

ELECTRONIC SYSTEM TO VERIFY THE GROUNDING CONNECTION

Explosion Proof Electrical Equipment



Ex Grounding electronic systems

Installation: hazardous areas - Zone 1 / 2 (Gases)
Classification: Group II - Category 2G

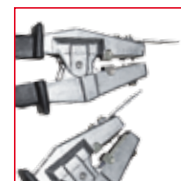
SM2021F - SM2021IIC



◀ SM2021IIC



◀ SM2021F



	SM2021F ELECTRONIC SYSTEM				
	ATEX 94/9/EC	IEC Ex	INMETRO	GOST-R (RTR/RTN)	GOST-K
EXECUTION	Ⓢ II 2 G Ex td IIB+H ₂ T ₆ ...T ₃ Ⓢ II 2 (1) G Ex db [ia IIA/B/C] IIB+H ₂ T ₆ ...T ₃ Ⓢ II 2 (2) G Ex db [ib IIA/B/C] IIB+H ₂ T ₆ ...T ₃ Ⓢ II 2 D Ex tb IIIC T ₈₅ °C...T ₁₅₀ °C	Ex db IIB+H ₂ T ₆ ...T ₃ Ex db [ia/ib] IIB+H ₂ T ₆ ...T ₃ Ex tb IIIC T ₈₅ °C...T ₁₅₀ °C	Ex db IIB+H ₂ T ₆ ...T ₃ Ex db [ia/ib] IIB+H ₂ T ₆ ...T ₃	1 Ex d IIB+H ₂ T ₆ 1 Ex d [ia/ib] IIB+H ₂ T ₆ Ex td A21 T ₈₅ °C...T ₁₅₀ °C 1 Ex d IIB+H ₂ U	1 Ex d IIB+H ₂ T ₆ 1 Ex d [ia/ib] IIB+H ₂ T ₆ A21 Ta ₈₅ °C
AMBIENT TEMP.	-60°C ÷ +130°C	-60°C ÷ +130°C	-60°C ÷ +130°C	-60°C ÷ +60°C	-60°C ÷ +130°C
PROTEC.DEGREE	IP66	IP66	IP66	IP66	IP66
CERTIFICATE REF.	INERIS 13 ATEX 0022X	IECEx BKI 09.0005	CEPEL 12.2139	POCC IT. ME92.B02924	No. 07/43-269
RULES OF COMPLIANCE	EN 60079-0:2004; EN 60079-1:2004; EN 60079-11:2006; EN 61241-0:2004; EN 61241-1:2004	IEC 60079-0; IEC 60079-1; IEC 60079-11; IEC 61241-0; IEC 61241-1	ABNT NBR IEC 60079-0:2008; ABNT NBR IEC 60079-1:2009; ABNT NBR IEC 60529-0:2009	ГОСТ Р МЭК 60079-0:2011; ГОСТ Р МЭК 61241-0:2007; ГОСТ Р МЭК 61241-1:2004	ГОСТ Р 51330.0/1/8/14-99; ГОСТ Р МЭК 61241-1-1:2002

	SM2021IIC ELECTRONIC SYSTEM				
	ATEX 94/9/EC	IEC Ex	INMETRO	GOST-R (RTR/RTN)	GOST-K
EXECUTION	Ⓢ II 2 G Ex db IIC T ₃ ...T ₆ Ⓢ II 2(1/2) GD Ex d [ia/ib] IIC T ₆ Ⓢ II 2 D Ex tb IIIC T ₈₅ °C...T ₂₀₀ °C Ⓢ II 2 D Ex tb IIIC T ₈₅ °C	Ex db IIC T ₃ ...T ₆ Ex d [ia/ib] IIC T ₆ Ex tb IIIC T ₈₅ °C...T ₂₀₀ °C Ex tb IIIC T ₈₅ °C	Ex db IIC T ₃ ...T ₆ Ex db [ia/ib] IIC T ₆ Ex tb IIIC T ₈₅ °C...T ₁₅₀ °C Ex tb [ia/ib] IIIC T ₈₅ °C	Ex d IIC T ₆ ...T ₃ Gb Ex tb IIIC T ₈₅ °C...T ₁₅₀ °C Db Ex d [ia/ib] IIC T ₆ Gb Ex tb [ia/ib] IIIC T ₈₅ °C Db	Ex d IIC T ₆ ...T ₃ Gb Ex tb IIIC T ₈₅ °C...T ₁₅₀ °C Db Ex d [ia/ib] IIC T ₆ Gb Ex tb [ia/ib] IIIC T ₈₅ °C Db
AMBIENT TEMP.	-60°C ÷ +80°C	-60°C ÷ +80°C	-60°C ÷ +80°C	-60°C ÷ +80°C	-60°C ÷ +80°C
PROTEC.DEGREE	IP66	IP66	IP66	IP66	IP66
CERTIFICATE REF.	INERIS 13 ATEX 0023X	IECEx BKI 11.0010	CEPEL 12.2137	POCC IT. ME92.B02924	-
RULES OF COMPLIANCE	EN 60079-0:2009; EN 60079-1:2007; EN 60079-11:2007; EN 60079-31:2009	IEC 60079-0:2007; IEC 60079-1:2007; IEC 60079-11:2006; IEC 60079-11:2008	ABNT NBR IEC 60079-0:2008; ABNT NBR IEC 60079-1:2009; ABNT NBR IEC 60529:2009;	ГОСТ Р МЭК 60079-0:2011; ГОСТ Р МЭК 61241-0:2007; ГОСТ Р МЭК 61241-1:2004	ГОСТ Р 51330.0/1/8/14-99; ГОСТ Р МЭК 61241-1-1:2002

	ATEX / IECEx / GOST					
Zone	0	1	2	20	21	22
		X	X		X	X

	NEC 505		
	Class I		
Zone	0	1	2
		X	X

	NEC 500					
	Class I		Class II		Class III	
Division	1	2	1	2	1	2
		X	X	X	X	X

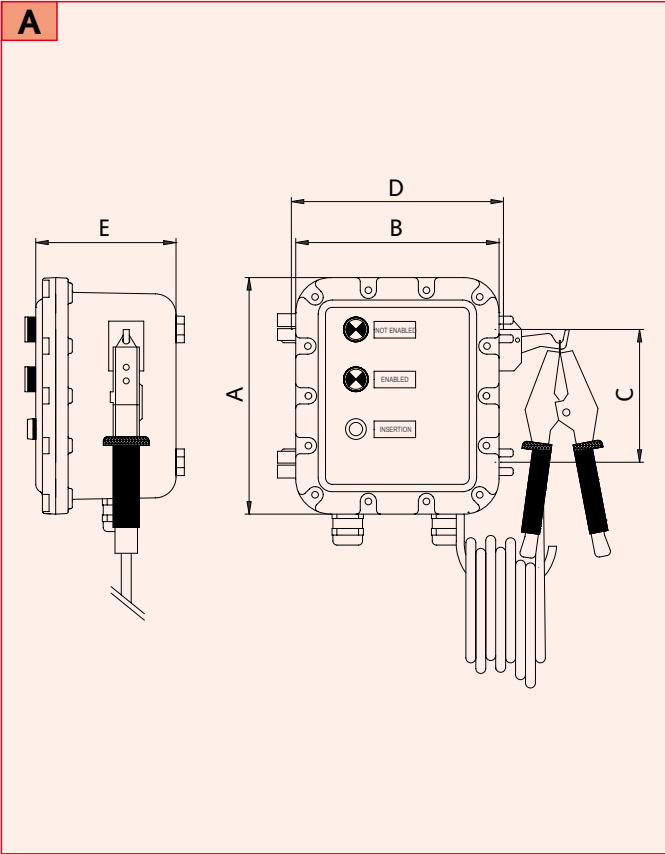
Mechanical characteristics

Body	marine grade copper free aluminium light alloy
Cover	marine grade copper free aluminium light alloy
Screws	stainless steel
Internal plate	hot dip galvanized steel
External Painting	poxy powders RAL-9006 Grey coloured
Hinges	casting on body and cover enclosure (SM2021F)

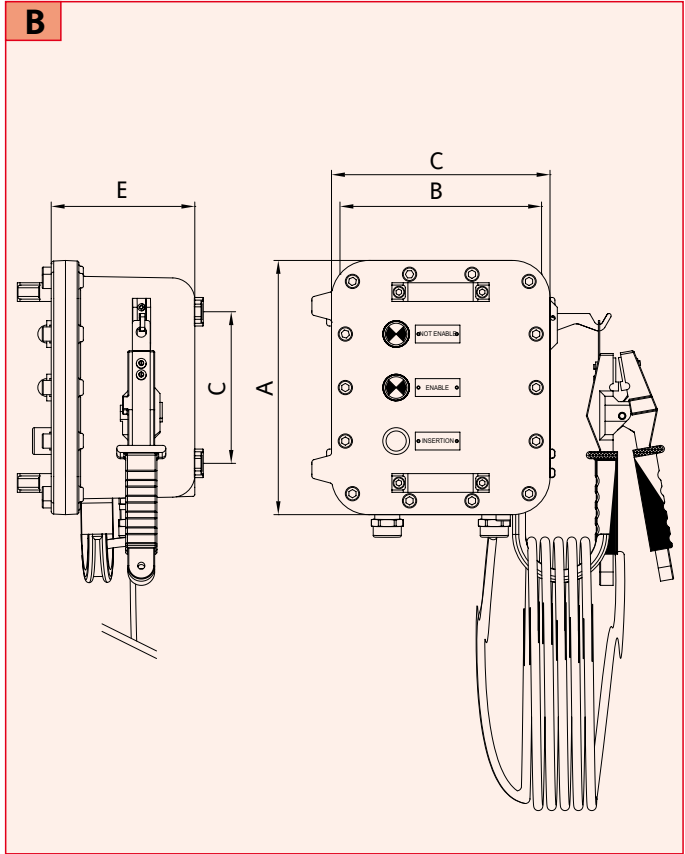
SM2021F - SM2021IIC Technical Features

CODE	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	WEIGHT [Kg]	DETAIL
SM2021F	285	245	160	276	169	12,00	A
SM2021IIC	285	245	169	226	170	13,00	B

Reference Details



Reference Details



APPLICATIONS:

They are used to control grounding continuity during tanks loading and unloading operations.
Tanks normally arrive electrostatically loaded, and an imperfect earthing might cause fire originated by a spark in presence of gas. The earthing control system is composed of a marine grade copper free aluminium enclosure, as above described, inside fitted with the earthing control electronic circuit SM-2001, which is normally set at 20 ohm, and authorize tanks loading/unloading when resistance is less than 20 ohm.

An intrinsically safety barrier placed inside the equipment and connected via the included cable clamp kit to the electronic system allows the one and only verification of the correct / perfect ground connection of the tank.
The tank ground connection is to made only with proper grounding clamp series IT (not included).
Enclosure is provided with: NOT AVAILABLE red light – AVAILABLE green light - INSERTION push button.
Red electronic system SM.. pilot light remain lit till grounding clamp IT series (not included) is perfect connected to vehicle's earthing bar. Insertion push button is pressed for at least 2sec.
If the resistance measured by electronic circuit is less than 20ohm, SM electronic system allows for loading and unloading operations. Earthing clamp for verification is normally complete with 8m of cable.

FOR GROUNDING TANKS CONNECTIONS, PLEASE USE EARTHING CLAMPS IT.. SERIES SHOWED ON PREVIOUS BULLETIN

REMARK:
Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.