



Security.Improved

Marking table for installation and maintenance of detector activated video surveillance systems to BS 8418:2021 including compliance with the requirements of BS EN 62676-4:2015

NSI 331 Issue 4

August 2021

NSI auditors use this marking table when inspecting detector activated video surveillance systems (VSS) installed by NSI NACOSS Gold and NSI Systems Silver approved companies to comply with BS 8418:2021 and relevant clauses of BS EN 62676-4:2015.

This marking table includes references to BS 8418:2021 and BS EN 62676-4:2015. Demerit marks may be given for non-compliance with clauses of BS 8418, and clauses of other standards called up by BS 8418, for which no specific reference has been made in the text of this marking table.

We draw your attention to NSI Technical Bulletin 0060 which provides guidance on the application of BS 8418:2021.

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BS 8418:2021 marking table

The BS 8418 marking table is divided into Sections 1 to 16 as listed below.

Section	Title	Maximum marks
1	Design Documentation	1
2	Commissioning	2
3	Handover & system documentation	2
4	Detectors	2
5	Cameras	2
6	Illumination	2
7	Audio challenge	2
8	Data transmission systems	2
9	Tamper detection and indication	2
10	Fault recognition and indication	2
11	Control equipment integrity	2
12	Event log at the supervised premises	2
13	Power supplies	2
14	Wiring, cabling & interconnections	2
15	Setting and unsetting	2
16	Maintenance	2

Notes

1. Each Section of this marking table contains one or more deviations (see pages 4 to 16 below).
2. Each deviation is given a Clause reference (e.g. BS 8418/21: 6.2.1), a Code (e.g. K01) and a score (e.g. 2 Marks).
3. NSI Inspection Reports detail deviations by Clause, Code, Description, (Marks).

Example:

BS 8418/21: 6.2.1 K01(b) No local indication of a tamper condition to the person setting the system at supervised premises (2).

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date	August 2021		
Document classification	PUBLIC (RESTRICTED)				Page 2 of 16

4. Marks are awarded for each individual deviation as shown in Note 3 above. However, the maximum number of Marks awarded (either 1 or 2) in any Section is shown in the table above.

Example:

If two deviations K01(b) (2 Marks) and K02 (2 Marks) are raised under Section 9 (Tamper detection and indication), a total of 2 Marks (not 4 Marks) are awarded against Section 9.

5. The total number of points awarded results in a grading (A to E). A = 0 points, B = 1-2 points, C = 3-5 points, D = 6-8 points and E = 9 points or more. The system will normally require a re-inspection if Grade D or E is achieved.

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date		August 2021	
Document classification	PUBLIC (RESTRICTED)			Page 3 of 16	

Clause	Code	Deviation	Marks
1 DESIGN DOCUMENTATION			
Risk assessment			
BS 8418/21: 4.1	A01	<ul style="list-style-type: none"> a) Survey of the protected premises did not take place and/or a risk analysis and threat assessment was not performed. b) Detection, camera coverage and/or expected responses did not take account of whether the site was an open or closed site. c) The threat assessment was not used to determine the most appropriate system design, including minimising false alarms. d) The VSS is not designed to mitigate the assessed risks. 	1
Operational Requirement (OR)			
BS 8418/21: 4.2	A02	<ul style="list-style-type: none"> a) No evidence of an operational requirements (OR) document having been completed. b) The OR does not clearly state what the customer expects the functions of the system to do. c) The OR does not include all the factors contained in BS 8418:2021, Annex B. d) There is no customer agreement that the OR can be defined within the system design proposal and/or there is no clear statement the OR is included with in the system design proposal. 	1

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date		August 2021	
Document classification	PUBLIC (RESTRICTED)	Page 4 of 16			

Clause	Code	Deviation	Marks
System design proposal			
BS 8418/21: 5.12	A03	a) A system design proposal has not been produced based on the OR. b) The customer has not agreed the system design proposal. c) The system design proposal does not include all the information required by BS 8418:2021, Annex E.	1
2 COMMISSIONING			
BS 8418/21: 8.1	A04	The visual and functional testing did not verify that the system was installed in accordance with the operational requirements and/or the system design proposal.	1
BS 8418/21: 8.1	A05	Commissioning not carried out in accordance with Annex G.	1
BS 8418/21: 8.1	A06	An agreed commissioning test plan to verify the installation is in accordance with the operational requirements and/or the system design proposal was not provided.	1
BS 8418/21: 8.1	A07	The VSS company did not confirm in writing with the RVRC after commissioning was completed, that the system was complete, the RVRC was satisfied and would be ready to monitor the site.	1
BS 8418/21: 8.2	A08	No evidence of completion of commissioning checklist as specified in BS 8418 Annex G.	1
BS 8418/21: 8.2	A09	Aspects of the VSS that do not conform to the Annex G checklist have not been modified and rechecked.	1

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date		August 2021	
Document classification	PUBLIC (RESTRICTED)	Page 5 of 16			

Clause	Code	Deviation	Marks
3 HANOVER & SYSTEM DOCUMENTATION			
BS8418/21: 8.3	A10	<ul style="list-style-type: none"> a) No evidence a full demonstration of the VSS has been provided including the operation of detection, the field of view of cameras and image quality in daylight and darkness. b) Users not offered training in use of VSS and/or training did not include information on the avoidance of unwanted alarms. 	1
NSI Regulation A.3	A11	Correct NSI Certificate not issued within 1 month.	1
BS8418/21: 8.3	A12	Explanation of the functions of the VSS and/or clear operating instructions not provided.	1
BS8418/21: 8.3	A13	Agreed procedures for communication between the customer and the RVRC not provided.	1
BS 8418/21: 8.4	A14	<ul style="list-style-type: none"> a) As-fitted document and/or day and night reference images of the detection areas not provided. b) As-fitted document does not include details of types and cables and cable routes, where required. c) Reference images not stored locally. d) Reference images not shared with RVRC. 	1
BS 8418/21: 9			
BS 8418/21: 7	A15	<ul style="list-style-type: none"> a) No documented response plan agreed between the installing company, the customer and the RVRC. b) Response plan does not include all the required information. 	1

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date		August 2021	
Document classification	PUBLIC (RESTRICTED)	Page 6 of 16			

Clause	Code	Deviation	Marks
		c) Copy of response plan not provide to the customer and/or RVRC.	
4 DETECTORS			
BS 8418/21: 5.1	B01	Detection areas are not within the associated camera's field of view.	2
BS 8418/21: 5.1	B02	Movement outside the boundary of the protected premises is detected by one or more detection devices.	1
BS 8418/21: 5.1	B03	Detection devices do not meet the requirements outlined in the operational requirements, system needs or to minimise unwanted alarms	1
BS 8418/21: 6.3	B04	Detectors not installed and/or configured in accordance with manufacturer's recommendations.	1
BS 8418/21: 6.3	B05	Detection equipment <ul style="list-style-type: none"> a) is not securely mounted; b) does not cover the area specified in the OR; c) overspills beyond the boundary of the premises, area to be protected or camera field of view; d) does not meet the functional requirements as identified in the OR. 	1
5 CAMERAS			
BS 8418/21: 6.4	C01	Cameras not installed and/or configured in accordance with manufacturer's recommendations.	1
BS 8418/21: 6.4	C02	a) Cameras not securely mounted. b) Cameras not located away from potential sources of false alarms and/or obscuration of fields of view.	1

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date		August 2021	
Document classification	PUBLIC (RESTRICTED)	Page 7 of 16			

Clause	Code	Deviation	Marks
BS 8418/21: 6.4		c) Cameras not positioned in accordance with SDP.	
BS 8418/21: 6.4		d) Camera's field of view does not cover the associated detection area.	
BS 8418/21: 5.2 & 6.4(e)		e) Cameras not positioned to minimise oversight of public areas and/or neighbouring property.	
BS 8418/21: 6.4		f) Cameras do not have privacy masking where required.	
BS 8418/21: 6.4		g) Cameras do not meet the functional requirements of the OR.	
BS 8418/21: 5.2	C03	Size of target does not meet requirements of BS EN 62676-4:2015, clause 6.7 in relation to the intended task.	1
6 ILLUMINATION			
BS 8418/21: 5.3	D01	Illumination is not adequate for the RVRC operator to verify a human form in daylight and, if required, in darkness.	2
7 AUDIO CHALLENGE			
BS 8418/15: 4.5	E01	Audio challenge is not clearly audible within the area of coverage of the relevant detection as indicated in the system design proposal	1
NPCC Policy: Appendix R	E02	Where a police response is required, VSS not provided with audio challenge facility.	2

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date		August 2021	
Document classification	PUBLIC (RESTRICTED)			Page 8 of 16	

Clause	Code	Deviation	Marks
8 DATA TRANSMISSION SYSTEMS			
BS 8418/21: 5.5.1	G01	Data transmission system cannot send continuous live video to the RVRC until terminated by an RVRC operator.	2
BS 8418/21: 5.5.1	G02	<ul style="list-style-type: none"> a) Minimum of one data transmission path not provided between VSS and the RVRC. b) Maximum path failure reporting time exceeds 24 hours. 	2
BS 8418/21: 5.5.1	G03	After data transmission failure, the system does not retry to establish a connection to the RVRC.	2
BS 8418/21: 5.5.1	G04	<ul style="list-style-type: none"> a) Risk of physical or cyber-attack to the transmission system not assessed. b) Additional resilience was not included to mitigate physical and or cyber attack 	2
BS 8418/21: 5.5.1	G05	The RVRC was not notified of changes made to the data transmission equipment and/or testing was not carried out in conjunction with the RVRC after the changes	2
BS 8418/21: 5.5.2	G06	For Type A+ systems only a fault on the data transmission system is not reported within 10 minutes.	2
BS 8418/21: 5.5.2	G07	For Type A+ systems only use of a second transmission path not taken into account where the threat assessment/risk analysis identifies the need for a higher level of resilience to failure or compromise.	2

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date		August 2021	
Document classification	PUBLIC (RESTRICTED)	Page 9 of 16			

Clause	Code	Deviation	Marks
9 TAMPER DETECTION AND INDICATION			
BS 8418/21: 6.2.1	K01	<ul style="list-style-type: none"> a) Tamper indications are not audible and/or visual. b) No local indication of a tamper condition to the person setting the system at supervised premises. 	2
BS 8418/21: 6.2 Table 3	K02	Interconnections to detectors do not incorporate tamper detection and/or tamper detection is not indicated correctly.	2
BS 8418/21: 6.2 Table 3	K03	<ul style="list-style-type: none"> a) Detector enclosures not provided with tamper detection of opening by normal means. b) For Type A+ systems only detector enclosures not provided with tamper detection of removal from mounting and/or masking when used and/or tamper detection is not indicated correctly. 	2
BS 8418/21: 6.2 Table 3	K04	For Type A+ systems only pluggable connectors not located within a secure area with restricted access or not provided with tamper detection and/or tamper detection is not indicated correctly.	2
BS 8418/21: 6.2 Table 3	K05	No tamper detection on power supply housings (including camera PSUs external to the camera enclosure) to detect opening by normal means and/or tamper detection is not indicated correctly.	2
BS 8418/21: 6.2 Table 3	K06	For Type A+ systems only no tamper detection of opening by normal means of enclosures for interconnections and/or control equipment and/or tamper detection is not indicated correctly.	2

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date		August 2021	
Document classification	PUBLIC (RESTRICTED)	Page 10 of 16			

Clause	Code	Deviation	Marks
BS 8418/21: 6.2 Table 3	K07	For Type A+ systems only no tamper detection of opening by normal means on setting/ unsetting devices and/or tamper detection not indicated correctly.	2
BS 8418/21: 6.2.2	K08	For Type A+ systems only it is possible to affect the correct functioning and/or change the state of the VSS if the setting/unsetting device is opened.	2
10 FAULT RECOGNITION AND INDICATION			
BS 8418/21: 5.6	L01	Local fault indications not indicated to the person setting/unsetting the system.	1
BS 8418/21: 5.6 Table 2	L02	System does not detect and indicate a video loss in excess of 30 seconds.	1
BS 8418/21: 5.7	L03	Where a local monitor is fitted there is no indication/message to report a loss of video.	1
BS 8418/21: 5.6 Table 2	L04	System does not detect and indicate low battery conditions in wireless components.	1
BS 8418/21: 5.1	L05	Where wireless or semi wired detection devices are used, failure of communication with the control equipment, is not indicated to the user whilst setting the system.	1
BS 8418/21: 5.6 Table 2	L06	System does not detect and indicate loss of communication with wireless and semi-wired detectors.	1
BS 8418/21: 5.6 Table 2	L07	For Type A+ systems only control equipment failures not detected and indicated.	1
BS 8418/21: 5.6 Table 2	L08	For Type A+ systems only UPS faults not detected and indicated.	1
BS 8418/21: 5.10.2	L09	For Type A+ systems only power supplies are not monitored for prime and alternative power source, charger and output faults.	1

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date	August 2021		
Document classification	PUBLIC (RESTRICTED)	Page 11 of 16			

Clause	Code	Deviation	Marks
BS 8418/21: 5.10.2	L10	For Type A+ systems only power supply faults are not identifiable to each power supply as either discrete or common fault indications.	1
11 CONTROL EQUIPMENT INTEGRITY			
BS 8418/21: 5.8.1	M01	a) Control equipment is not located within the supervised premises/area.	2
BS 8418/21: 5.8.2		b) For Type A+ systems only access to control equipment not restricted and/or not accessible only by designated staff.	
BS 8418/21: 5.8.1	M02	Control equipment configuration and/or operations menus not protected from unauthorised access (e.g. by use of unique password, electronic key, biometrics etc).	2
BS 8418/21: 5.8.2	M03	For Type A+ systems only VSS does not allow RVRC to determine set / unset status.	1
BS 8418/21: 5.8.2	M04	For Type A+ systems only no agreement between VSS company, RVRC and customer for parameters that can be altered remotely by RVRC.	1
12 EVENT LOG AT THE SUPERVISED PREMISES			
BS 8418/21: 5.9	N01	Event log(s) at the control equipment not in a date and time retrievable format.	2
BS 8418/21: 5.9	N02	Activation of detection devices not recorded in event log.	1
BS 8418/21: 5.9	N03	Changes in system status (e.g. set, unset, part-set) not recorded in event log.	1
BS 8418/21: 5.9	N04	VSS faults (see Table 2) not recorded in event log.	1
BS 8418/21: 5.11	N05	Overriding of prevention of setting actions not recorded in event log.	1

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date	August 2021		
Document classification	PUBLIC (RESTRICTED)			Page 12 of 16	

Clause	Code	Deviation	Marks
BS 8418/21: 5.9	N06	Detector omissions not recorded in event log (excludes when carried out by RVRC).	1
13 POWER SUPPLIES			
BS 8418/21: 5.10.2	P01	For Type A+ systems wireless components not supported by prime powers source capable of operating continuously under all anticipated conditions up to and including the next routine maintenance.	1
BS 8418/21: 5.10.1	P02	Date of installation of batteries used as an alternative power source not recorded.	1
BS 8418/21: 5.10.1	P03	a) For Type A+ systems UPS not provided b) For Type A systems UPS not provided where OR has identified a need. c) UPS, where provided, does not have sufficient capacity to support the VSS control and transmission equipment for a minimum of 30 minutes. d) Equipment listed in BS 8418, clause 5.10.1 not supported by UPS or standby battery.	2
BS 8418/21: 5.10.1	P04	Insufficient capacity in alternative power source to power wired and semi-wired detectors for a minimum of 30 minutes.	2
14 WIRING, CABLING & INTERCONNECTIONS			
BS 8418/21: 6.1	R01	a) ELV cables and signalling cables installed in ducting/trunking carrying LV (mains) cables. b) ELV cables installed parallel to LV (mains) cables without appropriate screening, insulation and/or segregation.	1

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date	August 2021		
Document classification	PUBLIC (RESTRICTED)			Page 13 of 16	

Clause	Code	Deviation	Marks
BS 8418/21: 6.1	R02	ELV cables into equipment through same entry point(s) as LV (mains) cables.	1
BS 8418/21: 6.1	R03	Cables not appropriate type and size for the application or environment.	1
BS 8418/21: 6.1	R04	No evidence of labelling at termination points, interconnections and junction boxes to facilitate maintenance and servicing.	1
BS 8418/21: 6.1	R05	Cables not supported or inadequately supported.	1
BS 8418/21: 6.1	R06	Cables likely to be subjected to accidental damage and/or deliberate interference (see risk assessment) are not mechanically protected.	1
15 SETTING AND UNSETTING			
BS 8418/21: 5.11	S01	Activations occur during setting/unsetting (except when otherwise agreed in writing).	1
BS 8418/21: 5.11	S02	Indication of successful setting/unsetting of the system not provided to person setting/unsetting the system.	2
BS 8418/21: 5.11	S03	Setting of the VSS is not prevented when a fault condition exists.	2
BS 8418/21: 5.11	S04	User unable to override prevention of setting conditions (<i>note: this must be recorded in the event log at the supervised premises</i>).	1
BS 8418/21: 5.11	S05	Where system is set/unset automatically, scheduled times not after premises is vacated or before staff are scheduled to arrive.	2
BS 8418/21: 5.11	S06	No documented procedure, agreed with the customer and the installing company and shared with the RVRC to manage automatic timed setting and/or unsetting of system.	1

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date		August 2021	
Document classification	PUBLIC (RESTRICTED)	Page 14 of 16			

Clause	Code	Deviation	Marks
16 MAINTENANCE			
BS 8418/21: 10.1	T01	Maintenance visits not carried out least twice a year at six monthly intervals from date of commissioning.	1
BS 8418/21: 10.1	T02	No documented criteria agreed between the maintenance company and the customer for the preventative and corrective maintenance requirements of the system (including call out response times).	1
BS 8418/21: 10.2	T03	Maintenance engineer did not inform RVRC that maintenance/repair is to take place as soon as they arrived on site.	1
BS 8418/21: 10.2	T04	Maintenance engineer did not: <ul style="list-style-type: none"> a) Determine any building or site layout changes that may affect the operation of the system. b) Determine any environmental issues that could affect the reliability of the system. 	1
BS 8418/21: 10.2	T05	Remedial action not documented and/or agreed with the customer.	1

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date	August 2021		
Document classification	PUBLIC (RESTRICTED)			Page 15 of 16	

Clause	Code	Deviation	Marks
BS 8418/21: 10.2	T06	<p>Maintenance engineer did not:</p> <ul style="list-style-type: none"> a) Compare each camera image with locally stored reference images in conjunction with the RVRC. b) Update camera reference images and store locally and/or share with the RVRC (where necessary). c) Clean cameras and/or check brackets for security or secure as required. d) Check control equipment for up to date software patches and updates or antivirus software. e) Check recorded day time and/or night time images. f) Check duration of recordings against the system design proposal. g) Do a full check to confirm that all devices transmit the correct alarm notification to the RVRC and locally. h) Check the audio transmission. 	1
BS 8418/21: 10.2	T07	The RVRC was not informed of changes made to the VSS configuration and/or the transmission equipment.	1
BS 8418/21: 10.2	T08	The VSS configuration and/or transmission equipment was not tested after changes were made and/or the as fitted document was not updated.	1
BS 8418/21: 10.2	T09	RVRC not informed that maintenance had been completed.	1
BS 8418/21: 10.2	T10	Maintenance documentation was not signed off by the authorised person.	1

Document no.	NSF 331	Document issue no.	4	Document issue date	August 2021
Document owner	Head of Approval Schemes	Last review date		August 2021	
Document classification	PUBLIC (RESTRICTED)			Page 16 of 16	