



TRUST. WELL EARNED.



SAFE BOND Integrated Track Feeder and Negative Shorting Panel

The BRUSH Switchgear SafeBond integrates the feeder circuit breaker function and the remote bonding function into one standard Lightning panel footprint, a big advantage in floor space saving, civil engineering, cabling and operational consistency and safety.

The SafeBond incorporates the NDC high speed, unidirectional circuit breaker, featuring the award-winning magnetic actuator, to carry out the making and breaking of all load and fault currents, whilst an "off-load" motorised two position disconnecter selects the circuit.

With the disconnecter in the positive position and the NDC CB closed, the positive busbar is connected to the track feeder cable thereby functioning as a standard feeder circuit breaker.

With the disconnecter in the negative position and the NDC CB closed the track feeder cable is bonded to the negative busbar, thereby functioning as a negative bonding device.

All operations are fully electrically interlocked and the control system can be operated remotely via SCADA or locally via the local control panel.

BRUSH Switchgear believe this product will contribute to improving safety and reducing lead times for track maintenance periods (possession).

As with all BRUSH Switchgear products the SafeBond is designed, manufactured and assembled to the highest standard of quality, fulfilling the customers' requirements and leading the market in innovative technology.



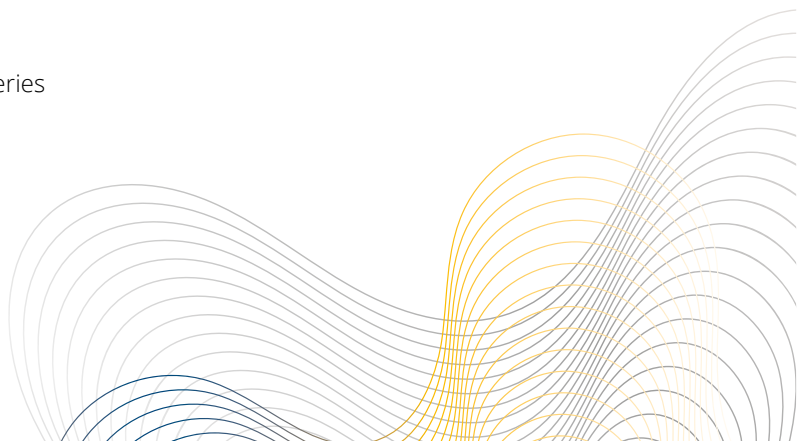
Key Features

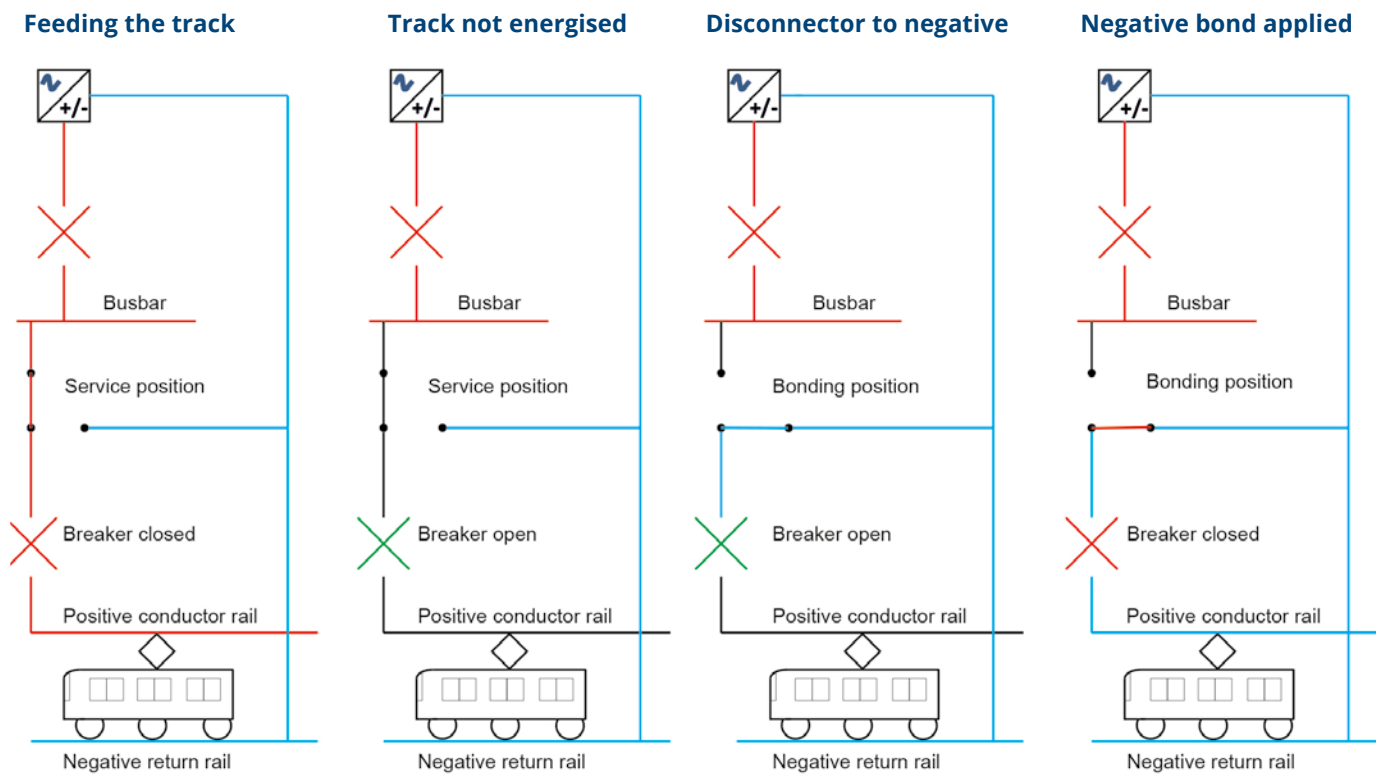
- Same footprint as standard Lightning panel – 450mm x 1526mm
- Feeder circuit breaker and bonding functions integral to one panel
- Fully rated, type tested and proven NDC circuit breaker does the making and breaking
- Proven 'off-load' 2 position disconnecter selects the circuit
- Disconnecter in positive position – Feeder circuit breaker function
- Disconnecter in negative position – negative bonding function
- Electrical control/interlocking schemes to suit customer requirements
- SCADA Remote control of complete unit as standard
- No additional civil engineering/cabling costs
- No additional outdoor housing costs



Standards

- BSEN 50123 Series





Ratings

Nominal Voltage	V dc	750	1500
Rated Voltage	V dc	900	1800
Rated Insulation Voltage	kV	1800	3000
Power-Frequency Withstand Level	kV (ac)	9	9
Rated Impulse Withstand Level	kV (ac)	20	20
Rated Short-Time Withstand Current	kAp/kA	100 / 71 250ms	100 / 71 250ms
Rated Short-Circuit Current	kAp/kA	180/125	142 / 100
Auxiliary Operating Supply	V dc	48 / 110 / 220	48 / 110 / 220
Specified Service Life	Years	30	30
Standards		BS EN 50123	BS EN 50123
Environmental Conditions		As EN 50123-1 clause 4.1, normal	As EN 50123-1 clause 4.1, normal
Max and Min Operating Temperature	Deg C	40 / -5	40 / -5
Degree of Pollution		EN50124-1 PD4	EN50124-1 PD4
Disconnecter			
Rated Service Current - Positive	A	4000	4000
Rated Service Current - Negative	A	500	500
Mechanical Endurance		10,000 operations	10,000 operations
Nominal Motor Operating Time	s	10	10
Circuit Breaker			
Rated Track Time Constant	ms	100	63
Critical Current	A	25	25
Mechanical Endurance		50,000 operations	50,000 operations
Breaking Characteristic		High Speed	High Speed
Weight	kg	265 / 295	265 / 295

BRUSH

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