



SPECTRUM INDUSTRIES, INC.

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Model MCB.

Overview

MCB is a family developed by Spectrum Industries, able to maintain IEEE 0.15S Accuracy Class from 0.1% or 0.5% of rated current up to the determined Rating Factor (Extended-Range); based on Spectrum Industries' experience with similar products of Current Transformers for Watt-hour Metering Devices in the American market.

The selection of the appropriate core with low losses and high permeability in a UL94-V0 outdoor enclosure results in a competitive unit meeting the current needs in the energy market with competitive delivery time and cost.



Features

- Voltage Class: 600V
- Frequency: 60Hz
- Insulation level: 10kV BIL
- Accuracy: 0.15S per IEEE C57.13-6
From 0.1%/0.5% of rated current to RF
- Application: Indoor
- Flammability Enclosure: UL94-V0
- Class F Electrical Insulation components

Benefits

- Quick selection based on a few requirements
- Improve metering accuracy from low current and high burdens
- Reduce inventory levels

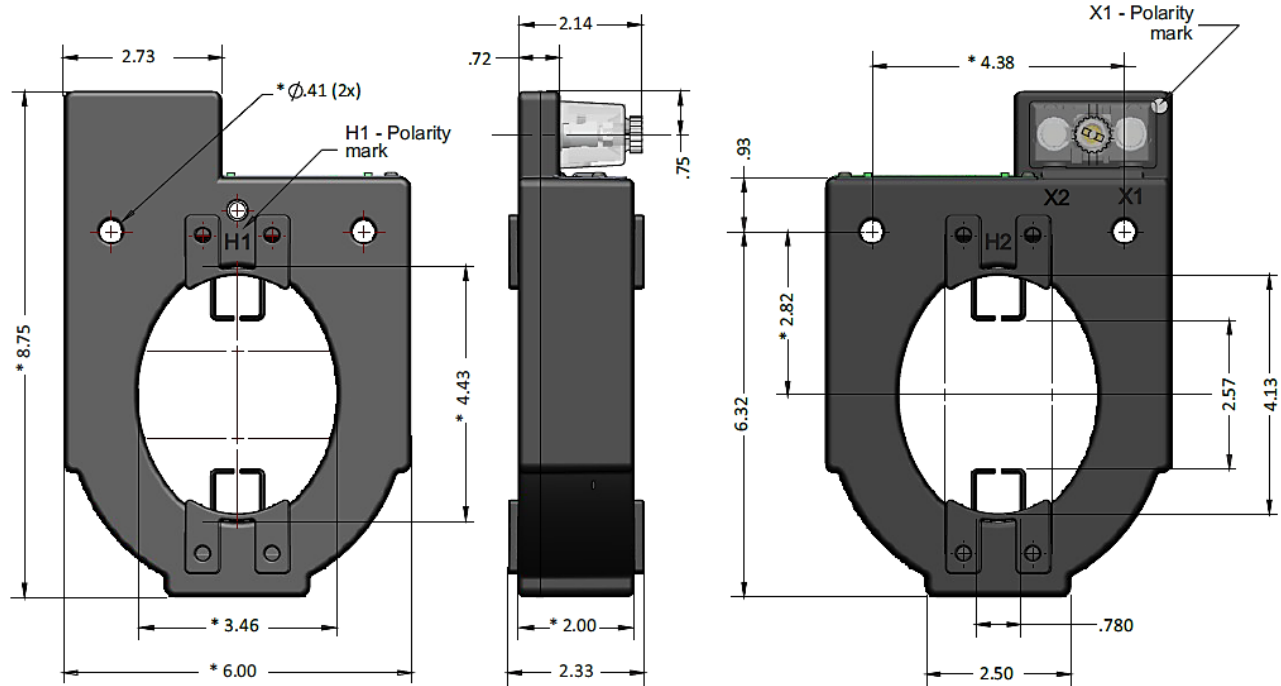
Unit selection

Spectrum Industries P/N	Current Ratio (amps)	Metering Accuracy (@ 60Hz)			Short-time Thermal current rating	Rating Factor (RF)		
		Class	% of rated current to RF (1)	Rated burden		30°C	55°C	85°C
MCB-500	500:5	0.15S	0.50	0.2	I _{th} =110 x I _p	4.0	3.0	2.0
MCB-600	600:5	0.15S	0.10	0.5	I _{th} =90 x I _p	3.0	2.5	2.0
MCB-800	800:5	0.15S	0.10	0.5	I _{th} =90 x I _p	3.0	3.0	2.5
MCB-1000	1000:5	0.15S	0.10	0.5	I _{th} =70 x I _p	2.5	2.0	2.0
MCB-2000	2000:5	0.15S	0.10	0.5	I _{th} =60 x I _p	2.0	1.5	1.5
MCB-4000	4000:5	0.15S	0.10	1.8	I _{th} =40 x I _p	1.2	1.0	1.0

(1) Where accuracy is guaranteed.

Weight: 4.40 lb. min- 6.00 lb. max.

Reference Drawings



Construction and Insulation

The winding assembly is mounted in the high-temperature plastic enclosure. The enclosure has been selected for outdoor applications: UV-stabilized, wide temperature (up to 155°C including temperature rise), low water absorption, and resistance to the most common chemicals.

Core and coil

The core has been carefully selected, using high permeability and low-loss material; locked in a strong core box, able to withstand the winding pressure and hold the high permeability after being wound.

The coil is built with strong copper magnet wire, capable of resisting several years in the field.

Terminals

The terminals are tin-plated brass materials; 0.275" diameter cross-holes for a typical ¼-28 clamp screw.

The unit is supplied with a shorting device and interlocked to the terminal cover.

Polarity

H1 and X1 indicate the polarity for the primary and secondary respectively, reinforced with a white point.

Nameplate

A laser-engraved aluminum nameplate is used to identify key electrical parameters for each unit.

Maintenance

Occasionally, to avoid dust accumulation.

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