

DATASHEET

Emax Link™ 2

UL 1558 recognized abbreviated switchgear



Enter the ever-growing low voltage switchgear market without the high overhead costs of labor, design and testing. The ABB Emax Link 2 UR 1558 structures provide a turnkey solution for OEMs and are designed and tested to UL 1558 standards. Emax Link 2 combined with SACE® Emax 2 circuit breakers provides advanced power distribution technology and helps enhance safety in a fast, flexible and cost-effective solution for the OEM low voltage switchgear market.

Safe

Emax Link 2 incorporates a variety of protection features. It has no ventilation openings in front of the equipment. Front and rear panels and doors are manufactured in 12GA or 14GA steel for NEMA Type 1 ratings and are tested and UL certified in compliance with ANSI standards.

Smart

Emax Link 2 is designed for modularity and flexibility. Each section of Emax Link 2 has been designed with horizontal splice plates for easy to install side-by-side line-ups. Doors and panels are all optional, allowing custom OEM designs. The modular design provides flexibility of line-up configurations applicable for a variety of applications.

Sustainable

Emax Link 2 has one of the smallest footprints in the market, offering the opportunity to install circuit breakers up to 2000A in 18", up to 3200A in 22" and up

to 5000A in 38" wide, 4 compartment high sections. It is available in optional depths of 72" and 84". Horizontal bus and vertical riser ratings are available from 2000A to 5000A in all section depths. This reduces space requirements and material usage.

Power management and connectivity

Emax 2's trip units are divided into two families: Ekip for distribution protection and Ekip G for generator protection. Exclusive functions such as the Ekip Power Controller and Network Analyzer complete the range, enabling power management and analysis of energy quality. The integrated IEC61850 communication module further enables connection to automation systems widely used in medium voltage power distribution to create intelligent networks (smart grids). All SACE® Emax 2 circuit breakers with Ekip Touch or Ekip Hi-Touch trip units can be equipped with communications for a variety of industrial protocols.

Product overview

Switchgear standards

- ANSI C37.20.1
- ANSI C37.51
- CSA C22.2, No. 31
- UL 1558/cUL

Circuit breaker standards

- ANSI C37.13
- ANSI C37.17
- ANSI C37.50
- UL 1066

Switchgear ratings

- 635V AC maximum
- Three-phase three-wire, three-phase four-wire
- 50/60 Hz
- 5000A maximum horizontal/vertical bus
- Silver plated copper bus as standard—optional tin plated copper
- Standard bus bracing 100kA
- NEMA 1 indoor

Circuit breaker ratings

- SACE® Emax 2 breakers sold separately
- E1.2 up to 1200A, 65/42kA at 508/635V
- E2.2 up to 2000A, 100/85kA at 508/635V
- E4.2 up to 3200A, 100/100kA at 508/635V
- E6.2 up to 5000A, 100/100kA at 508/635V
- Emax 2 UL Technical Catalog Document No. 1SXU200040C0201

Switchgear standard features

- ANSI 61 paint color (smooth finish)
- Glastic (GPO-3) bus compartment barrier between connecting sections
- GPO-3 barriers between bus compartment and cable compartment
- Ground bus mounted at bottom of enclosure as standard with option for top mounting
- Built-in top and horizontal wireway for control wires
- Lifting provisions for overhead lifting
- Top or bottom cable entry with removable, steel floor plates over conduit area
- Mounting pans in each instrument compartment

Switchgear options and accessories

- Side covers
- Left hinged front doors
- Rear covers or left/right hinged rear doors
- Overhead device for breakers



Circuit breaker standard features

- Independent automatic shutters for upper/lower terminals to facilitate checking and maintenance operations
- Shutter lock for up to three 4mm/0.15"–8mm/1" padlocks
- Front-exchangeable trip units divided in two families:
 - Ekip for distribution protection
 - Ekip G for generator protection
- Ekip Power Controller function Ekip Touch trip units

Circuit breaker optional features

- Communication modules:
 - Bluetooth¹ wireless communication
 - IEC 61850
 - Modbus TCP
 - Modbus RS-485
 - Profibus
 - Profinet
 - DeviceNet
 - EtherNet/IP
- Several communications modules have the ability for simultaneous use as well as the use of redundant protocols. In addition to the above, Emax 2 circuit breakers offer a wide range of mechanical and electrical accessories.

¹The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by ABB is under license. Other trademarks and trade names are those of their respective owners.

Technical data

Construction—External view

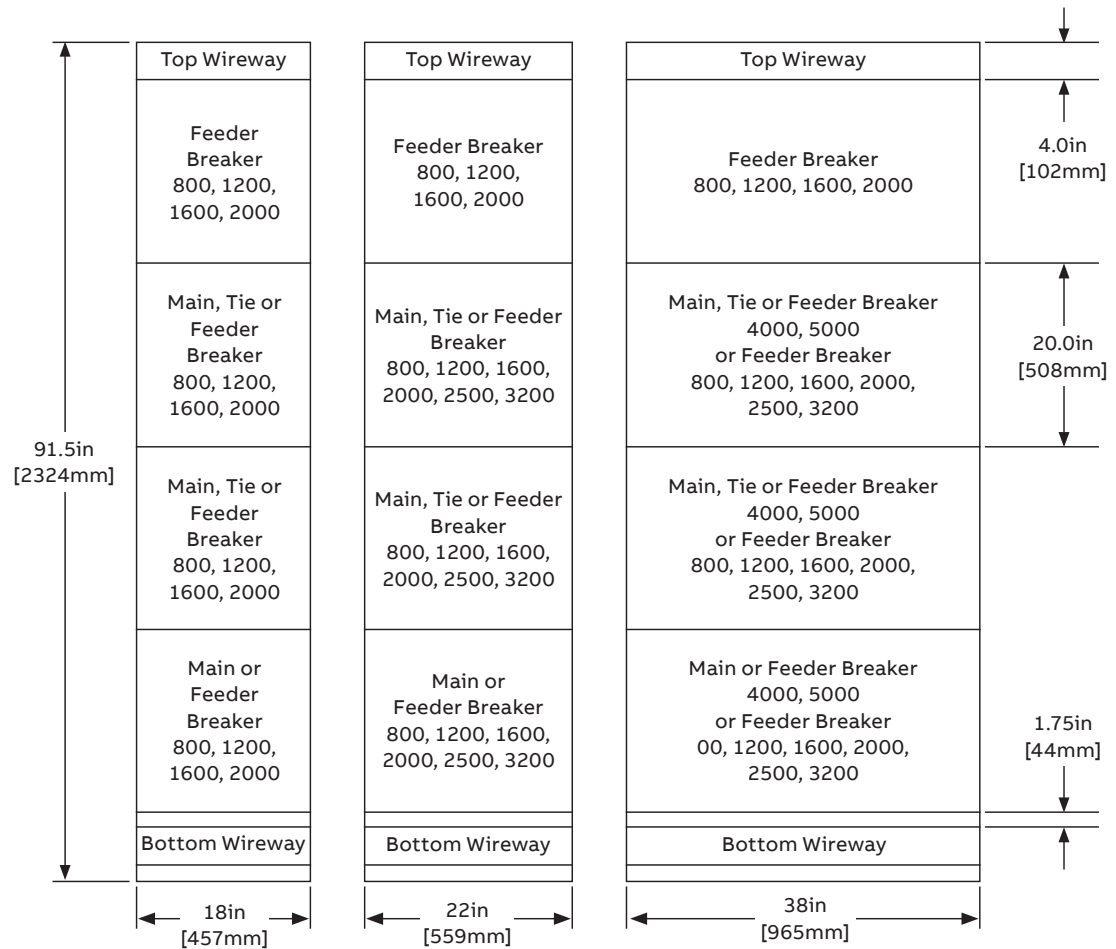
- 1 Top/bottom wireway for control wires
- 2 Front floors w/ left hinge (std) Right hinge optional
- 3 No ventilation in front of the equipment
- 4 Base channel (std)
- 5 No additional height due to hoods or ventilation stacks
- 6 Pry bar notches
- 7 Base channel with pry bar notches



Compartment door layouts

Top Wireway	Top Wireway	Top Wireway
A	AB	Full Section (Auxiliary)
B		
C		
D		
Bottom Wireway	Bottom Wireway	Bottom Wireway

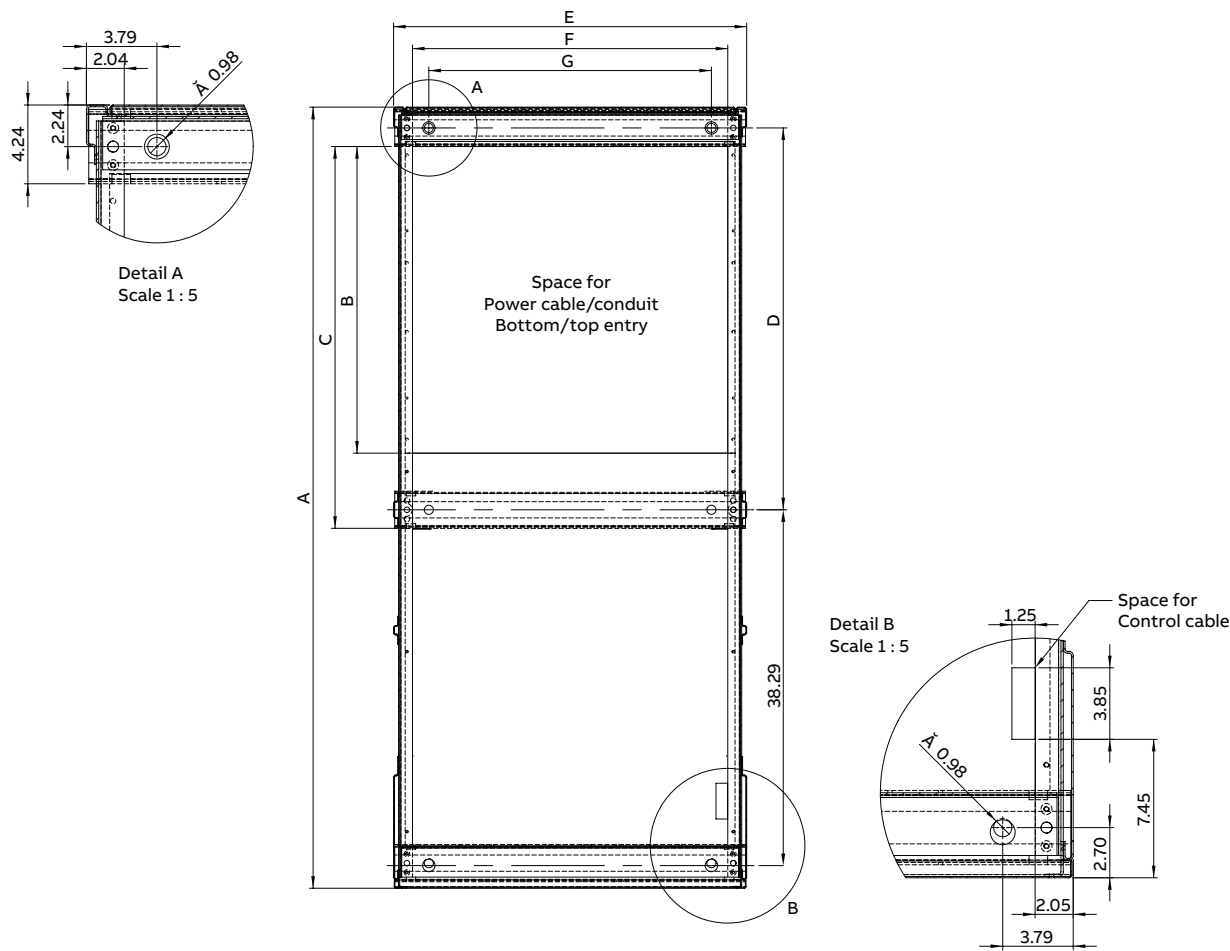
Breaker arrangements



Considerations

- All compartments can be used as an empty space or instrument compartment
- Compartment A only available up to 2000A
- Maximum of two 3200A circuit breakers in the same section or three in a main-tie-main configuration
- Tie breakers to be selected in B and C compartments only
- Top and bottom wireways height is 3.75" in all sections
- Base channel is built into the structure with a height of 1.750"

Cable compartment—conduit spacing



Section depth	Conduit space depth	Distance to bus compartment	Distance between base channels
A	B	C	D
72.00	21.00	29.00	29.10
84.00	33.00	41.00	41.10

Section width	Conduit space width	Distance between anchor holes
E	F	G
18.00	14.00	10.41
22.00	18.00	14.41
30.00	26.00	22.41
38.00	34.00	30.41

Notes: Not for construction, consult factory drawings for actual dimensions.
Verify that conduit space is adequate for the amount of breakers and cables in the section.

Construction—internal side view

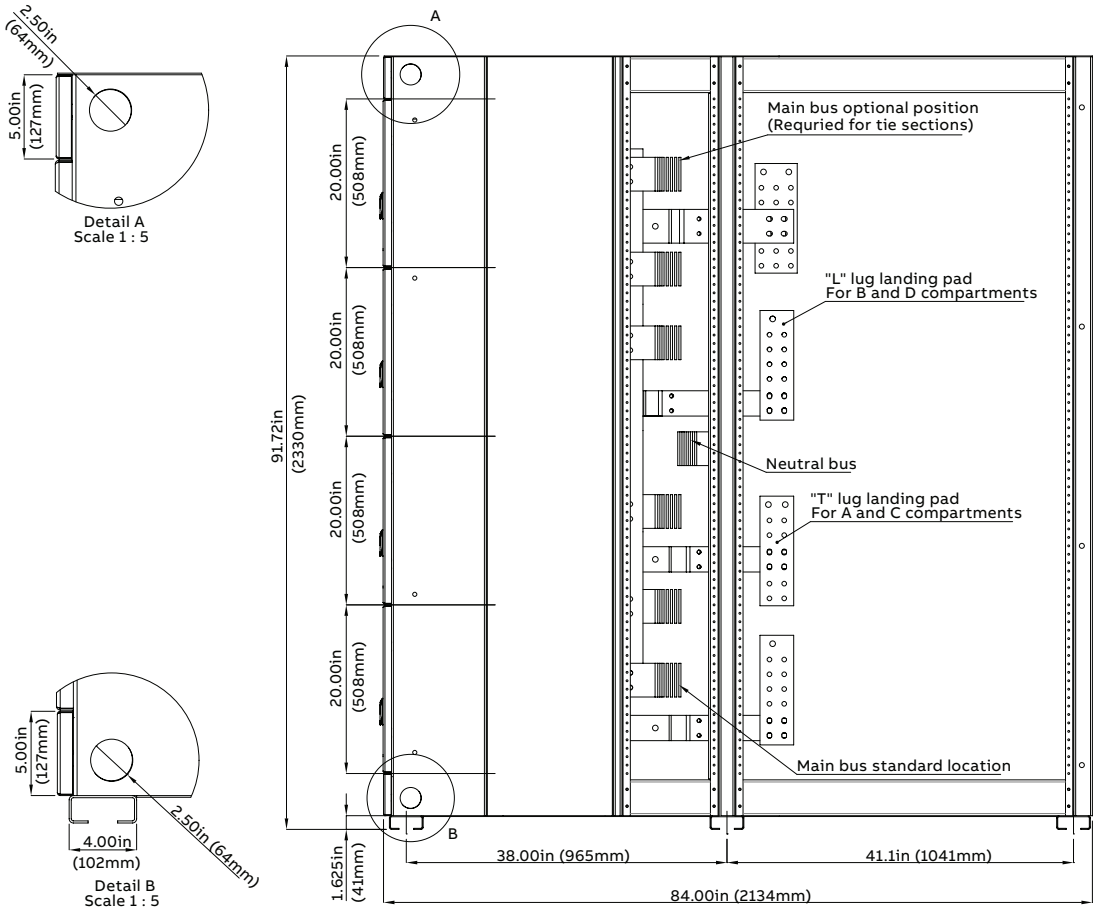




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