



DESLoad Low Voltage Distribution Boards

Certified, Complete solution for Final DBs



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Overview

Digital Electric System's DESLoad range of Final Distribution Boards (DBs), are designed, manufactured and type tested in accordance with the latest IEC standards IEC 61439-1, IEC 61439-2, IEC 61439-3.

DESLoad DBs are designed upto 250A incorporating IEC 60947 compliant LV components for Final Distribution (MCBs, RCBOs, RCCBs, etc) from several reputed manufacturers. It adopts a simplified, safe and sturdy construction concept that are used to build MCB Distribution Boards suitable for use in buildings, residential and industrial applications.

Key Features

- Fully type tested and certified to IEC 61439-1, 2 standards.
- 125A/250A Busbar system, fully moulded, safe, encapsulated pan assembly system.
- Busbars are type tested with short circuit withstand rating of 17kA for 0.25s (250A – 25kA for 0.25s)
- Ratings tested and certified @50°C ambient.
- Form-2B as standard, certified as per IEC 61439 standards.
- Standard offer for Row type DBs for specific market segments (Dubai, N.E in UAE, etc)
- Unique design of door lock for easy operation,
- Maximized gutter space for ease of wiring.
- Reversible door.
- Removable Gland plates.
- Removable Dead front and door.
- IP41, IK08, Epoxy powder coating to RAL7035 is standard.

Reliability

- Designed to withstand Harsh Environments – use of Galvanized sheet metal with Epoxy powder coating ensures protection against corrosion and with IP41 protection, the external influences of dust, water, etc are well protected.

Comply with major Utilities

- DESLoad DBs comply with the requirements of all major utilities in the region: ADQCC / ADDC, DEWA, SEWA, EWE... in Qatar: Kahramaa, in Bahrain: EWA, ..in Kuwait: MEW, in Oman: MHEW
- The versatile offer is compliant with all customer requirements for LV Final Distribution Boards in the entire M.E and Africa region.

Ready to Install

- DESLoad DBs are supplied with an enclosure and complete moulded, encapsulated busbar pan assembly system.
- Ready to Install purpose fitted mounting brackets are provided to easily install Incoming Isolators, RCCBs and Outgoing MCBs.
- This method of supplying ready to install DBs helps in retaining the configuration as type tested as per IEC 61439-1, 2 ensuring safety of the operators and the equipment.
- Row type DBs are available in compliance with DEWA, SEWA and Etihad EW (Northern Emirates) requirements.



Type Tested & Certified

- DESLoad DBs are fully type tested to the latest international standards, IEC 61439-1, -2, -3 with high performance parameters meeting the requirements of major consultants, end users, utilities, etc in the entire MEA region.
- Routine Tests are performed on every assembly in accordance with IEC 61439 prior to shipping to the project site.



Technical details

Structure

- Digital Electric System’s DESLoad DBs, are made using sturdy, folded, high quality galvanized iron sheet steel, designed to withstand the electrodynamic forces during a short-circuit.
- All sheet metal parts undergo a seven-stage treatment process to protect against corrosion and are then epoxy powder coated, finished to RAL 7035.

Standards	IEC 61439-1, IEC 61439-3
Rated Current, In	125A, 250A
Rated Short circuit withstand current, Icw	17kA 0.25s, (25kA 0.25s for 250A)
Rated Peak withstand current, Ipk	34kA (50kA for 250A)
Rated Operating Voltage, Ue	400V / 415V
Rated Insulation Voltage, Ui	690V (for main circuit), 500V (for devices)
Rated Impulse Withstand Voltage, Uimp	4kV
Degree of Protection	IP41
Mechanical Impact withstand strength	IK08
Ambient temperature	50°C
Raw Material and Coating	Galvanized Iron sheet steel with Epoxy Powder coating of 60 to 90 Microns thickness. All external and internal parts are painted finished to RAL 7035 (options available)
Sheet Steel thickness	Robust, Folded, Sheet metal enclosure, modular design, 1.2mm thick
Form of Separation	Form-2B as per IEC 61439-1, 2 (Standard)
Cable Entry / Exit	Bottom Entry (Top entry is available), Top/Bottom Exit
Access	Front
Devices incorporated	Adapts seamlessly, LV Products from all major manufacturers Power Distribution <ul style="list-style-type: none"> • MCBs • RCCBs • Isolators
DB dimensions	Please refer the offer references table



Functional Units

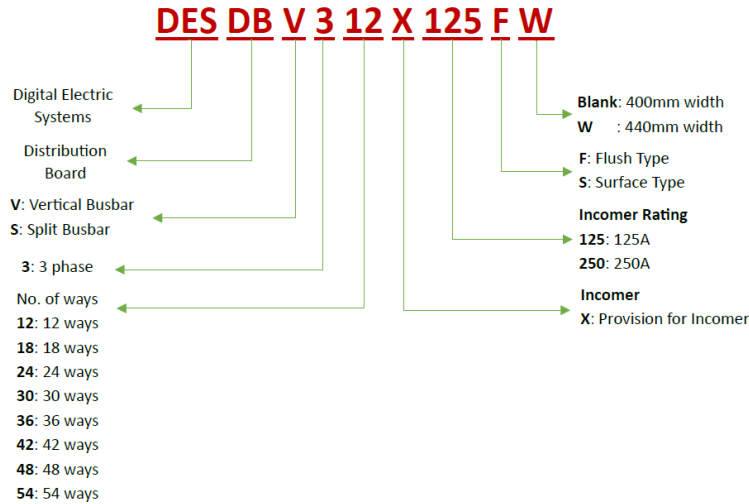
- Outgoing MCBs of various ratings upto 63A can be installed.
- Either 1-Pole or 3-Pole MCBs. Suitable to install MCBs of several manufacturers with 18mm pole pitch (eg: Acti9, Easy9 from Schneider, S200 from ABB, Eaton, Siemens, Chint, Dorman Smith, etc)
- Upto 54nos 1-Pole MCBs or 18nos 3-Pole MCBs can be installed
 - Either on a single vertical busbar
 - OR on 2 Split busbars (each busbar protected by a RCCB) → 100mA RCCB

Busbars (Moulded Pan Assembly)

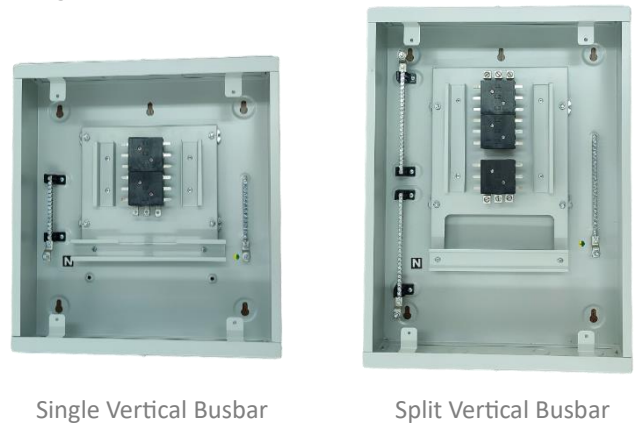
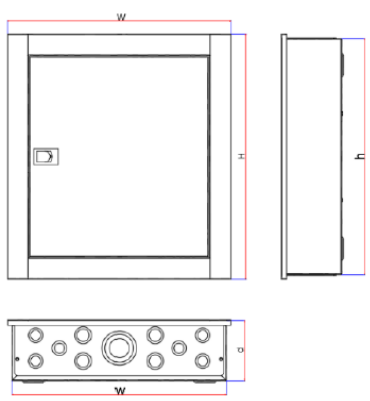
- Busbar type DBs are equipped with a Moulded and Encapsulated Pan Assembly structure, fully segregated from functional units and cable compartments.
- The Fully Moulded busbar system with inter-phase barriers prevents the possibility of internal circuit faults within the assembly.
- The top cover can be opened for easy inspection of joints and to perform Dielectric tests.
- Continuous operating temperature of Mould / Insulating material: 140°C
- Glow wire performance of the insulating material: 960°C
- Copper: Tin Plated, HDHC, 99.9% Purity, ETP Grade used for main busbar and interconnections.

Order Code – Busbar Type DBs

Digital Electric Systems supplies the DESLoad range of LV Distribution Boards (DB) in a Ready To Install format with the enclosure and busbar pan assembly fully assembled, ready to receive MCBs, RCCBs and Isolators. Suitable to install MCBs of several manufacturers with 18mm pole pitch. The Distribution boards can be ordered using the below Order Code format.



Order Codes and Dimensions of DESLoad DISTRIBUTION BOARDs



References: 125A Single Vertical Busbar DBs

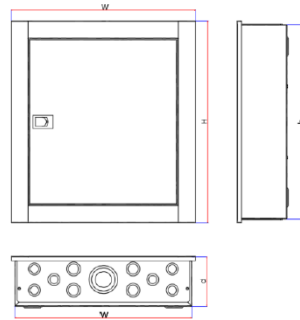
Type	Type of Mounting	No. of Ways	Part Ref.	Dimensions in mm				
				H	W	d	h	w
125A Vertical Type DB	Flush	12	DESDBV312X125F	465	425	117	440	400
		18	DESDBV318X125F	570	425	117	545	400
		24	DESDBV324X125F	570	425	117	545	400
		30	DESDBV330X125F	685	425	117	660	400
		36	DESDBV336X125F	685	425	117	660	400
		42	DESDBV342X125F	735	425	117	710	400
		48	DESDBV348X125F	855	425	117	830	400
	Surface	54	DESDBV354X125F	855	425	117	830	400
		12	DESDBV312X125S	457	417	117	440	400
		18	DESDBV318X125S	562	417	117	545	400
		24	DESDBV324X125S	562	417	117	545	400
		30	DESDBV330X125S	677	417	117	660	400
		36	DESDBV336X125S	677	417	117	660	400
		42	DESDBV342X125S	727	417	117	710	400
		48	DESDBV348X125S	847	417	117	830	400
		54	DESDBV354X125S	847	417	117	830	400

References: 125A Split Vertical Busbar DBs

Type	Type of Mounting	No. of Split Ways	Part Ref.	Dimensions in mm				
				H	W	D	h	w
Split Type DB	Flush	06+06	DESDBS30606X125F	570	425	117	545	400
		06+12	DESDBS30612X125F	570	425	117	545	400
		12+12	DESDBS31212X125F	685	425	117	660	400
		12+18	DESDBS31218X125F	685	425	117	660	400
		12+24	DESDBS31224X125F	735	425	117	710	400
		18+18	DESDBS31818X125F	735	425	117	710	400
		12+30	DESDBS31230X125F	785	425	117	760	400
		18+24	DESDBS31824X125F	785	425	117	760	400
		12+36	DESDBS31236X125F	910	425	117	885	400
		18+30	DESDBS31830X125F	910	425	117	885	400
		18+36	DESDBS31836X125F	910	425	117	885	400
		Surface	06+06	DESDBS30606X125S	562	417	117	545
	06+12		DESDBS30612X125S	562	417	117	545	400
	12+12		DESDBS31212X125S	677	417	117	660	400
	12+18		DESDBS31218X125S	677	417	117	660	400
	12+24		DESDBS31224X125S	727	417	117	710	400
	18+18		DESDBS31818X125S	727	417	117	710	400
	12+30		DESDBS31230X125S	777	417	117	760	400
	18+24		DESDBS31824X125S	777	417	117	760	400
	12+36		DESDBS31236X125S	902	417	117	885	400
	18+30		DESDBS31830X125S	902	417	117	885	400
	18+36		DESDBS31836X125S	902	417	117	885	400

References: 250A Single Vertical Busbar DBs

Type	Type of Mounting	No. of Ways	Part Ref.	Dimensions in mm				
				H	W	d	h	w
250A Vertical Type DB	Flush	12	DESDBV312X250F	685	425	140	660	400
		18	DESDBV318X250F	685	425	140	660	400
		24	DESDBV324X250F	735	425	140	710	400
		30	DESDBV330X250F	785	425	140	760	400
		36	DESDBV336X250F	855	425	140	830	400
		42	DESDBV342X250F	975	425	140	950	400
		48	DESDBV348X250F	975	425	140	950	400
	Surface	12	DESDBV312X250S	677	417	140	660	400
		18	DESDBV318X250S	677	417	140	660	400
		24	DESDBV324X250S	727	417	140	710	400
		30	DESDBV330X250S	777	417	140	760	400
		36	DESDBV336X250S	847	417	140	830	400
		42	DESDBV342X250S	967	417	140	950	400
		48	DESDBV348X250S	967	417	140	950	400
		54	DESDBV354X250S	967	417	140	950	400

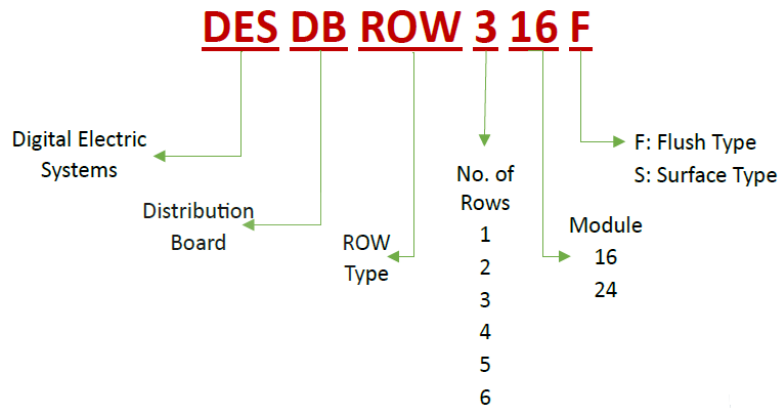


Note: 250A DBs are provided with MCCB Incomer as standard.

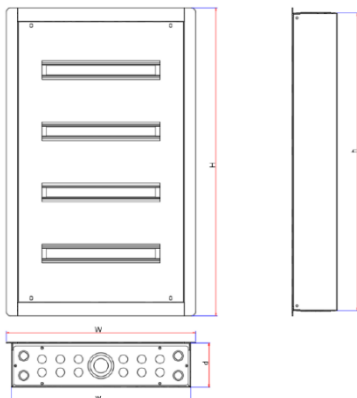
Order Code – Row Type DBs

Digital Electric Systems supplies the DESLoad range of LV Row type Distribution Boards (DB) for applications where the devices (MCBs, RCCBs, Isolators, etc) are installed on horizontally mounted DIN Rails. The devices are then interconnected using Comb busbars or cable connections. This type of configuration is applied in Dubai, Sharjah and Northern Emirates of UAE and other regions following European design for Final DBs.

The enclosure for the Row DBs follows the same specifications as the Busbar type DBs. The Row DBs are also type tested and certified in accordance with IEC 61439-1 standards having performed the relevant type tests such as Corrosion Resistance (Cl.10.2.2), Degree of protection (Cl.10.3), Mechanical impact (Cl.10.2.6), etc.



Order Codes and Dimensions of DESLoad ROW TYPE DISTRIBUTION BOARDs



Type	Type of Mounting	No. of Rows	Part Ref.	Dimensions in mm				
				H	W	d	h	w
Row Type DB Mod 16	Flush	1	DESDBROW116F	305	460	110	280	440
		2	DESDBROW216F	455	460	110	430	440
		3	DESDBROW316F	605	460	110	580	440
		4	DESDBROW416F	755	460	110	730	440
		5	DESDBROW516F	905	460	110	880	440
		6	DESDBROW616F	1055	460	110	1030	440
	Surface	1	DESDBROW116S	297	452	110	280	440
		2	DESDBROW216S	447	452	110	430	440
		3	DESDBROW316S	597	452	110	580	440
		4	DESDBROW416S	747	452	110	730	440
		5	DESDBROW516S	897	452	110	880	440
		6	DESDBROW616S	1047	452	110	1030	440
Row Type DB Mod 24	Flush	1	DESDBROW124F	305	600	110	280	580
		2	DESDBROW224F	455	600	110	430	580
		3	DESDBROW324F	605	600	110	580	580
		4	DESDBROW424F	755	600	110	730	580
		5	DESDBROW524F	905	600	110	880	580
		6	DESDBROW624F	1055	600	110	1030	580
	Surface	1	DESDBROW124S	297	592	110	280	580
		2	DESDBROW224S	447	592	110	430	580
		3	DESDBROW324S	597	592	110	580	580
		4	DESDBROW424S	747	592	110	730	580
		5	DESDBROW524S	897	592	110	880	580
		6	DESDBROW624S	1047	592	110	1030	580

Note: The DBs are of 16-Modules

Each Horizontal Din Rail Row can accommodate 16nos devices of 18mm width., i.e., 16nos x 1-Pole MCBs (or devices of equivalent dimensions). 24-Module DBs are also available with codes shown above.

The DBs have been type tested and certified for IP42 protection degree by DEKRA.

LV Components

.... MCB, RCBO, RCCB, Switch disconnectors

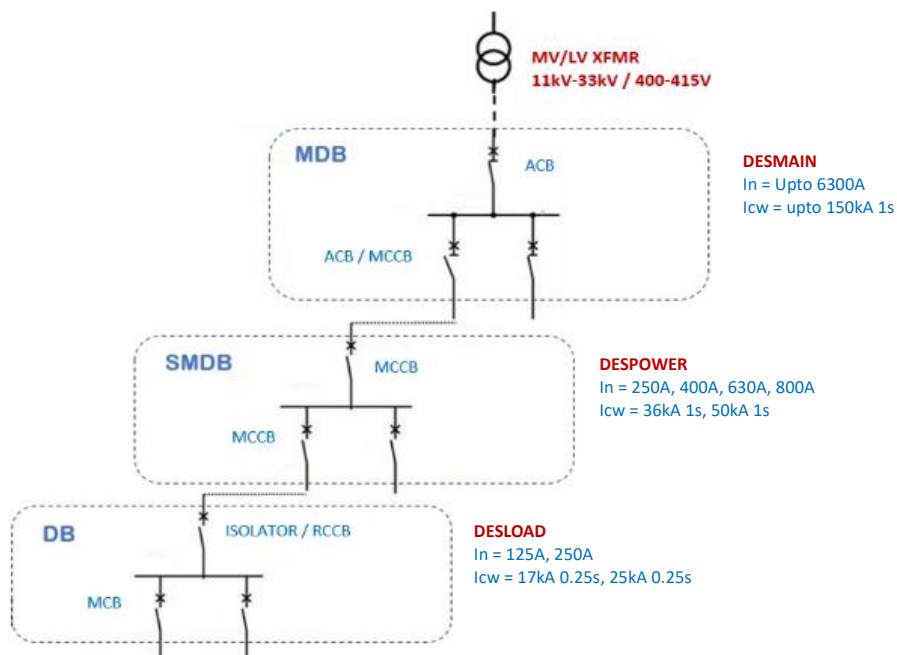
DESLoad DB's are suitable for installing LV components for Final Distribution such as MCBs, RCBOs, RCCBs, Switch disconnectors (Isolators), etc from several reputed manufacturers, some of which are shown below.



Note: DESLoad DBs are also suitable for other series of MCBs of 18mm width equipped with pin type bolt-on connection.

Fully Coordinated Solution

At Digital Electric Systems, we can go the extra mile to support in designing a Fully Coordinated solution (from MV/LV Transformer upto the Final DBs) that can help in ensuring Discrimination / Selectivity at all points in the LV network, thereby ensuring Continuity of Power Supply in the entire LV system.



Who we are

At Digital Electric Systems, our motivation is firmly rooted in the aspirations of our valued customers. Our ultimate objective is to consistently exceed their expectations by providing exceptional products and services, ensuring complete satisfaction of our customers.

Based within SAIF Zone, Sharjah, UAE, Digital Electric Systems FZE stands as a distinguished specialist in the field of Electrical Switchgear systems. With the backing of our principal manufacturing units located in the Far East, spanning more than 20,000 square meters, comprising of sheet metal manufacturing machinery using state-of-the-art CNC machines, fully automated powder coating lines, injection moulding machines for plastic parts, etc, we have the capacity and infrastructure to cater to the demanding needs of OEMs, Panel builders, etc across the Middle East and Africa regions.



Our association



..... and growing!

Stay connected all the time...Join us!

Write to us with your requirements for Low Voltage Switchgear solutions. We would be pleased to assist you on any of your technical queries on LV Switchgear particularly on compliance / type testing to IEC 61439, IEC 61641 standards, Utility regulations (ADQCC, ADDC, DEWA, SEWA, FEWA, KAHRAMAA, ASHGHAL, EWA/EDD Bahrain, MEW Kuwait, MEW Oman, etc.), Consultant specifications, etc.



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