

AC Watt & VAR Switchboard Meters Yokogawa AB40 Replacements

MCS Series

- Rugged, Durable Construction
- Readable Even from Sharp Angles
- Accurate to Within $\pm 1\%$ of Full Scale
- Transformer Rated
- UL Recognition (optional)



MCS ▲

SPECIFICATIONS

In accordance with ANSI Specifications C39.1

Accuracy	$\pm 1\%$ of FS basic accuracy class
Burden	Voltage circuit: <4.5 VA; Current circuit: <2 VA
Operating Temperature Range	0–40°C (32°F–104°F)
Dielectric Level	2,300VAC for 1 minute between circuit & case
Overload Rating	Voltage circuits—1.2x continuous; Current circuits—1.2x continuous, 10x for 0.5 seconds
Response Time	3 seconds maximum
Position of Use	Vertical (scale)
Full Scale Deflection	250°
Case	Drawn steel with black powder coat
Mounting/Terminal Studs	1/4"x28 thread / 10-32 thread
Size (H x W x Depth)	4.33" x 4.33" x 4.5"
Barrel (cutout)	4.03"
Full Scale Length	6.9"

Varmeters are usually zero-centered and scaled for half the scale value of the accompanying wattmeters. Example: If the Wattmeter is scaled 0-100 kilowatts, the Varmeter is scaled 50-0-50 kilovars.

VAR METER ORDERING INFORMATION

Amperes	Volts	Scale	Cat. No.
Single Phase/2-Wire, 1-Element, Transformer Rated, 60 Hz			
5	120	†	103 31□A...
3-Phase/3-Wire, 2-Element, Transformer Rated, 50/60 Hz (Cannot Use with External Phase Shifter)			
5	120	†	103 28□A...
3-Phase/4-Wire, 3-Element, Transformer-Rated, 50/60 Hz (Cannot Use External Phase Shifter)			
5	69	†	103 29□F...
5	120	†	103 29□A...
5	208	†	103 29□R...
5	277	†	103 29□Y...

† Order by description. Specify CT (Current Transformer) and/or PT (Potential Transformer) ratios if used and scale desired.

□ Sixth digit signifies pointer deflection (1-zero left, 2-zero center).

WATT METER ORDERING INFORMATION

AC Wattmeters Non-Isolated (cannot be use with external phase shifter for VARs)

Amperes	Volts	Scale	Cat. No.
Single-Phase/2-Wire, 1-Element, Transformer-Rated, 50/60 Hz			
5	120	+	103 21□A.....
3-Phase/3-Wire, 2-Element, Transformer-Rated, 50/60 Hz			
5	120		103 22□A.....
5	240	+	103 22□C.....
5	480		103 22□D.....
3-Phase/4-Wire, 3-Element, Transformer-Rated, 50/60 Hz (voltage balanced)			
5	69		103 25□F.....
5	120	+	103 25□A.....
5	208		103 25□R.....
5	277		103 25□Y.....

+ Order by Description. Specify CT (Current Transformer) and/or PT (Potential Transformer) Ratios if Used, and Scale Desired.

□ Sixth Digit Signifies Pointer Deflection (1-Zero Left, 2-Zero Center)

OPTIONS (WHERE APPLICABLE)

Custom Scaling

Nonstandard Ranges