

entertec

Entertainment Technology

POWER CATALOGUE



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Useful Info

Breaker Terminology

MCB – Miniature Circuit Breaker

These devices provide safeguarding to a circuit's cabling and connected equipment, by way of over current and short circuit protection. They typically come in B, C, and D type variants which accompany the current rating number (e.g. 16, 32, 63 and so on). The primary difference between variants is the breaking capacity of the device – i.e. how much of a short circuit it can cope with whilst still being able to disconnect itself correctly under fault conditions. You will find a mixture of B and C type variants on our equipment because they best suit the appropriate breaking capacity for typical live event applications. Having the choice of which variant to use on some distro within the system design offers more tolerance to remain compliant where longer cable runs are necessary.

RCD – Residual Current Device

An essential component of any safe electrical system, an RCD will detect the slightest imbalance in an electrical circuit, and offers life-saving protection to the user by disconnecting automatically under earth fault conditions.

RCBO – Residual Current Circuit Breaker with Over Current Protection

RCBO's represent a combination of an MCB and an RCD. They offer the same life-saving protections from fire, electrocution, over current, and short circuit – in a more compact format than using individual components. You will find B and C type RCBO's throughout our entire inventory protecting final circuits, i.e. the point at which there is an expectation for a user to plug in or interact with the cable and/or the appliance on the end of it, during normal use. Final circuit RCBO's are all fixed at 30mA leakage and incorporate instantaneous disconnection, which means the electrical supply will disconnect quickly enough under fault conditions to protect the user, the cable, and the equipment.

Useful Info

Breaker Terminology (cont.)

MCCB – Moulded Case Circuit Breaker

Typically found in larger installations due to their design parameters and ratings being well suited to risks of higher over current, MCCB's also feature the ability to switch a connected circuit on or off remotely. You will find MCCB's in all our synchronising generator fleet which, when coupled with the DSE controller hardware, enables the safe connection or disconnection of multiple machines and/or BESS components in a variety of live event environments to ensure uninterrupted, sustainable electrical systems.

VELR – Variable Earth Leakage Relay

These devices feature user-defined parameters, such as trip time and trip value, to facilitate a cascading protection structure as necessary for an electrical system's design. Using intelligent circuit protection, they operate similarly to how an RCD would do, i.e. when the user parameters are reached under fault conditions and the relay is triggered, a mechanical shunt connected to the appropriate circuit breaker will disconnect the flow of electricity. You will find VELR's in all our generators from 20kVA upwards, and also throughout various distro configurations, to offer the utmost flexibility in designing the most suitable electrical system for your live event environment distribution circuit parameters. If necessary, a VELR can be configured as a final circuit user protection device providing its user parameters are set at <30mA leakage, and <20ms disconnection time.

Useful Info

Practical System Design Tips

- Use the P = VI Triangle to ensure you are choosing the right inventory to satisfy your system design:



$$\text{WATTS} = \text{VOLTS} \times \text{AMPS}$$

$$\text{AMPS} = \frac{\text{WATTS}}{\text{VOLTS}}$$

$$\text{VOLTS} = \frac{\text{WATTS}}{\text{AMPS}}$$

- Consider a cascading protection structure to your distribution circuits, to minimise nuisance tripping, and simplify fault finding:

16A 30mA / 0ms (final circuit)

32A 30mA / 0ms (final circuit)

32A 100mA / 100ms (distribution circuit)

63A 300mA / 300ms (distribution circuit)

125A 500mA / 500ms (distribution circuit)

400A 1A / 1s (distribution circuit)

Generators

10kVA

	16A	32A	32-3PNE	63-3PNE	125-3PNE
Output Connections	1x	1x	-	-	-
	Length (mm)	Width (mm)	Height (mm)		Wet Weight (kg)
Skid Mounted	-	-	-		-
Trolley Mounted	1750	900	1080		388



Key Statistics

- Quiet Canopy Set = 67dBA at 7 metres
- HVO Diesel Stage V Emissions Compliant
- Fuel Consumption @ 70% load = 3 litres per hour
- Fuel Tank Capacity of 37 litres = circa 11 hrs run time
- 10kVA (8kW) = max eco load of 33amps (single phase only)
- DSE 3110, non-sync, with Auto-Start, AVR fitted

Generators

20kVA

	16A	32A	32-3PNE	63-3PNE	125-3PNE
Output Connections	1x	1x	1x	-	-
	Length (mm)	Width (mm)	Height (mm)		Wet Weight (kg)
Skid Mounted	1950	770	1240		1105
Trailer Mounted	3800	1980	1890		1650

Key Statistics

- Whisper Quiet Canopy Set = 55dBA at 7 metres
- HVO Diesel Stage V Emissions Compliant
- Fuel Consumption @ 70% load = 3 litres per hour
- Internal Fuel Tank Capacity of 75 litres = circa 22hrs run time
- 20kVA (16kW) = max eco load of 22amps (per phase)
- DSE 7310, non-sync, with Auto-Start, 24/7 Tracking & Monitoring

Generators

40kVA

	16A	32A	32-3PNE	63-3PNE	125-3PNE
Output Connections	1x	1x	1x	1x	-
	Length (mm)	Width (mm)	Height (mm)		Wet Weight (kg)
Skid Mounted	2400	980	1600		1760
Trailer Mounted	3800	1980	2250		2305

Key Statistics

- Whisper Quiet Canopy Set = 55dBA at 7 metres
- HVO Diesel Stage V Emissions Compliant
- Fuel Consumption @ 70% load = 6 litres per hour
- Internal Fuel Tank Capacity of 240 litres = circa 36hrs run time
- 40kVA (32kW) = max eco load of 44amps (per phase)
- DSE 8610 MKII with sync, with Auto-Start, 24/7 Tracking & Monitoring

Generators

60kVA

	16A	32A	32-3PNE	63-3PNE	125-3PNE
Output Connections	2x	3x	1x	1x	1x
	Length (mm)	Width (mm)	Height (mm)		Wet Weight (kg)
Skid Mounted	2660	1110	1800		2250
Trailer Mounted	4400	1980	2450		2855



Key Statistics

- Whisper Quiet Canopy Set = 55dBA at 7 metres
- HVO Diesel Stage V Emissions Compliant
- Fuel Consumption @ 70% load = 11 litres per hour
- Internal Fuel Tank Capacity of 300 litres = circa 24hrs run time
- 60kVA (48kW) = max eco load of 66amps (per phase)
- DSE 8610 MKII with sync, with Auto-Start, 24/7 Tracking & Monitoring
- PowerLock Source & Drain Connection Set

Generators

100kVA

	16A	32A	32-3PNE	63-3PNE	125-3PNE
Output Connections	–	3x	1x	1x	2x
	Length (mm)	Width (mm)	Height (mm)		Wet Weight (kg)
Skid Mounted	2660	1110	1800		2500
Trailer Mounted	4400	1980	2450		3105



Key Statistics

- Whisper Quiet Canopy Set = 55dBA at 7 metres
- HVO Diesel Stage V Emissions Compliant
- Fuel Consumption @ 70% load = 16 litres per hour
- Internal Fuel Tank Capacity of 300 litres = circa 16hrs run time
- Internal AdBlue Tank Capacity of 38 litres (fuel consumption matched)
- 100kVA (80kW) = max eco load of 114amps (per phase)
- DSE 8610 MKII with sync, with Auto-Start, 24/7 Tracking & Monitoring
- PowerLock Source & Drain Connection Set

Road Tow Bowsers

Our Road Tow Bowsers include 12V metered pumps with a built-in battery, an Anderson connection for powering off a towing vehicle, retractable filling hoses, and a spill kit. They can also be used to feed any of our generators from 20kVA upwards using a set of fuel lines, instead of requiring a separate external fuel tank.

Supported by our logistics division and accessible via our 24hr office line - when you need fuel, we can bring it. Anywhere, anytime.

Length	3650mm
Width	1900mm
Height	1568mm
Empty Weight	740kg
Full Weight	1790kg
Re-fill Hose Length (Diesel)	10m
Re-fill Hose Length (AdBlue)	5m
Diesel Capacity	980 litres
AdBlue Capacity	200 litres



Mains Distribution

We have an extensive stock of smaller mains distribution on 16A, 13A, Schuko, Swiss, and USA connection types, plus all manner of adapters, splitters, step up and step down cables, and transformers, to cater for almost any mains distribution configuration required in almost any scenario or working environment.

If you need something specific, just ask one of our team, so we can work with you to find a solution.

Single Phase C-Form

CODE	INPUT	IMAGE	CONFIGURATION
SES18	32-1		32-1 tail 3x C16 (30mA) + 1x B16 (30mA)
SES14	32-1		32-1 inlet Inline C32 (VELR)
SES15	32-1		32-1 inlet Inline B32 (MCB)
SES17	32-1		32-1 inlet Inline C16 (MCB)
SES10	63-1		63-1 inlet 2x C32 (30mA) + 6x C16 (30mA)
SES13	63-1		63-1 inlet Inline C63 (VELR)

Three Phase C-Form

CODE	INPUT	IMAGE	CONFIGURATION
SES2	32-3		32-3 inlet 32-3 thru 6x C16 (30mA)
SES4	32-3		32-3 inlet 32-3 outlet (30mA) 3x C32 (30mA) + 3x C16 (30mA) + 2x C10 (30mA)
SES5	32-3		32-3 inlet 32-3 thru 3x C32 (30mA) + 9x C16 (30mA)
SES12	32-3		32-3 inlet Inline C32-3 (VELR)
SES8	63-3		63-3 inlet 1x C32-3 (VELR) + 3x C63-1 (VELR)
SES1	63-3		63-3 inlet 2x C32-3 (MCB) + 1x C32-3 (30mA) 3x C32-1 (MCB) + 3x C32-1 (30mA) 6x C16 (30mA)
SES7	63-3		63-3 inlet 1x C32-3 (MCB) 3x C32-1 (MCB) + 3x C32-1 (30mA) 9x C16 (30mA) + 3x B16 (30mA)
SES21	63-3		63-3 inlet 1x C32-3 (MCB) 6x SOCA (36x 30mA) 2x C16 (30mA) + 2x C10 (30mA)
SES11	63-3		63-3 inlet Inline C63-3 (VELR)
SES9	125-3		125-3 inlet 2x 63-3 (VELR) + 2x 32-3 (VELR) 3x 63-1 (VELR) + 3x 32-1 (VELR)

Mains Cable

We hold a substantial range of cables in single and three phase, although any cable can be custom-made to order for a particular project. In addition, we hold all manner of adapters, splitters, step up / step down cables, ramps, matting, flyware, scaffolding, truss, and accessories to cater for any kind of temporary installation in almost any working environment. All our cable is HO7 RN-F.

If you need something specific, just ask one of our team, so we can work with you to find a solution.

16-1		SHORT, 5m, 10m, 20m, 30m, 50m
32-1		SHORT, 5m, 10m, 20m, 30m, 50m
63-1		SHORT, 5m, 10m, 20m, 30m
32-3		SHORT, 5m, 10m, 15m, 20m, 30m, 50m
63-3		SHORT, 5m, 10m, 20m, 30m, 50m
125-3		SHORT, 5m, 10m, 15m, 20m, 25m, 50m
POWERLOCK (150mm)		LUGS, SHORT, 5m, 10m, 25m, 50m

Instagrid

Portable electricity just got better...

Instagrid oneMAX

Output Voltage	230V / 50Hz
Rated Power Output	3.6kW (16A)
Rated Energy Capacity	2.1 kWh
Charge Duration	< 3h up to 100%
On (Idle)	150 hours
Output Socket 1	BS1363-2 (13A)
Output Socket 2	Neutrik PowerCON TRUE 1
Input Charging Socket	Neutrik PowerCON TRUE 1
Weight	20kg
IP Class	IP54
Operating Temperature	-15°C to 40°C

Instagrid LINK

Weight	4.5kg
IP Class	IP54
Protection Class	Class II / double-insulated
Operating Temperature	-15°C to 40°C
Input Socket	3x Neutrik PowerCON TRUE 1 (Line 1 Priority)
Output Socket	3x C-Form (IEC 60309) 16-1
Output Voltage	230 V / 50Hz
Output Current	16A
Switching Time	<20 ms

Logistics

Comprehensive vehicle fleet: all-terrain 4x4's up to 45ft artics

In-house tachograph management including 4x4 towing

Exclusively Euro 6 vehicle fleet running on HVO Diesel

24/7 Price Matrix - no surcharges for "out of hours"

Tracking suite on all vehicles and all fleet hardware $\geq 20\text{kVA}$

Fuel / AdBlue deliveries, anywhere, anytime.



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