


CATHODIC PROTECTION


SSMC Series Solid State Mitigation Cells

Robust, maintenance free Ex Proof
Safety Grounding, DC and AC
Mitigation Solution for CP Systems



SSMC is a robust polarization cell designed to divert induced AC current to the ground. The internal impedance of the cell is so large for DC current up to a preset DC voltage and almost short circuit for AC current which makes it possible to bypass the AC current to ground while not affecting the cathodic protection current of the structure.

The cell switches on for any voltage present on the protected structure which is 2.0 V negative or 1.0V positive with respect to ground and switches off if the voltage of the pipeline is between these limits, providing overvoltage protection for the pipeline up to the fault current ratings.

The cell does not require any maintenance, can be used in any mounting position and under any whether conditions because of its sealed structure.



CATHODIC PROTECTION



Fail safe, never becomes open circuit even under extreme conditions



Technical Specifications

Model	SSMC 3.7kA	SSMC 5.5kA	SSMC 10kA	SSMC 30kA
Atex Data (*Only -Ex models)	Zone 2, Zone 22, T5 (IEP 20 ATEX 0829x)	Zone 2, Zone 22, T5 (IEP 20 ATEX 0829x)	Zone 2, Zone 22, T5 (IEP 20 ATEX 0829x)	Zone 2, Zone 22, T5 (IEP 20 ATEX 0829x)
Continuous AC Current	50A	50A	50A	50A
AC Fault Current (0.1sec)	5,5kA	7,5kA	17kA	40kA
AC Fault Current (0.6sec)	3,7kA	5,5kA	10kA	30kA
Operating Temperature	-20/+50°C	-20/+50°C	-20/+50°C	-20/+50°C
Ingress Protection	IP65	IP65	IP65	IP65
Forward Pol. Threshold Voltage	2,0 / 3,0 VDC (Optional)	2,0 / 3,0 VDC (Optional)	2,0 VDC	2,0 / 3,0 VDC (Optional)
Reverse Pol. Threshold Voltage	1,0 VDC	1,0 VDC	1,0 VDC	1,5 / 3,0 VDC (Optional)
Lifetime (40°C)	> 15 Years (> 30 Y. Opt.)	> 15 Years (> 30 Y. Opt.)	> 15 Years (> 30 Y. Opt.)	> 15 Years (> 30 Y. Opt.)
Warranty	2 Years	2 Years	2 Years	2 Years
Lightning Protection	100kA (10/350 µs)	100kA (10/350 µs)	100kA (10/350 µs)	100kA (10/350 µs)
Internal Impedance (50Hz)	0.015 ohm	0.015 ohm	0.015 ohm	0.015 ohm
Leakage Current	< 7,5mA	< 10mA	< 15mA	< 7,5mA

AC Fault Current Ratings (Amperes RMS)

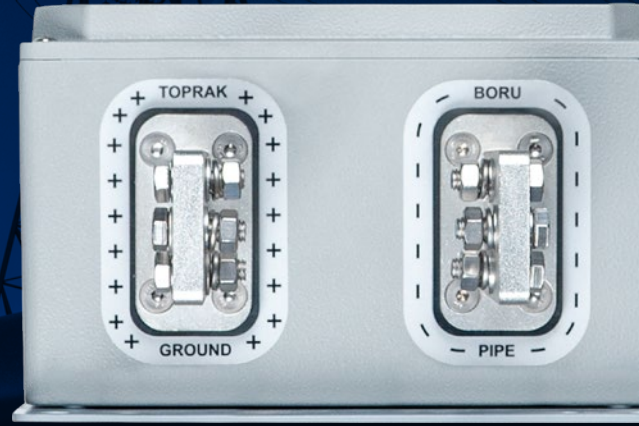
Model	SSMC 3.7kA		SSMC 5.5kA		SSMC 10kA		SSMC 30kA	
Cycles	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
1	10kA	10,5kA	10kA	10,5kA	25,5kA	26,5kA	50kA	52kA
3	7,5kA	8,0kA	9,5kA	10kA	20kA	21kA	45kA	47kA
5	5,5kA	6,0kA	7,5kA	8kA	17kA	18,5kA	40kA	43kA
10	4,5kA	5,0kA	7kA	7,5kA	16kA	17kA	39kA	40kA
20	4,0kA	4,5kA	6kA	6,5kA	13,5kA	14,5kA	33kA	35kA
30	3,7kA	4,2kA	5,5kA	5,8kA	10kA	11kA	30kA	31kA



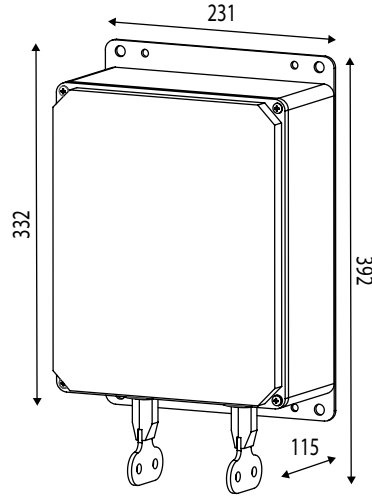
CATHODIC PROTECTION



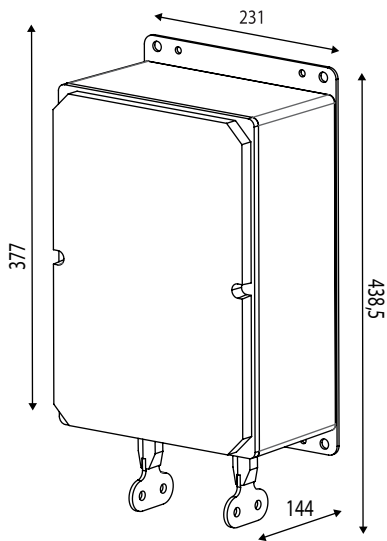
Safely avoid mixed
potential built up



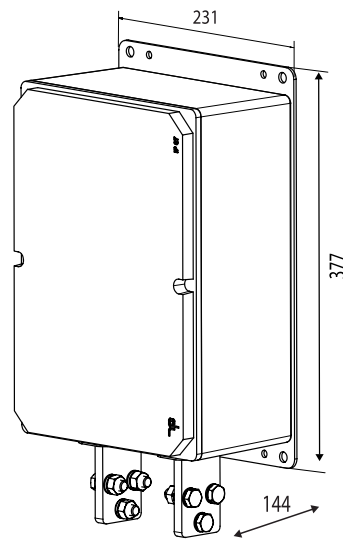
SSMC 3.7kA - SSMC 5.5kA



SSMC 10kA



SSMC 30kA



İvedik OSB. 1468.cad. No:60 Yenimahalle/ANKARA

+90 312 386 04 04 / +90 312 386 04 02

info@4zelektronik.com www.4zelektronik.com / www.forze.com.tr

/4zelektronik

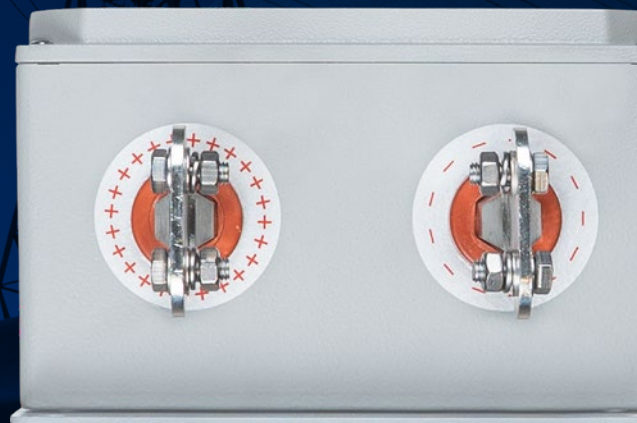
FORZE ELEKTRONİK



CATHODIC PROTECTION



-Ex option for
Hazardous locations



Model Numbering System

AC Fault Current
(30 Cycle @50Hz)

Options

3.7kA
5.5kA
10kA
30kA

Forward/Reverse
Polarity Threshold
Voltage

Options

2.0/1.0 VDC
3.0/1.0 VDC

Connection Type

S: Standard

SSMC 3.7kA / 50A - 2/1 - LP - S - Ex

Solid State
Mitigation Cell

Continuous AC
Current

Options

20A
50A

Lightning Protection

N: None

LP: 100kA 10/350 μ s

Atex Data

Zone 2, Zone 22,
T5 (IEP 20 ATEX
0829x)

Standard Options

SSMC 3.7kA	SSMC 5.5kA	SSMC 10kA	SSMC 30kA
SSMC3.7kA/50A-2/1-LP-S	SSMC5.5kA/50A-2/1-LP-S	SSMC10kA/50A-2/1-LP-S	SSMC30kA/50A-2/1.5-LP-S
SSMC3.7kA/50A-2/1-LP-S-Ex	SSMC5.5kA/50A-2/1-LP-S-Ex	SSMC10kA/50A-2/1-LP-S-Ex	SSMC30kA/50A-2/1.5-LP-S-Ex
SSMC3.7kA/50A-3/1-LP-S	SSMC5.5kA/50A-3/1-LP-S		SSMC30kA/50A-3/1-LP-S
SSMC3.7kA/50A-3/1-LP-S-Ex	SSMC5.5kA/50A-3/1-LP-S-Ex		

* Please note that all products, product specifications and data presented in this datasheet or web site are believed to be free of errors and subject to change without prior notification for continued improvement. It is the users responsibility to ensure the suitability of the product for a specific application.

FORZE ELEKTRONIK

İvedik OSB. 1468.cad. No:60 Yenimahalle/ANKARA

+90 312 386 04 04 / +90 312 386 04 02

info@4zelektronik.com www.4zelektronik.com / www.forze.com.tr

/4zelektronik