IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Ex COMPONENT CERTIFICATE

Certificate No.:	**IECEx IMQ 19.0004U**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 3	Issue 2 (2022-03-23) Issue 1 (2020-06-01) Issue 0 (2019-10-24)
Date of Issue:	2025-04-22		

Applicant: **SCAME PARRE S.p.A.**
Via Costa Erta, 15 – 24020 Parre Ponte Selva (BG)
Italy

Ex Component: Empty enclosures Zenith-P and Zenith-S

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Ex eb; Ex tb**

Marking: Ex eb IIC Gb
Ex tb IIIC Db

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Approved for issue on behalf of the IECEx Certification Body: **Mr. Mauro CASARI**

Position: **IMQ ExCB Manager**

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

Istituto Italiano del Marchio di Qualità S.p.A
Via Quintiliano 43
20138 Milano
Italy

IECEx Certificate of Conformity

Certificate No.: **IECEx IMQ 19.0004U**

Date of issue: 2025-04-22

Issue No: 3

Manufacturer: **SCAME PARRE S.p.A.**
Via Costa Erta, 15 – 24020 Parre Ponte Selva (BG)
Italy

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The component and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-31:2022 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the component listed has successfully met the examination and test requirements as recorded in:

Test Report:

IT/IMQ/ExTR19.0008/03

Quality Assessment Report:

IT/IMQ/QAR15.0001/09

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Ex Component(s) covered by this certificate is described below:

The ZENITH-P range comprises 20 sizes of enclosure type 644.xxxx manufactured in GRP glass reinforced polyester with 4 mm thickness with service temperature range -60°C÷+100°C with silicon rubber gasket. Polyester gives excellent mechanical strength and life expectancy: this material is highly resistant to contaminations, it is absolutely corrosion-proof and is suitable for LSOH (low smoke zero halogen) applications.

The range is carbon loaded which helps to reduce the surface resistance of the material and consequently remove the risk of ignition sources through static induced sparking resistivity. The mounting holes are contained within the profile of the enclosure but are outside the seal. The wall thickness is sufficient to allow entry holes to be machined in the walls of the enclosure and it provides a very good alternative to aluminium, stainless steel or cast iron.

The ZENITH-S range comprises 14 sizes of enclosures type 645.Bxxxx with lid fixed with screws, 25 sizes of enclosures type 645.Cxxxxxx with hinges, flanges and key lock, 14 sizes of enclosures type 645.Dxxxxxx with hinges, flanges, key lock and welded mounting bracket, all the enclosures can be equipped with windows. All the enclosures are made in stainless steel AISI304L or AISI316L with minimum 1,2 mm of thickness with service temperature range -50°C to +100°C with silicon gasket.

Degree of protection: IP66

Full details in Annex to Certificate.

SCHEDULE OF LIMITATIONS:

- Enclosures series Zenith-P (type 644.xxxx) are suitable for the service temperature: from -60°C to 100°C. Enclosures series Zenith-S (type 645.Bxxxx, type 645.Cxxxxxx and type 645.Dxxxxxx) are suitable for the service temperature: from -50°C to 100°C.
- This component is not intended to be used alone and requires additional consideration by the conformity assessment procedure when incorporated into electrical apparatus or systems.
- Drillings in walls/lid/bottom shall be in accordance with Manufacturer's instructions.
- The suitability of all entries should be considered in the end use application.
- The accessories used for cable entries shall be certified according to IEC 60079-0, IEC 60079-7, IEC 60079-31 standards, with Gb and Db minimum EPLs, and installed according IEC 60079-14.
- They shall guarantee the protection degree on enclosure.
- For painted enclosure for use in dust atmosphere, installation shall be performed in order to minimize the risk from electrostatic discharge.
- All the enclosures series Zenith-P joined with junction kit in various configurations, have to be fixed on the same frame.
- Could be joined only Zenith-P enclosures with the same height

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1:

Added enclosures type 645.Cxxxxxx and 645.Dxxxxxx for Zenith-S series

Issue 2:

- For series ZENITH-P: added junction KIT SL-00059 and new size enclosure;
- For series ZENITH-S: added optional earth-stud;
- Standard update

Issue 3:

- For series ZENITH-S: added an alternative enclosure gasket;
- Standard update (IEC 60079-31:2022)

Annex:

IECEx IMQ 19.0004U issue No. 3 Annex.pdf

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General description

The ZENITH-P range comprises 20 sizes of enclosure type 644.xxxx manufactured in GRP glass reinforced polyester with 4 mm thickness with service temperature range -60°C÷+100°C with silicon rubber gasket. Polyester gives excellent mechanical strength and life expectancy: this material is highly resistant to contaminations, it is absolutely corrosion-proof and is suitable for LSOH (low smoke zero halogen) applications.

The range is carbon loaded which helps to reduce the surface resistance of the material and consequently remove the risk of ignition sources through static induced sparking resistivity. The mounting holes are contained within the profile of the enclosure but are outside the seal. The wall thickness is sufficient to allow entry holes to be machined in the walls of the enclosure and it provides a very good alternative to aluminium, stainless steel or cast iron.

The ZENITH-S range comprises 14 sizes of enclosures type 645.Bxxxx with lid fixed with screws, 25 sizes of enclosures type 645.Cxxxxxx with hinges, flanges and key lock, 14 sizes of enclosures type 645.Dxxxxxx with hinges, flanges, key lock and welded mounting bracket, all the enclosures can be equipped with windows. All the enclosures are made in stainless steel AISI304L or AISI316L with minimum 1,2 mm of thickness with service temperature range -50°C to +100°C with silicon gasket.

Degree of protection: IP66

Model sizes:

ZENITH-P		Dimensions (mm)		
SCAME Code	Enclosure size	H	W	D
644.0100	75x80x55	75	80	55
644.0200	75x80x75	75	80	75
644.0110	75x110x55	75	110	55
644.0210	75x110x75	75	110	75
644.0120	75x160x55	75	160	55
644.0220	75x160x75	75	160	75
644.0130	75x190x55	75	190	55
644.0230	75x190x75	75	190	75
644.0140	75x230x55	75	230	55
644.0240	75x230x75	75	230	75
644.0345	120x122x90	120	122	90
644.0350	120x220x90	120	220	90
644.0360	160x160x90	160	160	90
644.0370	160x260x90	160	260	90
644.0380	160x360x90	160	360	90
644.0390	160x560x90	160	560	90
644.0465	250x255x120	250	255	120
644.0485	250x400x120	250	400	120
644.0585	250x400x165	250	400	165
644.0595	405x400x165	405	400	165

Table 1 - External dimensions

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Type 645.B Code (*)	Enclosure size LxHxP [mm]	Body Thickness	Lid Thickness	Screws Numbers	Screw type	Nm
645.Bxy01	90X90X75	12/10	12/10	4	M5x16	2.5
645.Bxy02	100x100x90	12/10	12/10	4	M5x16	2.5
645.Bxy03	100x160x90	12/10	12/10	4	M5x16	2.5
645.Bxy04	100x220x90	12/10	12/10	4	M5x16	2.5
645.Bxy05	150x160x120	12/10	12/10	4	M5x16	2.5
645.Bxy06	150x220x120	12/10	12/10	4	M5x16	2.5
645.Bxy07	150x280x120	12/10	12/10	4	M5x16	2.5
645.Bxy08	200x220x120	12/10	12/10	4	M5x16	2.5
645.Bxy09	200x280x120	12/10	12/10	4	M5x16	2.5
645.Bxy10	250x280x120	12/10	12/10	4	M5x16	2.5
645.Bxy11	250x340x150	12/10	12/10	4	M5x16	2.5
645.Bxy12	300x340x150	12/10	12/10	4	M5x16	2.5
645.Bxy13	300x400x150	12/10	12/10	6	M5x16	2.5
645.Bxy14	400x400x150	12/10	12/10	6	M5x16	2.5

Table 1 - External dimensions

(*) The code is completed as following:

x = enclosure material: **4** = AISI304L
6 = AISI316L
y = gasket material: **S** = Silicon (for service temperature -50°C to +100°C)

The root part number could have an optional suffix not influential on the equipment and the type of protection.

Note: the dimension indicated in the above table, can be change maximum by 10%.

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Type 645.C Code (*)	Enclosure size LxHxP [mm]	Body Thickness	Lid Thickness	Key Lock	hinge
645.Cxy00zw	260x260x150	12/10	15/10	1	2
645.Cxy01zw	300x300x210	12/10	15/10	1	2
645.Cxy02zw	300x380x210	12/10	15/10	1	2
645.Cxy03zw	300x450x210	12/10	15/10	2	2
645.Cxy04zw	380x300x210	12/10	15/10	1	2
645.Cxy05zw	380x380x210	12/10	15/10	1	2
645.Cxy06zw	380x600x210	12/10	15/10	2	2
645.Cxy07zw	400x500x210	12/10	15/10	2	2
645.Cxy08zw	450x300x210	12/10	15/10	1	2
645.Cxy09zw	450x450x210	12/10	15/10	2	2
645.Cxy10zw	450x450x250	12/10	15/10	2	2
645.Cxy11zw	450x600x210	12/10	15/10	2	2
645.Cxy12zw	450x600x250	12/10	15/10	2	2
645.Cxy13zw	500x700x250	12/10	15/10	2	2
645.Cxy14zw	600x380x210	12/10	15/10	1	2
645.Cxy15zw	600x450x250	12/10	15/10	2	2
645.Cxy16zw	600x600x210	12/10	15/10	2	2
645.Cxy17zw	600x600x250	12/10	15/10	2	2
645.Cxy18zw	600x600x300	12/10	15/10	2	2
645.Cxy19zw	600x750x210	15/10	15/10	2	2
645.Cxy20zw	600x750x250	15/10	15/10	2	2
645.Cxy21zw	600x750x300	15/10	15/10	2	2
645.Cxy22zw	600x900x300	15/10	15/10	2	3
645.Cxy23zw	750x1000x300	15/10	15/10	2	3
645.Cxy24zw	800x1200x300	15/10	20/10	2	3

Table 2 - External dimensions

(*) The scame code is completed as following:

x = enclosure material:	4 = AISI304L 6 = AISI316L
y = gasket material:	S = Silicon (for service temperature -50°C to +100°C)
z = flange	0 = Enclosure without flange 1 = Enclosure with 1 flange bottom sides 2 = Enclosure with 2 flanges Top/Bottom sides 3 = Enclosure with 3 flange Bottom/Left/Right sides 4 = Enclosure with 4 flange Top/Bottom/Left/Right sides
w = key lock	Y = Optional suffix, for key lock instead of cam lock

The root part number could have an optional suffix not influential on the equipment and the type of protection.

Note: the dimension indicated in the above table, can be change by 10%

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Type 645.D Code (*)	Enclosure size WxHxD [mm]	Body Thickness	Lid Thickness	Key Lock	hinge	Mounting Brackets
645.Dxy00zw	260x260x150	12/10	15/10	1	2	4
645.Dxy01zw	300x300x210	12/10	15/10	1	2	4
645.Dxy02zw	300x380x210	12/10	15/10	2	2	4
645.Dxy03zw	300x450x210	12/10	15/10	2	2	4
645.Dxy05zw	380x380x210	12/10	15/10	2	2	4
645.Dxy07zw	400x500x210	12/10	15/10	2	2	4
645.Dxy09zw	450x450x210	12/10	15/10	2	2	4
645.Dxy11zw	450x600x210	12/10	15/10	2	3	4
645.Dxy14zw	600x380x210	12/10	15/10	2	3	4
645.Dxy16zw	600x600x210	12/10	15/10	2	3	4
645.Dxy19zw	600x750x210	15/10	15/10	2	3	4
645.Dxy22zw	600x900x300	15/10	15/10	2	3	6
645.Dxy23zw	750x1000x300	15/10	15/10	2	3	6
645.Dxy24zw	800x1200x300	15/10	20/10	2	3	6

Table 3 - External dimensions

(*) The SCAME code is completed as following:

x = enclosure material:	4 = AISI304L 6 = AISI316L
y = gasket material:	S = Silicon (for service temperature -50°C to +100°C)
z = flange	0 = Enclosure without flange 1 = Enclosure with 1 flange bottom sides 2 = Enclosure with 2 flanges Top/Bottom sides 3 = Enclosure with 3 flange Bottom/Left/Right sides 4 = Enclosure with 4 flange Top/Bottom/Left/Right sides
w = key lock	Y = Optional suffix, for key lock instead of cam lock

The root part number could have an optional suffix not influential on the equipment and the type of protection.

Note: the dimension indicated in the above table, can be change by 10%

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Junction kit:

The enclosures listed in the below table can be joined with the junction kit part number SL00059. Each enclosure have 1 or 2 square cut which depends from the size of the enclosure.

ENCLOSURE	DIMENSION mm	SQUARE CUT mm	Long SIDE N°	Short SIDE N°
644.0465	250*255*120	55*125	1	1
644.0485	250*400*120	55*125	2	1
644.0595	405*400*165	55*125	2	2
644.0585	250*400*165	55*125	1	1

Schedule of limitations

- Enclosures series Zenith-P (type 644.xxxx) are suitable for the service temperature from -60°C to 100°C. Enclosures series Zenith-S (type 645.Bxxxx, type 645.Cxxxxxx and type 645.Dxxxxxx) are suitable for the service temperature from -50°C to 100°C.
- This component is not intended to be used alone and requires additional consideration by the conformity assessment procedure when incorporated into electrical apparatus or systems.
- Drillings in walls/lid/bottom shall be in accordance with Manufacturer's instructions.
- The suitability of all entries should be considered in the end use application.
- The accessories used for cable entries shall be certified according to IEC 60079-0, IEC 60079-7, IEC 60079-31 standards, with Gb and Db minimum EPLs, and installed according IEC 60079-14.
- They shall guarantee the protection degree on enclosure.
- For painted enclosure for use in dust atmosphere, installation shall be performed in order to minimize the risk from electrostatic discharge.
- All the enclosures series Zenith-P joined with junction kit in various configurations, have to be fixed on the same frame.
- Could be joined only Zenith-P enclosures with the same height

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