

Lighting solutions for hazardous areas ATEX / IECEx zones 1, 2, 21 & 22











 $Steelworks, Arcelor \textbf{M} ittal, \, Dunkirk, \, France.$

Airplane painting hall, Airbus, Hamburg, Germany.



Our expertise of hazardous

Sammode has designed a range of lighting solutions dedicated to hazardous areas based on our extensive experience and knowledge of the specific nature of our clients' businesses (chemical, petrochemical, onshore and offshore installations, cereals processing and storage...). Our luminaires are robust, resistant, made to last.

Robustness

We selected a wide range of high-value materials:

- Inox 304L and 316L for all external metal features
- Borosilicate glass, polycarbonate or coextruded polycarbonate/methacrylate to certify the resistance of the luminaire in high chemical, corrosive and abrasive situations



Imperviousness - IP68/IP69K

- IP68: The absolute sealing of our luminaires maintains their performance throughout their lifetime
- IP69K: The luminaires are weatherproof (heavy seas, spray, etc.) as well as impervious to cleaning with high pressure jets



Sustainable, maintainable and evolutionary luminaires

- Our products are robust and developed to last in time
- They are developed to be easy to maintain, at the opposite of planned obsolescence. With the protection mode increased safety the luminaire can be maintained on site by qualified staff.
- Each component can be replaced: we are committed to answering your needs as they evolve and as new technologies are available

Performance

- Our luminaires include high-efficiency LED modules to reduce the energy consumption associated with lighting. The chosen technology ensures efficient operation even at the temperatures' limits of the product.
- User comfort: All our products combine a high level of performance and high luminous comfort.



5 years warranty

Sammode embodies its commitment to the quality and sustainability of its luminaires by offering for its ranges for hazardous areas a guarantee that covers the whole product in the specified terms of use.





Congorep oil rig, Gulf of Guinea, Republic of Congo

Hazardous environments

Selected protection methods by Sammode

Increased safety (e):

Consisting of applying measures to avoid, with a high safety coefficient, the possibility of high temperatures and appearances of arcs or sparks inside the electric material in normal service.

Encapsulation (m):

The components that could ignite an explosive atmosphere with sparks or heating are enclosed in resin so the explosive atmosphere does not enter our sealed luminaires.

No spark's risk (n):

Electrical equipment that is designed to make it impossible, in normal operation, for any external source of ignition (spark, hot surface) to occur. Its temperature class takes into account the maximum surface temperature of the outer housing.

Enveloppe (t):

The envelope of the electric product is tight from dust penetration, the ignition source has no contact with the explosive atmosphere. The temperature data for the surface of the material is limited.

Benefits of these protection modes



- Low weight. These protection modes use components that have a weight close to the standard components.
- Easy maintenance and services. All operations on our luminaires for hazardous areas can be made on site by qualified professionals.

ATEX zones

Gas and fumes				
Zone 0	Zone 1	Zone 2		
Location where an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, fumes or a mist is continuously present, for lengthy period or often.	Location where an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, fumes or a mist is likely going to be present in a normal operation.	Location where an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, fumes or a mist is not likely to occur in normal operation but, if it does occur, is only short-lived.		
Dusts				
Zone 20	Zone 21	Zone 22		
Location where a hazardous explosive atmosphere in the form of a cloud of combustible dust permanently occurs, often or during long lasting period.	Location where a hazardous explosive atmosphere in the form of a cloud of combustible dust may occur from time to time during normal operation.	Location where a hazardous explosive atmosphere in the form of a cloud of combustible dust is not likely to occur in normal operation but, if it does occur, is only short-lived.		

Certifications

ATEX

This European certification testifies our products are made in accordance with the full range of requirements of the European standards and guidelines concerned.

IECEx

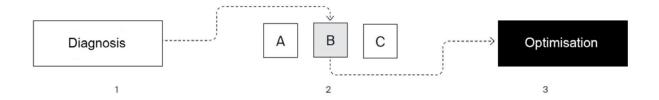
This international certification shows our products have been conceived following the full range of international required standards.

Our commitments

Because of their aggressiveness, conditions in hazardous areas usually result in premature deterioration of materials that could lead to the spontaneous breakage of equipment. For this reason and with more than 40 years of experience in those environments (corrosive or saline environments, UV etc.) Sammode offers a large selection of solutions to face these demanding conditions.

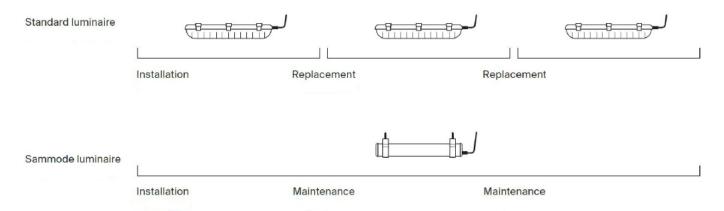
A partner for your project

Sammode's expert teams are committed and flexible and offer you their support all along your project.



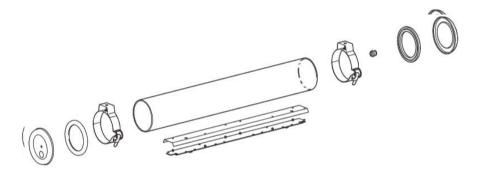
A long-term investment

We take into account our product life cycle from development to manufacturing: installation, maintenance, technological updates and sustainability are considered. Thus we offer the technologically and economically most accurate answer to your needs.



Innovative solutions

Throughout their development and manufacturing, our products are developed to evolve with time and technologies, depending on your needs.



Selection guide

Our lighting solutions for hazardous areas combine lighting comfort and exceptional durability thanks to the construction principles of the housing and to specific adequate components. With this selection guide you can choose the right product depending on the operating environment, your installation and use constraints. Our team is also available to help you.

Gas

Zone 1

Luminaire	Environment	Benefits	Light Output	Page
Alder	Severe	Ease of implementation	1150 to 4250 lm	8
Sabatier	Extreme	Resistance to agressive chemical environment	1150 to 8500 lm	9

Zone 2

Luminaire	Environment	Benefits	Light Output	Page
Jamin	Severe	Ease of implementation	1850 to 9250 lm	10
Boyle	Extreme	Resistance to agressive chemical environment	1850 to 9250 lm	11
Hutton	Extreme cold (-40°C)	Special electronic for low temperatures	1850 to 9250 lm	12
Fumat	High height (up to 7m)	Intensive optic	9500 lm	13

Dust

Zone 21/22

Luminaire	Environment	Benefits	Light Output	Page
Jamin	Severe	Ease of implementation	1850 to 9250 lm	10
Boyle	Extreme	Resistance to agressive chemical environment	1850 to 9250 lm	11
Hutton	Extreme cold (-40°C)	Special electronic for low temperatures	1850 to 9250 lm	12
Fumat	High height (up to 7m)	Intensive optic	9500 lm	13

Alder

ATEX zones	Zone 1
Environement	Severe
Light output	1150 lm to 4250 lm



Key features

Ease of implementation

Durable and maintainable luminaire, resistant to external UV-rays

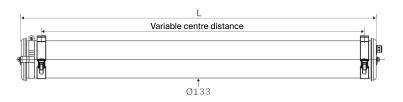
Very good resistance to oils and hydrocarbons













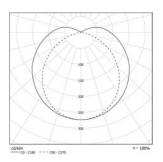
Options

860
PO
113
116
lind plug
216-10
C5P
MR
BRV

Accessories

Protective roof	p.14
Fixings for columns	p.14

Photometry



Principal part numbers

Light output (Im)	Designation	Code	Power (W)	L (mm)	Weight (Kg)
1150	ALD133 12H840 POME BRS 213-10	1990 0110	14	745	4,3
2100	ALD133 22H840 POME BRS 213-10	1990 0410	25	745	4,5
2300	ALD133 14H840 POME BRS 213-10	1990 0210	24	1355	6,9
4250	ALD133 24H840 POME BRS 213-10	1990 0510	47	1355	7,1
4250	ALD133 15H840 POME BRS 213-10	1990 0310	47	1655	7,5

^{*} Light output of the luminaire

Technical data	
Light source	High performance and removable driver and LED modules
	Lifespan @Ta max : 50 000h L80B50
Heat management	Heatsink in aluminium
Optic	Optical diffuser
Color temperature	4000K
Control gear	Constant current output driver
Power supply	110-240 V AC 50/60Hz
	220-240V DC
Operating temperature	-20 °C to +40 °C
Electrical class	Class 1
Connection	Connection to a 3x2,5mm ² terminal block
	2 cable glands in black polyamide (Ø8-13 mm) including 1 blind plug
Fixing	Attachement with 2 bolt-fitted stainless steel straps with variable center distance and 360° orientation
Method of construction	Housing in one piece with long-lasting imperviousness Patented SLIDE opening system
Materials	
Housing	Polycarbonate protected by a coextruded layer of PMMA
End caps, Fixing straps	Stainless steel 304L
Gaskets	EPDM
Normes	
ATEX / IECEx	IEC 60079-0, IEC 60079-7, IEC 60079-18, IEC 60079-31
Marking	II 2G Ex eb mb IIC T4 Gb - II 2D Ex tb IIIC T65°C Db IP66/IP68
Imperviousness	IP66, IP68, IP69K
Shock resistance	IK10
Fire resistance	650°C

Sabatier

ATEX zones	Zone 1
Environement	Extreme
Light output	1150 lm to 8500 lm



Key features

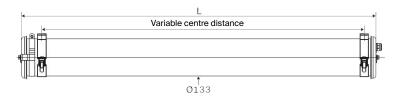
Resistant to agressive chemical environments
High-intensity vibration resistance
Durable and maintainable luminaire













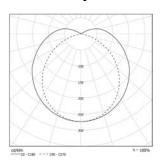
Options

Color temperature:	
6000K	860
Housing:	
Polycarbonate	PO
Coextrudé PO/PMMA	POME
Cable entries:	
1 polyamide cable gland Ø8-13 mm	113
1 polyamide cable gland Ø10-15 mm	116
2 polyamide cable glands including one bli	ind plug
Ø10-15 mm	216-10
Connection:	
5-point terminal block for phase balancing	C5P
Finishings:	
Stainless steel 316 L	MR
Fixings:	IVIIX
Reinforced fixing straps with HSHC screw	BRV

Accessories

Protective roof	p.14
Fixings for columns	p.14

Photometry



Principal part numbers

-					
Light output* (lm)	Designation	Code	Power (W)	L (mm)	Weight (Kg)
1150	SAB133 12H840 PY BRS 213-10	1991 0110	14	745	7,2
2100	SAB133 22H840 PY BRS 213-10	1991 0410	25	745	7,2
2300	SAB133 14H840 PY BRS 213-10	1991 0210	25	1355	9,2
4250	SAB133 24H840 PY BRS 213-10	1991 0510	47	1355	9,2
4250	SAB133 15H840 PY BRS 213-10	1991 0310	47	1655	10,8
8500	SAB133 25H840 PY BRS 213-10	1991 0610	94	1655	11,2

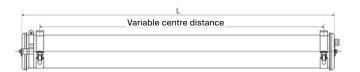
^{*} Light output of the luminaire

Technical data	
Light source	High performance and removable driver and LED modules
	Lifespan @Ta max : 50 000h L80B50
Heat management	Heatsink in aluminium
Optic	Optical diffuser
Color temperature	4000K
Control gear	Constant current output driver
Power supply	110-240 V AC 50/60Hz
	220-240V DC
Operating temperature	-20 °C to +40 °C (Except for 8500lm: -20 °C < 35 °C)
Electrical class	Class 1
Connection	Connection to a 3x2,5mm² terminal block
	2 cable glands in black polyamide (Ø8-13 mm) including 1 blind plug
Fixing	Attachement with 2 bolt-fitted stainless steel straps with variable center distance
	and 360° orientation
Method of construction	Housing in one piece with long-lasting imperviousness by axial screw fitting
Materials	
Housing	Borosilicate glass
End caps, fixing straps	Stainless steel 304L
Gaskets	EPDM
Standards	
ATEX / IECEx	IEC 60079-0, IEC 60079-7, IEC 60079-18, IEC 60079-31
Marking	II 2G Ex eb mb IIC T4 Gb - II 2D Ex tb IIIC T65°C Db IP66/IP68
Imperviousness	IP66, IP68, IP69K
Shock resistance	IK07
Fire resistance	Non-flammable

Jamin

ATEX zones	Zone 2 - 21/22
Environement	Severe
Light ouput	1850 to 9250 lm







Key features

Ease of implementation

Durable and maintainable luminaire, resistant to external UV-rays

Very good resistance to oils and hydrocarbons







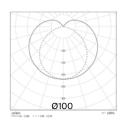
Options

Colour temperature:	
3000K	830
5000K	850
Housing:	
Polycarbonate	PO
Cable entries:	
1 polyamide cable gland Ø8-13 mm	113
1 polyamide cable gland Ø10-15 mm	116
2 polyamide cable glands including one blind plug Ø10-15 mm	216-10
Connection:	
5-point terminal block for phase balancing	C5P
Finishings:	
Stainless steel 316 L	MR
Fixing:	
Fixing straps with HSHC screw	BRV

Accessories

Protective roof	p.14
Fixings for columns	p.14

Photometry





Principal part numbers

Light ouput* (lm)	Designation	Code	Power (W)	L (mm)	Weight (Kg)
1850	JAM100 12H840 POME BRS 213-10	1987 5100	16	708	2,1
2775	JAM100 13H840 POME BRS 213-10	1987 5200	23	1018	2,9
4625	JAM100 15H840 POME BRS 213-10	1987 5300	37	1618	4,2
5550	JAM133 23H840 POME BRS 213-10	1988 5100	44	995	3,9
9250	JAM133 25H840 POME BRS 213-10	1988 5200	75	1595	5,5

^{*}Light ouput of the luminaire

Light source	High performance and removable driver and LED modules Lifespan @Ta max : 50 000h L80B50
Heat management	Heatsink in aluminium
Optic	Optical diffuser
Color temperature	4000K
Control gear	Constant current output driver
Power supply	220-240 V 50/60 Hz
Operating temperature	-20°C to +40°C
Electrical class	Class 1
Connection	Connection to a 3x2,5mm² terminal block 2 cable glands in black polyamide (Ø8-13 mm) including 1 blind plug
Fixings	Attachement with 2 bolt-fitted stainless steel straps with variable center distance and 360° orientation
Method of construction	Housing in one piece with long-lasting imperviousness Patented SLIDE opening system
Materials	
Housing	Polycarbonate protected by a coextruded layer of PMMA
End caps, fixings straps	Stainless Steel 304L
Gaskets	EPDM
Standards	
ATEX / IECEx	IEC 60079-0, IEC 60079-15, IEC 60079-31
Marking	II 3G Ex nA IIC T4 Gc / II 2D Ex tb IIIC T65°C Db IP66/IP68
Imperviousness	IP66, IP68, IP69K
Shock resistance	IK10
Fire resistance	650°C

Boyle

ATEX zones	Zone 2 - 21/22
Environement	Extreme
Flux	1850 to 9250 lm



Key features

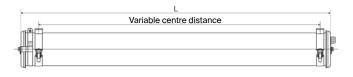
Resistant to agressive chemical environments
High-intensity vibration resistance
Durable and maintainable luminaire













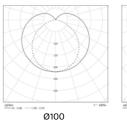
Options

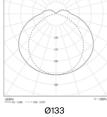
Colour temperature:	
3000K	830
5000K	850
Housing:	
Polycarbonate	PO
Coextruded PO/PMMA	POME
Cable entries:	
1 polyamide cable gland Ø8-13 mm	113
1 polyamide cable gland Ø10-15 mm	116
2 polyamide cable glands including one blir	ıd plug
Ø10-15 mm	216-10
Connection:	
5-point terminal block for phase balancing	C5P
Finishings:	
Stainless steel 316 L	MR
Fixing:	
Reinforced fixing straps with HSHC screw	BRV

Accessories

Protective roof	p.14
Fixings for columns	p.14

Photometry





Principal part numbers

Light output (Im)	Designation	Code	P (W)	L (mm)	Weight (Kg)
1850	BOY100 12H840 PY BRS 213-10	1983 5100	16	697	3,0
2775	BOY100 13H840 PY BRS 213-10	1983 5200	23	1007	4,9
4625	BOY100 15H840 PY BRS 213-10	1983 5300	37	1607	7,6
5550	BOY133 23H840 PY BRS 213-10	1984 5100	44	987	8,3
9250	BOY133 25H840 PY BRS 213-10	1984 5200	75	1587	10,5

Light source	High performance and removable driver and LED modules Lifespan @Ta max : 50 000h L80B50
Heat management	Heatsink in aluminium
Optic	Optical diffuser
Color temperature	4000K
Control gear	Constant current output driver
Power supply	220-240 V 50/60 Hz
Operating temperature	-20°Cto +40°C
Electrical class	Class I
Connection	Connection to a 3x2,5mm² terminal block 2 cable glands in black polyamide (Ø8-13 mm) including 1 blind plug
Fixings	Attachement with 2 bolt-fitted stainless steel straps with variable center distance and 360° orientation
Method of construction	Housing in one piece with high mechanical and chemical resistance
	Long-lasting imperviousness by axial screw fitting
Materials	
Housing	Borosilicate glass
End caps, fixings straps	Stainless Steel 304L
Gaskets	EPDM
Normes	
ATEX / IECEx	IEC 60079-0, IEC 60079-15, IEC 60079-31
Marking	II 3G Ex nA IIC T4 Gc / II 2D Ex tb IIIC T65°C Db IP66/IP68
Imperviousness	IP66, IP68, IP69K
Shock resistance	IK07
Fire resistance	Non-flammable

Hutton

ATEX zones	Zone 2 - 21/22	
Environement	Extreme	
Light output	1850 to 9250 lm	
Operating temperature	-40°C / +40°C	



Key features

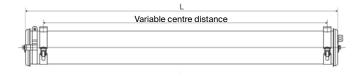
Suitable for low temperatures
High-intensity vibration resistance
Durable and maintainable luminaire













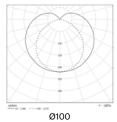
Options

Color temperature:	
3000K	830
5000K	850
Housing:	
Polycarbonate	PO
Cable entries:	
1 polyamide cable gland Ø8-13 mm	113
1 polyamide cable gland Ø10-15 mm	116
2 polyamide cable glands including one blind plug Ø10-15 mm	216-10
Connection:	
5-point terminal block for phase balancing	C5P
Finishings:	
Stainless steel 316 L	MR
Fixing:	
Reinforced fixing straps with HSHC screw	BRV

Accessories

Protective roof	p.14
Fixings for columns	p.14

Photometry





Principal part numbers

Light output (Im)	Designation	Code	P (W)	L (mm)	Weight (Kg)
1850	HUT100 12H840 PY BRS 213-10	1985 5100	16	697	3,0
2775	HUT100 13H840 PY BRS 213-10	1985 5200	23	1007	4,9
4625	HUT100 15H840 PY BRS 213-10	1985 5300	37	1607	7,6
5550	HUT133 23H840 PY BRS 213-10	1986 5100	44	987	8,3
9250	HUT133 25H840 PY BRS 213-10	1986 5200	75	1587	10,5

Light source	High performance and removable driver and LED modules
	Lifespan @Ta max : 50 000h L80B50
Heat management	Heatsink in aluminium
Optic	Optical diffuser
Color temperature	4000K
Control gear	Constant current output driver
	Resistant to overvoltage: 320 V AC, 48 h
	Resistant to voltage peak < 4 kV
Power supply	220-240 V 50/60 Hz
Operating temperature	-40 °C to +40 °C
Electrical class	Class I
Connection	Connection to a 3x2,5mm² terminal block
	2 cable glands in black polyamide (Ø8-13 mm) including 1 blind plug
Fixings	Attachement with 2 bolt-fitted stainless steel straps with variable center distance and 360° orientation
Method of construction	Housing in one piece with high mechanical and chemical resistance
	Long-lasting imperviousness by axial screw fitting
Materials	
Housing	Polycarbonate protected by a coextruded layer of PMMA
End caps, fixings straps	Stainless Steel 304L
Gaskets	EPDM
Standards	
ATEX / IECEx	IEC 60079-0, IEC 60079-15, IEC 60079-31
Marking	II 3G Ex nA IIC T4 Gc / II 2D Ex tb IIIC T65°C Db IP66/IP68
Imperviousness	IP66, IP68, IP69K
Shock resistance	IK10
Fire resistance	650°C

Fumat

ATEX zones	Zone 2 - 21/22
Environement	Extreme
Light output	9250 lm
High height	Up to 7 m



Key features

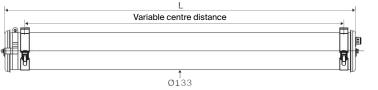
Vibration resistance
Durable and maintainable luminaire
(RAV)













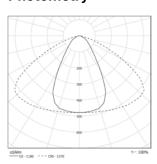
Options

Color temperature:	
3000K	830
5000K	850
Housing:	
Polycarbonate	PO
Cable entries:	
1 polyamide cable gland Ø8-13 mm	113
1 polyamide cable gland Ø10-15 mm	116
2 polyamide cable gland including one blind plug Ø10-15 mm	216-10
Connection:	
5-point terminal block for phase balancing	C5P
Finishings:	
Stainless steel 316 L	MR
Fixings:	
Fixing straps with HSHC screw	BRV

Accessories

Protective roof	p.14
Fixings for columns	p.14

Photometry



Principal part numbers

Light output (lm)	Designation	Code	Power (W)	L (mm)	Weight (Kg)
9250	FUM133 16H840 POME BRS 213-10	1989 0020	81	1850	6,6

^{*} Light output of the luminaire

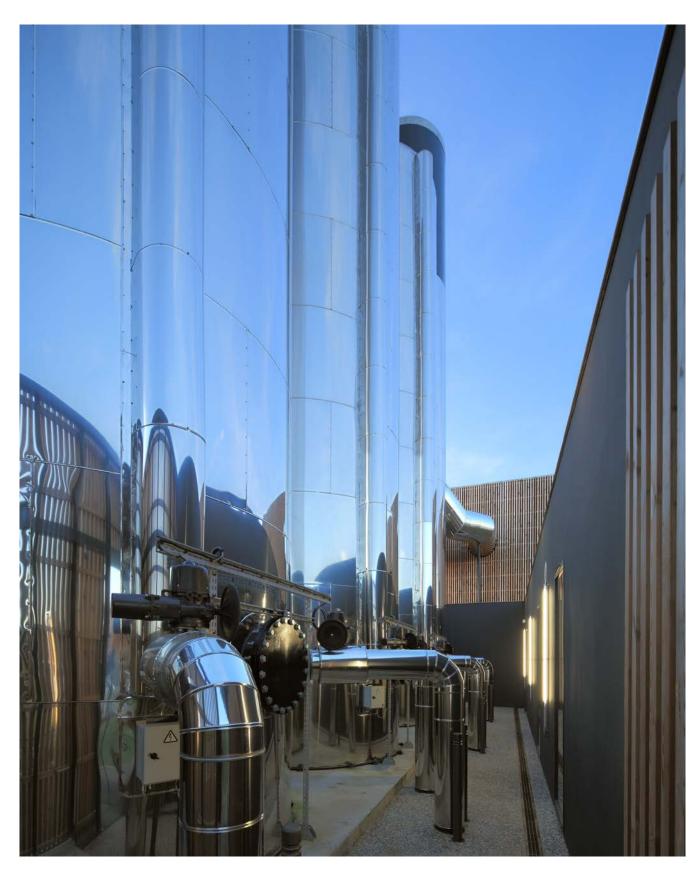
Technical data	
Light source	High performance and removable driver and LED modules Lifespan @Ta max : 50 000h L80B50
Heat management	Heatsink in aluminium
Optic	Optical diffuser
Color temperature	4000K
Control gear	Constant current output driver Resistant to overvoltage : 320 V AC, 48 h Resistant to voltage peak < 4 kV
Power supply	220-240 V 50/60 Hz
Operating temperature	-20°C to +40°C
Electrical class	Class 1
Connection	Connection to a 3x2,5mm² terminal block 2 cable glands in black polyamide (Ø8-13 mm) including 1 blind plug
Fixings	Attachement with 2 bolt-fitted stainless steel straps with variable center distance and 360° orientation
Method of construction	Housing in one piece with high mechanical and chemical resistance Long-lasting imperviousness by axial screw fitting
Materials	
Housing	Polycarbonate protected by a coextruded layer of PMMA
Ends caps, fixing straps	Stainless Steel 304 L
Joints	EPDM
Standards	
ATEX / IECEx	IEC 60079-0, IEC 60079-15, IEC 60079-31
Marking	II 3G Ex nA IIC T4 Gc / II 2D Ex tb IIIC T65°C Db IP66/IP68
Imperviousness	IP66, IP68, IP69K
Shock resistance	IK10
Fire resistance	650°C

Accessories

Folded 304L stainless steel protective cover	Compatibility	Code	
304L stainless steel protective cover for installation on the fixing straps of Ø100 and Ø133 ranges of luminaires. The fixing holes are to be drilled on site to suit the space between fixing straps.	800 mm	PU6362	
	1100 mm	CP00595	
	1400 mm	PU6286	
	1700 mm	PU6363	
	1950 mm	CP00597	
Folded 316L stainless steel protective cover	Compatibility	Code	
316L stainless steel protective cover for installation on the fixing straps of Ø100 and Ø133 ranges of luminaires. The fixing holes are to be drilled on site to suit the space between fixing straps.	800 mm	CP00565	
	1100 mm	CP00596	
	1400 mm	CP00566	
	1700 mm	CP00567	
	1950 mm	CP00598	
304L column mounting fixing straps	Compatibility	Code	
Kit of two 304L stainless steel column mouting fixing straps to carry standard Sammode luminaire fixing straps.	1" 1/4 (42 mm)	CP00568	
	1" 1/2 (49 mm)	CP00569	
	2" (60 mm)	CP00570	
316L column mounting fixing straps	Compatibility	Code	10
Kit of two 316L stainless steel column mouting fixing straps to carry standard Sammode luminaire fixing straps.	1" 1/4 (42 mm)	CP00571	

CP00573

2" (60 mm)



Boiler room, Dalkia, La Rochelle, France.

Architect: Arnold Velay Architecte

Sammode is a family-owned company founded in 1927. For four generations, we have been experts in developing and manufacturing lighting solutions for industry and architecture.

Our lighting solutions are renowned for their quality, performance and sustainability. They are 100% made in France and developed to meet our customer's requirements and needs.

They trust us:

ACETEX CHIMIE

Adisseo

ADNATCO (Abu Dhabi National Tanker Company)

Airbus

British Petroleum

EURENCO

Grand Port Maritime de Dunkerque

Kem one

MISC (Malaysia International Shipping Corporation Berhad)

Naphtachimie

PANSN (Port Atlantique Nantes Saint-Nazaire)

Perenco

Petronas

QAPCO (Qatar Petrochemical Company)

Sanofi

Tereos

Total

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