



Nexo Field Sensitive Device ESE Terminal



ESE Terminal Nexo Field Sensitive Device

Nexo FSD Series

Product Datasheet

The principle of operation of an Nexo FSD terminal is to create an upward streamer earlier than conventional air terminals or other objects on the earth. Nexo FSD does this by collecting and storing ground charge during the initial phase of a thunderstorm development and emits strong and consistent upwards streamers earlier than conventional air terminals or any other objects on earth.

These streamer from the finial tip earlier than other competing structural points, The Nexo FSD terminal becomes a preferred point for the capture of the lightning discharge within the protected area.

Features

- 1) Meets NFC 17-102 & UNE 21186 standards
- 2) Tested to withstand multiple 40kA impulses.
- 3) High quality anti-corrosive and conductive coating.
- 4) Wind resistance.
- 5) 5 years replacement guarantee.

Triggering Time Gain

The triggering time AT (ps) is defined as the gain at the spark over instant obtained with an ESE terminal compared with a simple rod terminal exposed to the same conditions.

Different Models of Nexo Field Sensitive Device

- 1) Nexo FSD20
- 2) Nexo FSD40
- 3) Nexo FSD60
- 4) Nexo FSD HE

Triggering Time Distance Gain

According to NF C 17-102, the triggering time instance gain ΔT is associated with a triggering time distance gain ΔL .

$\Delta L = V \cdot \Delta T$ where:

ΔL (m): gain in lead distance of the spark over distance.

V (m/ μ s): the average speed of the downward tracer

ΔT (μ s): gain in spark over time of the upward leader

Lightning Protection of a Structure

As a general rule for protection, the object to be protected shall be in the 'Radius of Protection of a Lightning Protection System' whose electromagnetic characteristics are compatible with the capability of the object to withstand stress causing the damage. (physical damage, failure of electrical and electronic systems due to over-voltages).

Radius of Protection (Rp) in Metres					
Protection Level	H(m)	Nexo FSD HE	FSD20 Rp	FSD40 Rp	FSD60 Rp
Level - I (D=20)	2	9	13	25	31
	4	13	25	51	63
	5	20	32	63	79
	8	27	33	64	79
	10	29	34	64	79
Level - II (D=30)	2	11	15	28	35
	4	18	30	57	69
	5	26	38	71	87
	8	32	39	72	87
	10	34	40	72	88
Level - III (D=45)	2	15	18	32	39
	4	23	36	64	78
	5	30	46	81	97
	8	38	47	82	98
	10	40	49	83	99
Level - IV (D=60)	2	17	20	36	43
	4	26	41	72	85
	5	35	52	90	107
	8	43	54	91	108
	10	46	56	92	109

The functions of the external LPS are:

- ❑ to intercept a lightning flash to the structure.
(with an air-termination system)
- ❑ to protect and reduce physical damage and life hazard.
- ❑ to conduct the lightning current safely to earth using a down-conductor system.
- ❑ to disperse the lightning charge into the earth using an earth - termination system and equalize potential between other earth - termination systems on site with an Equipotential device/system)

Four classes of radius of protection levels of LPS (I, II, III, IV) are defined as a set of construction rules.

Protection to reduce the failure of internal systems:

The protection against LEMP (Lightning Electromagnetic Pulse) to reduce the risk of failure of internal systems shall limit:

- ❑ over-voltages due to lightning flashes near the structure resulting from inductive coupling;
- ❑ over-voltages transmitted by lines connected to the structure due to flashes on or near the lines;
- ❑ magnetic field directly coupling with internal systems;
- ❑ Effective protection against over-voltages causing failures of internal systems may be achieved by means of a "coordinated SPD protection." Limiting over-voltages below the rated impulse withstand voltage of the system to be protected.

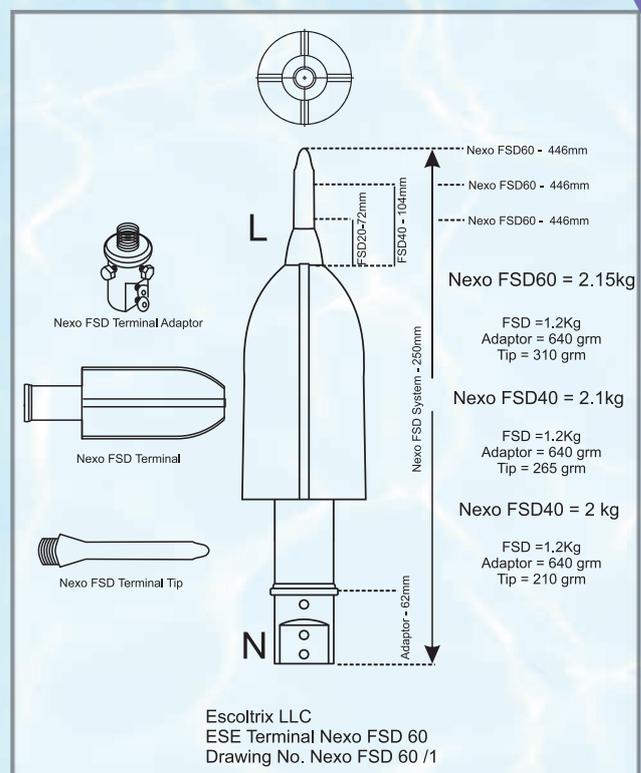


Lightning Surge Counter Nexo LSC-6D

Product Datasheet

INTRODUCTION: New LSC-6D has been specifically designed to monitor lightning surge. It is able to define the number of both lightning and switching surge that occurs in a specific site.

CONSTRUCTION FEATURE: It consist of a rectifier, capacitor and an electronic switch connected to a mechanical counting relay which is totally moulded in a sealed box which is ideal for exposed installation. The entire assembly is housed in an elegant alloy casting and a suitable window permits easy reading of the 6-digit counter.



PERFORMANCE: The design of the circuit ensures that the counting relay is not energized for low lightning current impulses which are insignificant to the arrester capability and life. Since, no gaps or series impedance are used, there is no risk of internal arcing or consequent explosive and failure in the event of a short circuit, following an arrester failure.

SPECIAL FEATURES:

- Can use the tower as an inductive shunt, voltage drop across the shunt triggers the counter.
- Can count up to 999,999 before resetting.
- Easy to install.
- Use a #14 or larger wire gauge for connections with TK clamps and CCK for corrosion free Joints
- Can be tested with either polarity battery from 9V to 60V.
- Weather resistant.



The Armor Ring Concept

The Total Energy Risk Mitigation Solution



Cutting Edge Solution for a Modern Facility

Designers and Manufactures of :
Lightning Protection, Surge Protection, Grounding System



Ripo Shield: Series of Surge Protection Devices



Ardo : Grounding Solutions



Nexo: Lightning Protection Solutions

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