



Cathtect

Engineering (Pty) Ltd.

Natural Drainage Unit (NDU)



WHAT IT TAKES

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Natural Drainage Unit (NDU)

The natural drainage unit consists of a pipe and rail connection that couples the pipe to a rail via a diode, allowing current only to pass from pie to rail should the pipe be more positive than the rail. The diode has a suitable peak inverse voltage that blocks current in the opposing direction should the rail be more positive than the pipe. The directional diode is protected by a parallel snubber circuit across it and an inline fuse that is suitably rated. A series shunt connected to an analogue current meter with captive measuring sockets provide for DC current measurement. Both sides of the NDUs equipment is surge protected as close to the Connection terminals as possible, allowing an earth return path via an earth stud. A pull-out link is situated in the rail leg of the NDU. The NDU is on a frame type mounting and the heat sink assembly can reach safe operating peak temperatures of up to 300°C (varies with ambient), with steady state currents of up to 600A for long periods of time.

Connections	<ul style="list-style-type: none"> • Pipe – M12 Galvanized Stud • Rails – M12 Galvanized Stud • Earth – M12 Brass Stud
Component Ratings & Characteristics	
Fuse	<ul style="list-style-type: none"> • 630A • 120kA Fault Capacity
Link	<ul style="list-style-type: none"> • 800A Steady State • 300A Load Switching
Shunt	<ul style="list-style-type: none"> • 600A / 50mV
Ammeter	<ul style="list-style-type: none"> • 600A / 50mV Analogue
Diode	<ul style="list-style-type: none"> • 2000A in Heat Sink Assembly • 4000 PIV
RC Snubber	<ul style="list-style-type: none"> • Capacitor 0.47µF 1600V • Resistor 33Ω 60W
Buss Bars	<ul style="list-style-type: none"> • 30mm x 5mm Aluminium • 900A Current Rating
Surge Protection	<ul style="list-style-type: none"> • On Rail Class I 800V 10/350µs 100kA • On Pipe Class I 800V 10/350µs 100kA
Mounting Frame	<ul style="list-style-type: none"> • 50x50 Square tubing galvanized 2mm thick • 600W x 1000L x 1300H • Mounted on a 1.6mm white powder coated mild steel chassis plate.

Spares

Spares are mounted on a back chassis plate, 1.6mm white powder coated mild steel

- 1x 800V Spark Gap E1 – E2
- 1x 630A Fuse F1

