	182	358	194	194	372
Housing material	PC-ABS	PC	PC-ABS					
Housing colour	White	Clear	White	Red	Red	White	Red	Red
Operating temperature (°C)	-25 to +70		-10 to 55		-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	4			2				
EN54-17 isolator	Yes							
EN54-3 sounder	Yes							
Visual indicator	No	Yes	No			Yes		
Vibration, shock, corrosion, EMC	Complies with EN54 series requirements							
Beacon flash rates	-	0.5 and 1 Hz	-	-	-	0.5 and 1 Hz		
Ingress protection	IP21C				IP55	IP21C		IP55
Typical Sounder output at 1 metre								
High volume	90 dBA			100 dBA				
Mid High volume	80 dBA			-				
Mid Low volume	70 dBA			-				
Low volume	60 dBA*			90 dBA				
Beacon performance								
Flash colour	-	Red	-			Red		
Electrical characteristics								
Addressable loop voltage	20 V - 40 V, 35 V Typical							

*The **Low** setting on the FC440SB and FC440AIB does not meet the volume level requirements of EN54-3.

Note: 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.

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 (if applicable)	Wall sounder FC440SW, FC440SR, FC445SR	Wall VID FC440AIW, FC440AIR, FC445AIR	Base sounder FC440SB	Base VID FC440AIB
OFF	OFF	0.35 mA	0.35 mA	0.35 mA	0.35 mA
LOW	OFF	3.1 mA	3.1 mA	2.45 mA	2.45 mA
HIGH	OFF	8.45 mA	8.45 mA	4.32 mA	4.32 mA
HIGH	0.5 Hz	-	10.85 mA	-	6.71 mA
HIGH	1 Hz	-	13.0 mA	-	8.8 mA

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

Sounder performance Volume HIGH- ceiling devices FC440SB, FC440AIB

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 MID-LOW- ceiling devices FC440SB, FC440AIB

Volume MID-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
	40V	> 70	> 63	> 61	> 58	> 59	> 65	> 71	> 62	> 62	> 58	> 57	> 55

Installation information

Dimensions

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

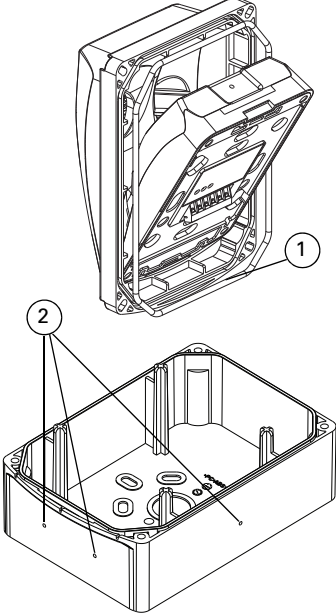
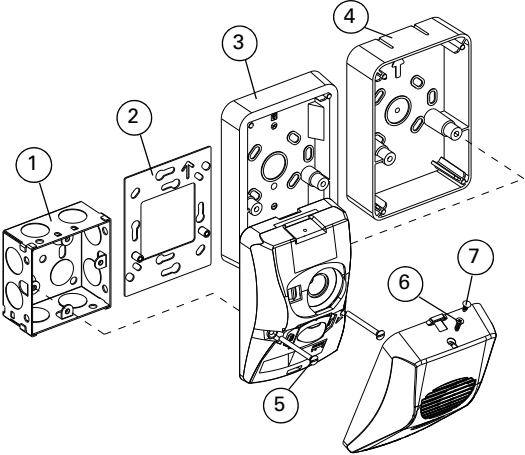
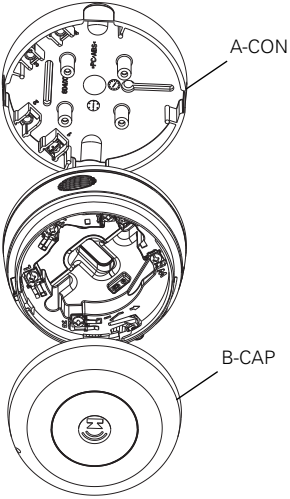
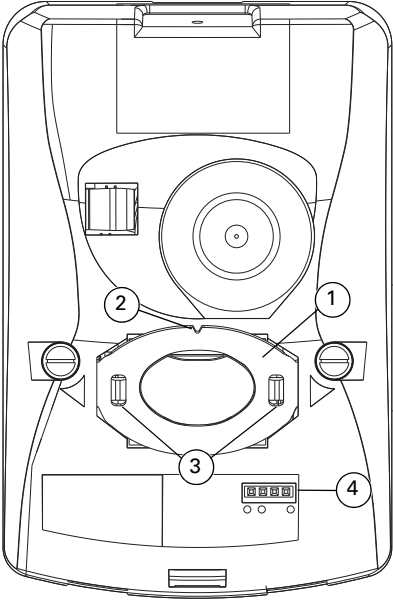
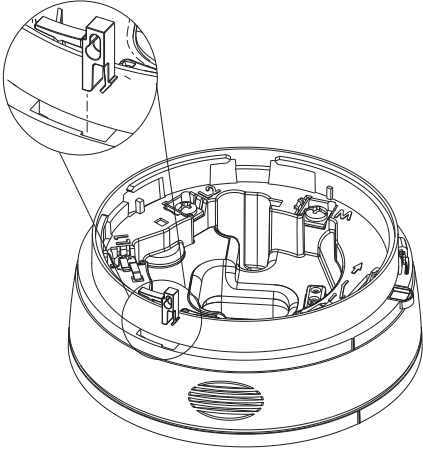
Cabling and wiring

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

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.

Mounting and fixing instructions

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 6. 1 Fix the back box to the wall. Drill positions for glands on the top, bottom, and sides, see item 2 in Fig 6. 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 suitable rated cable glands and sealant as required.	1 Unclip the front cover from the wall unit. using the screw-driver 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 8. See Fig 10 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. 6: Fitting weatherproof wall units	 Fig. 7: 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. 8: Fitting base units
 Fig. 9: 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. 10: Fitting the locking pin



Approvals

	CE 18 0832 TYCO FIRE & SECURITY GMBH NEUHAUSEN AM RHEINFALL 8212 SWITZERLAND	CPR APPROVAL			MED	EUROPEAN TYPE APPROVALS						INTERNATIONAL LISTINGS		
		EN54-3	EN54-23	EN54-17		LPCB	VDS	AFNOR	FNO	DBI	FPANZ	HKFSD	TFTF	
FC440SB	DoP-2017-4234 / 0832-CPR-F2061	●		●		●								
FC440AIB	DoP-2017-4234 / 0832-CPR-F2062	●		●		●								
FC440SW	DoP-2017-4234 / 0832-CPR-F1673	●		●		●								
FC440SR	DoP-2017-4234 / 0832-CPR-F1674	●		●		●								
FC445SR	DoP-2017-4234 / 0832-CPR-F1824	●		●		●								
FC440AIW	DoP-2017-4234 / 0832-CPR-F1675	●		●		●								
FC440AIR	DoP-2017-4234 / 0832-CPR-F1676	●		●		●								
FC445AIR	DoP-2017-4234 / 0832-CPR-F1825	●		●		●								

