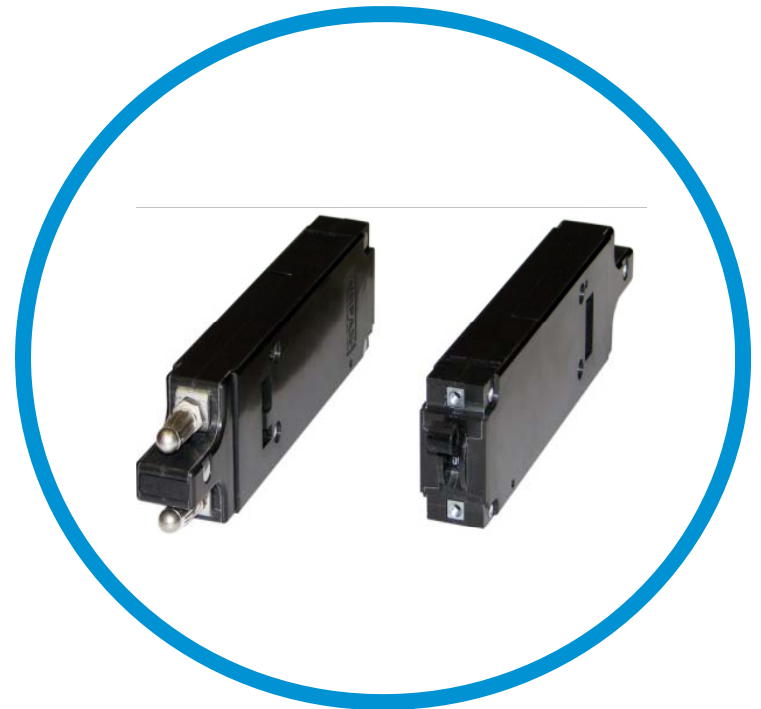




Sensata
Technologies

RACK UNITS



The World Depends on Sensors and Controls

Introduction

Sensata Technologies develops and manufactures high quality Airpax™ hydraulic-magnetic circuit breakers and power switches to protect your valuable equipment and personnel. Airpax™ hydraulic-magnetic circuit breakers are commonly used in the datacom, telecom and industrial markets. For instance in 1 rack unit high equipments.

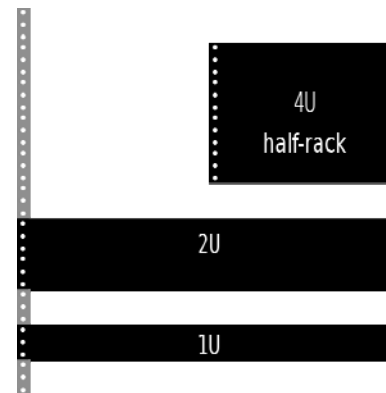
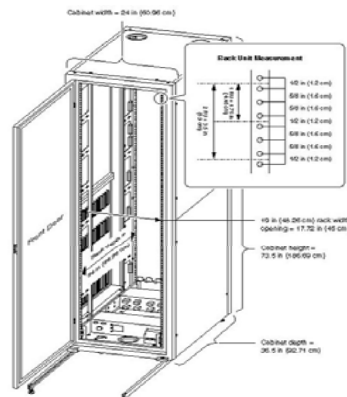
Application

A rack unit, U or RU is a unit of measure used to describe the height of equipment intended for mounting in a 19-inch rack or a 23-inch rack (The 19-inch or 23-inch dimension refers to the width of the equipment mounting frame in the rack i.e. the width of the equipment that can be mounted inside the rack). One rack unit is 1.75 inches (44.45 mm) high.

The size of a piece of rack-mounted equipment is frequently described as a number in "U". For example, one rack unit is often referred to as "1U", 2 rack units as "2U" and so on.

A typical full size rack is 44U, which means it holds just over 6 feet of equipment, and a typical "half-height" rack would be 18-22U, or around 3 feet high.

A front panel or filler panel in a rack is not an exact multiple of 1.75 inches (44.45 mm). To allow space between adjacent rack-mounted components, a panel is $\frac{1}{32}$ inch (0.031 inch or 0.79 mm) less in height than the full number of rack units would imply.



Application

The rack unit size is based on a standard rack specification as defined in EIA-310. The rack unit is also specified as the unit of height in the Eurocard standard, which also defines a similar unit, horizontal pitch (HP), used to measure the width of rack mounted equipment.

The reasons for using a Airpax™ 1RU circuit breaker are:

- Advancements in power electronics and other areas of technology have allowed for a significant decrease in the size of systems. Corresponding reductions in size have not occurred with respect to the distribution panels.
- One rack unit distribution is increasingly popular. Unfortunately, mounting standard magnetic-hydraulic circuit breakers horizontally results in loss of valuable circuit breaker positions and complex and more costly bussing solutions.
- The options for RU circuit protection products with the ratings required to provide adequate protection are limited.

The IER/CER series fits vertically into a one rack unit (1U or 1RU) high space and allows efficient bussing of multiple units. To fit the 1RU profile, larger circuit breakers must be mounted horizontally requiring more complex bussing and a reduction in the number of branch breakers per panel.

In many of today's applications, operating ambient temperatures are a major challenge and the operating characteristics of magnetic-hydraulic devices are much better suited. No de-rating is required.

The IER/CER series comes with optional alarm capability provided via an auxiliary switch built into the circuit breaker.

The DC rated IER/CER product is UL 489A Listed for DC applications and is suitable for use as a branch circuit breaker. This meets the requirements of EN60950 (data processing, equipment safety, safety measures, office equipment, data processing equipment, electrical equipment, electrical safety)

Features & benefits

Key features of the 1RU circuit breaker are:

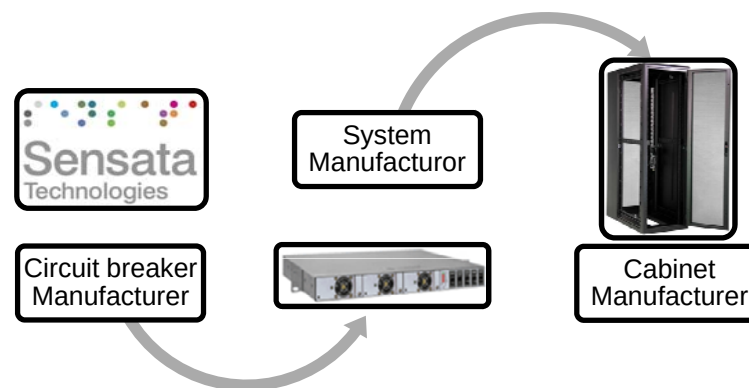
- UL1077, TÜV and UL489A approved
- Designed to fit in a 1RU application
- 5000 A.I.C. interrupt capacity (65/80VDC, 120/240VAC)
- Series or mid trip with auxiliary switch alarm options
- Various delays including motor start
- 1 to 2 poles, multiple termination options



Sensata Technologies has a long and proven experience in manufacturing these circuit breakers.

Market

The supply chain applicable to the Airpax™ hydraulic-magnetic circuit breakers used in rack units is represented below.



Other applications

- Telecom:
 - Small and medium DC power systems
 - Base transceiver stations (BTS)
 - Routers and switches
 - Optical Transport
 - Outside Plant
- Industrial
 - Inverters
 - Precision machining equipment
 - Semi-conductor processing equipment
- Information Processing
 - Servers
 - Computer systems
 - Mass storage systems



1RU Inverter