




Date : 16 January 2018

CERTIFICATE OF COMPLIANCE

This certificate of compliance validates the following			
TEST REPORT NUMBER 'Assessment Reports' are not acceptable	TE298770 P106286-1001 P108134-1001	CERTIFICATE NUMBER	1054b-(cl-2)
DATE OF ISSUE	29 October 2015 4 July 2017 7 September 2017	DATE OF ISSUE	16 January 2018
DATE OF EXPIRY	N/A	DATE OF EXPIRY	N/A
Manufacturer details			
NAME OF FACTORY/ MANUFACTURER	Bosch (Zhuhai) Security Systems Co. Ltd.	NAME OF THE BRAND	Bosch
FACTORY ADDRESS / REGION (STREET / TOWN / CITY / COUNTRY)	Bosch (Zhuhai) Security Systems Co. Ltd. 20 Ji Chang Bei Road Qingwan Industrial Estate, Sanzao Town, Jinwan District, Zhuhai, Guangdong 519040, China	MODEL / NO	Control and indicating equipment Bosch / PAVIRO VACIE
WEBSITE	www.boschsecurity.com	LOGO ON THE PRODUCT	 BOSCH
TEL	+31(40)257-7174	EMAIL	nl.Securitysystems@bosch.com

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Product Details From Test Report		Reference Test Report page NO																																		
<p>DESCRIPTION OF THE PRODUCT (TECHNICAL DETAILS FROM TEST REPORT, SUCH AS ACTUAL FIRE RATINGS/DIMENSIONS/THICKNESS/ SENSITIVITY ETC)</p>	<p>Voice Alarm Control and Indicating Equipment</p> <p>Incorporating the following modules:</p> <table border="0"> <tr> <td>PVA-2P500</td> <td>PAVIRO 2x500 W Amplifier</td> </tr> <tr> <td>PVA-15CST</td> <td>PAVIRO Call Station</td> </tr> <tr> <td>PVA-15ECS</td> <td>PAVIRO Call Station</td> </tr> <tr> <td>PVA-20CSE</td> <td>PAVIRO Call Station Extension</td> </tr> <tr> <td>PVA-1KS</td> <td>PAVIRO CST Key Switch</td> </tr> <tr> <td>PVA-1EB</td> <td>PAVIRO CST Emergency button</td> </tr> <tr> <td>OM-1</td> <td>Network Module</td> </tr> </table> <p>Certified with the following options with requirements from EN54-16:</p> <table border="0"> <tr> <td>7.3</td> <td>Audible Warning</td> </tr> <tr> <td>7.5</td> <td>Phase evacuation</td> </tr> <tr> <td>7.6.2</td> <td>Manual silencing of the voice alarm condition</td> </tr> <tr> <td>7.7.2</td> <td>Manual reset of the voice alarm condition</td> </tr> <tr> <td>7.9</td> <td>Voice alarm condition output</td> </tr> <tr> <td>8.3</td> <td>Indication of faults related to the transmission path to the CIE</td> </tr> <tr> <td>8.4</td> <td>Indication of faults related to voice alarm zones</td> </tr> <tr> <td>10</td> <td>Voice alarm manual control</td> </tr> <tr> <td>12</td> <td>Emergency microphone(s)</td> </tr> <tr> <td>13.14</td> <td>Redundant power amplifier</td> </tr> </table> <p>Notes:</p> <ol style="list-style-type: none"> The VACIE is approved when connected to PLN-1EOL or PVA-1WEOL end of line board or with activated impedance measurement. The VACIE speaker lines are monitored by use of end line modules namely PLN-1EOL end of line board, PVA-1WEOL addressable end of line board or impedance measurement. The PVA-15CST call station requires the PVA-1KS and PVA-1EB in order to meet option with requirement clause 10 and 12 of EN 54-16. The PVA-20CSE is approved when connected with PVA-15CST call station The following IP30 cabinets have been approved for use with PAVIRO:- <ul style="list-style-type: none"> - Rittal TS8 based rack, with a lockable glass door, side panels, temperature controlled top fans and having a fixed frame with a maximum height of 42 HU (i.e. TS-IT series) or a lockable swing frame with a maximum height of 40 HU (i.e. TS-series). - Schroff (20130073 PRAESIDEO) - Diamond 19 Inch Cabinet (Manufacturer: E.Lan) - Knuerr Miracel 2 (Manufacturer: Knürr GmbH) 	PVA-2P500	PAVIRO 2x500 W Amplifier	PVA-15CST	PAVIRO Call Station	PVA-15ECS	PAVIRO Call Station	PVA-20CSE	PAVIRO Call Station Extension	PVA-1KS	PAVIRO CST Key Switch	PVA-1EB	PAVIRO CST Emergency button	OM-1	Network Module	7.3	Audible Warning	7.5	Phase evacuation	7.6.2	Manual silencing of the voice alarm condition	7.7.2	Manual reset of the voice alarm condition	7.9	Voice alarm condition output	8.3	Indication of faults related to the transmission path to the CIE	8.4	Indication of faults related to voice alarm zones	10	Voice alarm manual control	12	Emergency microphone(s)	13.14	Redundant power amplifier	
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	<p>6. The following SFP Modules have been approved for use with PAVIRO when connected to the network switch LT-802GBTME:- - AC-SFP-LX-E-10 Single mode 1310nm SFP Module - AC-SFP-SX-E Multi-mode 850nm SFP Module 7. This certificate is valid only when the installation has been performed in accordance with the "EN54-16 Installer checklist".</p>																																																					
<p>TEST STANDARD (SUCH AS ASTM/BS EN/ DN ETC)</p>	<p>EN 54-4:1997 + A1:2002 + A2:2006 EN 54-16:2008</p>																																																					
<p>TEST DESCRIPTION</p>	<p>The object of this evaluation was to assess the performance of the Bosch PAVIRO voice alarm control and indicating equipment for compliance with the requirements of Loss Prevention Certification Board (LPCB) test schedule E123299/1.42.</p>	<p>TE298770 Page 5</p>																																																				
<p>SPECIFICATION OF TEST SPECIMEN</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">Equipment</th> </tr> <tr> <th style="width: 10%;">Qty</th> <th style="width: 50%;">Description</th> <th style="width: 20%;">Submission</th> <th style="width: 20%;">Receipt date</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>PAVIRO VACIE (Specimen 1)</td> <td style="text-align: center;">1</td> <td style="text-align: center;">29/10/2014</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Bosch S5 Silver Plus 12V 74 Ah battery</td> <td style="text-align: center;">1</td> <td style="text-align: center;">29/10/2015</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">Equipment</th> </tr> <tr> <th style="width: 10%;">Qty</th> <th style="width: 50%;">Description</th> <th style="width: 20%;">Submission</th> <th style="width: 20%;">Receipt date</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>PAVIRO VACIE (Cabinet B)</td> <td style="text-align: center;">1</td> <td style="text-align: center;">16/12/2016</td> </tr> <tr> <td style="text-align: center;">1</td> <td>PVA-15CST call station (15 zone)</td> <td style="text-align: center;">1</td> <td style="text-align: center;">16/12/2016</td> </tr> <tr> <td style="text-align: center;">1</td> <td>PVA-20CST call station extension (20 zone)</td> <td style="text-align: center;">1</td> <td style="text-align: center;">16/12/2016</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Bosch S5 Silver Plus 12V 74 Ah battery</td> <td style="text-align: center;">1</td> <td style="text-align: center;">16/12/2016</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">Equipment</th> </tr> <tr> <th style="width: 10%;">Qty</th> <th style="width: 50%;">Description</th> <th style="width: 20%;">Submission</th> <th style="width: 20%;">Receipt date</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>PAVIRO VACIE (Cabinet B)</td> <td style="text-align: center;">1</td> <td style="text-align: center;">21/07/2017</td> </tr> </tbody> </table>	Equipment				Qty	Description	Submission	Receipt date	1	PAVIRO VACIE (Specimen 1)	1	29/10/2014	2	Bosch S5 Silver Plus 12V 74 Ah battery	1	29/10/2015	Equipment				Qty	Description	Submission	Receipt date	1	PAVIRO VACIE (Cabinet B)	1	16/12/2016	1	PVA-15CST call station (15 zone)	1	16/12/2016	1	PVA-20CST call station extension (20 zone)	1	16/12/2016	2	Bosch S5 Silver Plus 12V 74 Ah battery	1	16/12/2016	Equipment				Qty	Description	Submission	Receipt date	1	PAVIRO VACIE (Cabinet B)	1	21/07/2017	<p>TE298770 Page 6</p> <p>P106286-1001 Page 5</p>
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<p>TEST RESULT (SUCH AS PASSED CRITERIA___/ COMPLIED TO___/ DURATION___OBSERVATION___/ETC)</p>	<p>The PAVIRO VACIE was tested to EN 54-16 where the output to loudspeaker was rated at 70/100Vrms line, in which case only Loudspeakers with compatible electrical rating of 70/100Vrms may be connected to the VACIE. The manufacturer's installation instruction list the different loudspeakers that can be connected, see page 5 list of compatible loudspeakers. The system should be installed in accordance with the manufacturer's installation instruction and apply the national code of practice.</p> <p>TE298770 Page 6</p> <p>The Bosch Security Systems B.V. PAVIRO met the requirements of EN 54-16:2008¹ as specified in LPCB test schedule E123299/1.4² on the twenty-second submission.</p> <p>The Bosch Security Systems B.V. PAVIRO met the requirements of EN 54-16:2008¹ as specified in BRE test schedule P106286/1.0² on submission 9.</p> <p>The Bosch Security Systems B.V. PAVIRO met the requirements of selected clauses from EN 54-16:2008², EN 50130-4:1995⁶+A1:1998+A2:2003 and EN 50130-4:2011⁷ +A1:2014 in accordance with BRE test schedule P108134/1.3¹ on submission 3.</p>	<p>TE298770 Page 6</p> <p>P106286-1001 Page 45</p> <p>P108134-1001 Page 23</p>												
<p>PRODUCT APPLICATION GUIDELINE (END USE) (CLEARLY STATE THE END USE WITH SPECIFIC APPLICATION, SUCH AS EXACT FIRE RATING/TO BE INSTALLED IN___/TO BE INSTALLED AT___/TO BE CONNECTED WITH___/TO BE INSTALLED WITH___ ETC ALONG WITH ANY WARNINGS SUCH AS NOT TO BE USED IN___/NOT TO BE INSTALLED AT___/ NOT TO BE INSTALLED WITH___ ETC.</p>	<p>Product Manual F01U306896</p>	<p>BRE GLOBAL LTD BUCKNALLS LANE WATFORD WD25 9XX J.K.</p>												
<p>Addendum to product manual F01U306900: The PAVIRO VACIE was tested to EN 54-16 where the output to loudspeaker was rated at 70/100Vrms line, in which case only Loudspeakers with compatible electrical rating of 70/100Vrms may be connected to the VACIE. The manufacturer's installation instruction lists the different loudspeakers that can be connected. The system should be installed in accordance with the manufacturer's installation instruction and apply the national code of practice</p>														



Type	Description
Column loudspeakers	
LA1-UM20E-1	Column loudspeaker, 20W
LA1-UM40E-1	Column loudspeaker, 40W
Cabinet loudspeakers	
LB1-UM06E-1	Cabinet loudspeaker, metal, circular
LB1-UM20E-L	Cabinet loudspeaker, 20W, white
LB1-UM20E-D	Cabinet loudspeaker, 20W, black
LB1-UM50E-L	Cabinet loudspeaker, 50W, white
LB1-UM50E-D	Cabinet loudspeaker, 50W, black
LB3-PC250	Cabinet loudspeaker, 250W, 12"
LB3-PC350	Cabinet loudspeaker, 350W, 15"
LBC3018/01	Cabinet loudspeaker, metal, rectangular
Line array loudspeakers	
LBC3200/00	Line array loudspeaker, 30W
LBC3201/00	Line array loudspeaker, 60W
LBC3210/00	Line array loudspeaker, 60W, outdoor
Ceiling loudspeakers	
LBC3086/41	Ceiling loudspeaker 6W metal clamp mount
LBC3081/02	Metal fire dome for LBC3086/41
LBC3087/41	Ceiling loudspeaker, 6W, screw mount
LBC3080/01	Metal fire dome
LC1-WC06E8	Ceiling loudspeaker, 6W, ABS
LC1-WC06E8 accessories	Enclosure type LC1-MFD, LC1-CSMB (+LC1-MSK), LC1-CMR+LC1-CBB
LC1-WM06E8	Ceiling loudspeaker, 6W, metal, 4"
LC1-WM06E8 accessories	Enclosure type LC1-MFD, LC1-CSMB (+LC1-MSK), LC1-CMR+LC1-CBB
LC1-UM06E8	Ceiling loudspeaker, 6W, metal
LC1-UM06E8 accessories	Enclosure type LC1-MFD, LC1-CSMB (+LC1-MSK), LC1-CMR+LC1-CBB
LC1-UM12E8	Ceiling loudspeaker, 12W, coaxial
LC1-UM12E8 accessories	Enclosure type LC1-MFD, LC1-CSMB (+LC1-MSK), LC1-CMR+LC1-CBB
LC1-UM24E8	Ceiling loudspeaker, 24W, coaxial
LC1-UM24E8 accessories	Enclosure type LC1-MFD, LC1-CSMB (+LC1-MSK), LC1-CMR+LC1-CBB
LC3-UC06E with LC3-CBB	Ceiling loudspeaker, 6W, spring arms with Back box for LC3 speaker
LC4-UC06E	Ceiling loudspeaker, 6W, wide angle
LC4-UC12E	Ceiling loudspeaker, 12W, wide angle
LC4-UC24E	Ceiling loudspeaker, 24W, wide angle
LC5-WC06E4	Ceiling loudspeaker, 6W, ABS, 2"
LC5-CBB	Back box for LC5 speaker
LC20-PC60G6-8E	Premium sound 60 W 8" ceiling lsp (2pcs)
LC20-PC60G6-6E	Premium sound 60 W 6" ceiling lsp (2 pcs)
Horn loudspeakers	
LH1-UC30E	Horn loudspeaker, 30W, music
LH1-10M10E	Horn loudspeaker, 10W, 7x8"
LH2-UC15E	Horn loudspeaker, 15W, marine
LBC3482/00	Horn loudspeaker, 25W
LBC3483/00	Horn loudspeaker, 35W
Sound projectors	
LBC3430/03	Sound projector 12W metal bi-directional
LBC3432/03	Sound projector 20W metal unidirectional
LC4-CBB	Back box for LC4 speaker
LC4-MFD	Metal fire dome for LC4 speaker
LP1-BC10E-1	Sound projector, 10W, bi-directional
LP1-UC10E-1	Sound projector, 10W, uni-directional
LP1-UC20E-1	Sound projector, 20W, uni-directional
LS1-UC20E-1	Pendant sphere loudspeaker, 20W
LS1-OC100E-1	Hemi-directional loudspeaker, 100W

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Laboratory and Certification body details			
NAME OF CERTIFICATION BODY	BRE Global Ltd.	NAME OF TEST FACILITY	BRE Global Ltd.
CERTIFICATION BODY ADDRESS / REGION <small>(STREET / TOWN / CITY / COUNTRY)</small>	Bucknalls Lane Garston Watford WD25 9XX United Kingdom	TEST FACILITY ADDRESS / REGION <small>(STREET / TOWN / CITY / COUNTRY)</small>	Bucknalls Lane Garston Watford WD25 9XX United Kingdom
WEBSITE	www.breglobal.com	WEBSITE	www.breglobal.com
TEL	+44 (0)333 321 88 11	TEL	+44 (0)333 321 88 11
EMAIL	BREGlobalEnquiries@bre.co.uk	EMAIL	BREGlobalEnquiries@bre.co.uk
ACCREDITED BY <small>(NAME OF ACCREDITATION BODY WHICH ISSUED ACCREDITATION TO THE CERTIFICATION BODY, ALONG WITH WEBSITE)</small>	UKAS www.ukas.com	ACCREDITED BY <small>(NAME OF ACCREDITATION BODY WHICH ISSUED ACCREDITATION TO THE LABORATORY, ALONG WITH WEBSITE)</small>	UKAS www.ukas.com
AS PER <small>(STANDARD TO WHICH THE CERTIFICATION BODY IS ACCREDITED TO)</small>	EN45011: 1998 / ISO 17065: 2012	AS PER <small>(STANDARD TO WHICH YOUR ORGANIZATION IS ACCREDITED TO)</small>	ISO 17025: 2005
VALIDITY <small>(EXPIRY DATE OF CERTIFICATION BODY ACCREDITATION)</small>	N/A	VALIDITY <small>(EXPIRY DATE OF LABORATORY ACCREDITATION)</small>	N/A
REFERENCE NUMBER: <small>(CERTIFICATION BODY ACCREDITATION REFERENCE NUMBER TO VERIFY ON THE ACCREDITOR'S WEBSITE)</small>	0007	REFERENCE NUMBER: <small>(THE LABORATORY ACCREDITATION REFERENCE NUMBER TO VERIFY ON THE ACCREDITOR'S WEBSITE)</small>	0578
CERTIFICATION MARK	 1054b/02		1054b-(cl-2)

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(ENDORSEMENT) TO BE SIGNED BY MANUFACTURER			
NAME OF MANUFACTURER'S SIGNATORY	Chester Chan, manufacturing manager Zhuhai, CHina	SIGNATURE	
EMAIL / TEL	nl.Securitysystems@bosch.com +31(40)257-7174	FACTORY OFFICIAL SEAL	
NOTES: I Undertake that all data and information provided are genuine and accurate			

(ENDORSEMENT) TO BE SIGNED BY CERTIFICATION BODY			
NAME OF CERTIFICATION BODY SIGNATORY	BRE Global Ltd. E Mattie-Suleiman	SIGNATURE	
EMAIL / TEL	BREGlobalEnquiries@bre.co.uk +44 (0)333 321 88 11	CERTIFICATION BODY OFFICIAL SEAL	
NOTES: I Undertake that all data and information provided are genuine and accurate			
		1054b-(cl-1)	
		1054b/02	

ATTACHMENTS:

- COPY OF 'CERTIFICATE OF COMPLIANCE' ISSUED BY CERTIFICATION BODY (OLD OR NEW)

