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## Safebond 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 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.

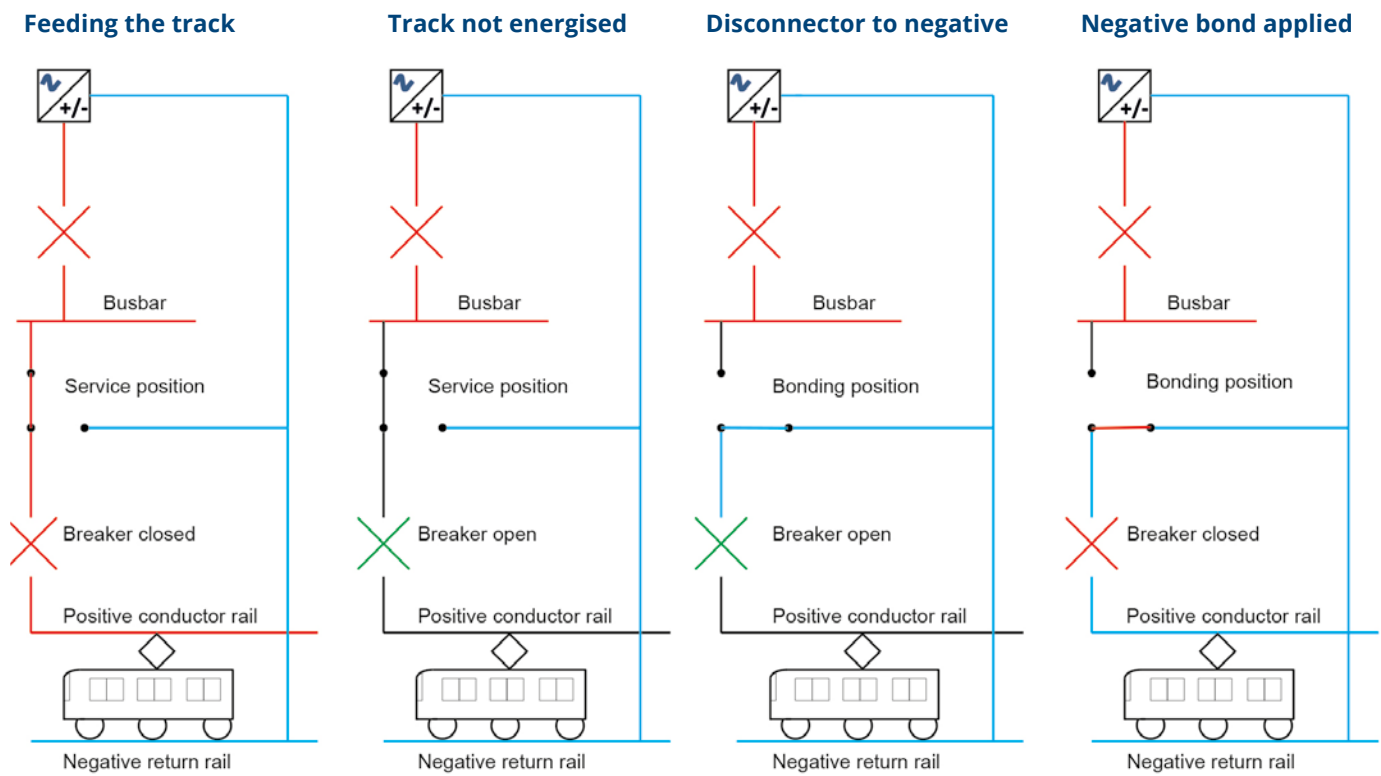
All operations are fully electrically interlocked and the control system can be operated remotely via SCADA or locally via the local control panel.

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

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.

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



### 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 disconnector 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



### BRUSH

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