



**"Plug-and-play", compact tachometer... large display with backlighting**

**( 0xx11 ) 3858-9911**

The A103 Tachometers provide high-visibility readout of motor, machine shaft or other RPM, yet are extremely compact in overall size. Its dedicated function design makes installation and operation direct and easy. The A103 series also includes matching indicators for count totalization, elapsed time indication, and rate metering, as well as models with a preset output for control by count or time. All are in a uniform 36 x 72 millimeters bezel size package, enhancing your control panel with a family of devices that look and program alike.

A supertwist LCD display with thick 12mm (.47") high digits allows for easy viewing at a glance and feature display-backlight capability by simply connecting an external 12VDC supply.

Powered by a long-life internal 3 volt battery, the A103 requires no external voltage source to operate. Signal input from a Dynapar brand magnetic pickup, also requiring no power connection, creates a complete "powerless" speed measurement system.

- Matching totalizing and preset counters, elapsed time indicators, preset timers, and advanced feature rate indicators look great together on a panel
- High visibility 4-digit LCD display with backlighting capability standard
- Long life 3 Volt lithium battery eliminates the need for external power
- "Magnetic" input accepts signals from inexpensive, non-powered sensors
- Option modules provide additional functionality and added convenience – fast, easy installation
- NEMA 4/IP65 rated front panel for use in washdown environments

The A103 is further enhanced by a series of quick-attach option modules. These can provide a power supply for sensors and display backlighting, and accept high or low voltage AC or DC input signals.

## SPECIFICATIONS

**Magnetic Input:** Capacitive coupled; 10 kHz (50% duty cycle); 0.2V peak (28 VDC max)

**High Speed Input:** PNP or square wave pulse; 10 kHz max (50% duty cycle), 45 µsec min pulse width; Low State: < 1.0 VDC, High State: > 2.0 VDC (28VDC max)

**Low Speed Input:** NPN, Contact Closure; 30 Hz max (50% duty cycle), 12 ms min pulse width; Low State: < 1.0 VDC, High State: > 2.0 VDC (28VDC max)

**Calibration:** Not required. Display of RPM is based on 60 pulse-per-revolution input signal

**Power Source:** Single or dual 3V Lithium battery; typical 5 years life w/single battery, 10 years w/dual batteries

**Display:** 12mm high, Supertwist LCD; 4 digits; "Low Bat" indicator

**Backlighting:** Green illumination over whole viewable area. Requires 10 to 28 VDC power source

**Dimensions & Mounting:** See dimensions figure. Panel Mount with supplied mounting bracket and gasket

**Connections:** Screw terminals

**Operating Temperature:** +32° to +131 °F (0° to +55°C)

**Weight:** Approximately 64 grams (2.25 ounces)

## OPTION MODULE SPECIFICATIONS

Option modules accessories provide a convenient integrated solution to applications that require AC or high voltage DC signals, and/or a voltage source for use with the A103's display backlight feature or external. Specifications for each option module feature follow, while specific combinations of features are listed in the "Models" table, below.

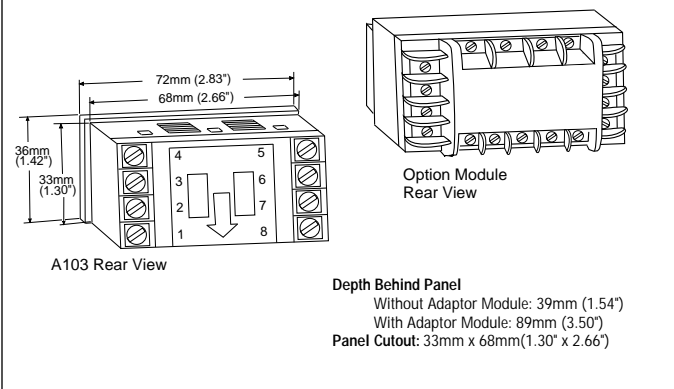
**High Voltage Input:** Allows A103 to accept 100 to 260 Volt AC/DC as signal input

**Low Voltage Input:** Allows A103 to accept 15 to 30 VAC or VDC as signal input

**AC Power Supply:** Provides 10 - 20 VDC @ 50mA for display backlighting and/or sensor. Requires connection to 115 or 230 VAC, 50/60 Hz

Model No.	Description		
A103-003	A103 Tachometer		
<b>The following option modules attach to the rear of the A103 Tachometers:</b>			
Model No.	AC Power Supply	Low Voltage Input	High Voltage Input
A103-A12	X		
A103-A17		X	
A103-A19	X	X	
A103-A10			X
A103-A14	X		X

## Dimensions:





**Input scaling to measure any rate or speed... large display with backlighting**

**( 0xx11 ) 3858-9911**

The A103 Programmable Rate Meters are extremely compact indicators providing high-visibility readout of virtually any rate: *gallons/minute, feet/minute, parts/hour, etc.* Easy to program input-scaling, decimal point, and "dummy-zero" features assure maximum flexibility for any application. The A103 series also includes matching indicators for count totalization, elapsed time indication, simple speed display (RPM) as well as models with a preset output for control by count or time. All are in a uniform 36 x 72 millimeters bezel size package, enhancing your control panel with a family of devices that look and program alike.

A supertwist LCD display with thick 12mm (.47") high digits allows for easy viewing at a glance and feature display-backlight capability by simply connecting an external 12VDC supply.

Powered by a long-life internal 3 volt battery, the A103 requires no external voltage source to operate. A complete non-powered rate measurement system can be achieved by using signal input from a Dynapar brand magnetic pickup.

- Matching totalizing and preset counters, elapsed time indicators, preset timers, and advanced feature rate indicators look great together on a panel
- High visibility 4-digit LCD display with programmable decimal point and "dummy zero". Backlighting capability standard
- Input scale multiplier (.001 to 9999) calibrates input signal to correct engineering unit
- Long life 3 Volt lithium battery eliminates the need for external power
- "Magnetic" input accepts signals from inexpensive, non-powered sensors
- Option modules provide additional functionality and added convenience – fast, easy installation
- NEMA 4/IP65 rated front panel for use in washdown environments

The A103 indicators are further enhanced by a series of quick-attach option modules. These can provide a power supply for sensors and display backlighting, and accept high or low voltage AC or DC input signals.

## SPECIFICATIONS

**Magnetic Input:** Capacitive coupled; 10 kHz (50% duty cycle); 0.2V peak (28 VDC max)

**High Speed Input:** PNP or square wave pulse; 10 kHz max (50% duty cycle), 45 µsec min pulse width; Low State: < 1.0 VDC, High State: > 2.0 VDC (28VDC max)

**Low Speed Input:** NPN, Contact Closure; 30 Hz max (50% duty cycle), 12 ms min pulse width; Low State: < 1.0 VDC, High State: > 2.0 VDC (28VDC max)

**Calibration:** Input scale multiplier, programmable from 0.001 to 9999

**Power Source:** Single or dual 3V Lithium battery; typical 5 years life w/single battery, 10 years w/dual batteries

**Display:** 12mm high, Supertwist LCD; 4 digits w/selectable decimal point and "dummy zero" 5th digit; "Low Bat" indicator

**Backlighting:** Green Illumination over whole viewable area. Requires 10 to 28 VDC power source

**Dimensions & Mounting:** See dimensions figure. Panel Mount with supplied mounting bracket and gasket

**Connections:** Screw terminals

**Operating Temperature:** +32° to +131 °F (0° to +55°C)

**Weight:** Approximately 64 grams (2.25 ounces)

## OPTION MODULE SPECIFICATIONS

Option modules accessories provide a convenient integrated solution to applications that require AC or high voltage DC signals, and/or a voltage source for use with the A103's display backlight feature or external. Specifications for each option module feature follow, while specific combinations of features are listed in the "Models" table, below.

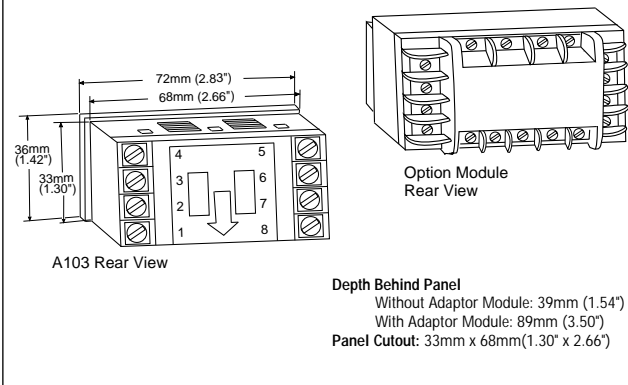
**High Voltage Input:** Allows A103 to accept 100 to 260 Volt AC/DC as signal input

**Low Voltage Input:** Allows A103 to accept 15 to 30 VAC or VDC as signal input

**AC Power Supply:** Provides 10 - 20 VDC @ 50mA for display backlighting and/or sensor. Requires connection to 115 or 230 VAC, 50/60 Hz

Model No.	Description		
A103-004	A103 Programmable Rate Meter		
<b>The following option modules attach to the rear of the A103:</b>			
Model No.	AC Power Supply	Low Voltage Input	High Voltage Input
A103-A12	X		
A103-A17		X	
A103-A19	X	X	
A103-A10			X
A103-A14	X		X

## Dimensions:



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*Scaled measurement of rate or speed – plus totals... large display with backlighting*

**( 0xx11 ) 3858-9911**

The A103 Rate Meters with Totalizer are extremely compact indicators providing high-visibility readout of virtually any rate: *gallons/minute, feet/minute, parts/hour, etc.* – plus a total count. Easy to program input-scaling, decimal point, and "dummy-zero" features assure maximum flexibility for any application. The A103 series also includes matching indicators for count totalization, elapsed time indication, simple speed display (RPM) as well as models with a preset output for control by count or time. All are in a uniform 36 x 72 millimeters bezel size package, enhancing your control panel with a family of devices that look and program alike.

A supertwist LCD display with thick 12mm (.47") high digits allows for easy viewing at a glance and feature display-backlight capability by simply connecting an external 12VDC supply.

Powered by a long-life internal 3 volt battery, the A103 requires no external voltage source to operate.

- Matching totalizing and preset counters, elapsed time indicators, preset timers, and advanced feature rate indicators look great together on a panel
- High visibility LCD, 4-digit rate and 8-digit totals display with programmable decimal point and "dummy zero". Backlighting capability standard
- Dual input scale multipliers for independent engineering unit calibration of rate and total
- Available with calibrated pulse output (A103-009)
- Long life 3 Volt lithium battery eliminates the need for external power
- Option modules provide additional functionality and added convenience – fast, easy installation
- NEMA 4/IP65 rated front panel for use in washdown environments

The A103 indicators are further enhanced by a series of quick-attach option modules. These can provide a power supply for sensors and display backlighting, and accept high or low voltage AC or DC input signals.

## SPECIFICATIONS

**High Speed Input:** PNP or square wave pulse; 10 kHz max (50% duty cycle), 45  $\mu$ sec min pulse width; Low State: < 1.0 VDC, High State: > 2.0 VDC (28VDC max)

**Low Speed Input:** NPN, Contact Closure; 30 Hz max (50% duty cycle), 12 ms min pulse width; Low State: < 1.0 VDC, High State: > 2.0 VDC (28VDC max)

**Calibration:** Independent programmable input scale multipliers for rate (range: 0.001 to 9999) and totals (range: 0.0001 to 99.9999). Additional calibrator for pulsed output (model A103-009), see below.

**Pulsed Output:** Model A103-009 only. Isolated Photomos relay; 0.1 amp @ 30 VAC/DC, >50 $\Omega$  on resistance. Independent programmable calibrator scales input pulse rate by multiplier of 0.0000 to 0.9999

**Power Source:** Single or dual 3V Lithium battery; typical 5 years life w/single battery, 10 years w/dual batteries

**Display:** 12mm high, Supertwist LCD; 4 digits w/selectable decimal point and "dummy zero" 5th digit; "Low Bat" indicator

**Backlighting:** Green illumination over whole viewable area. Requires 10 to 28 VDC power source

**Dimensions & Mounting:** See dimensions figure. Panel Mount with supplied mounting bracket and gasket

**Connections:** Screw terminals

**Operating Temperature:** +32° to +131 °F (0° to +55°C)

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## OPTION MODULE SPECIFICATIONS

Option modules accessories provide a convenient integrated solution to applications that require AC or high voltage DC signals, and/or a voltage source for use with the A103's display backlight feature or external. Specifications for each option module feature follow, while specific combinations of features are listed in the "Models" table, below.

**High Voltage Input:** Allows A103 to accept 100 to 260 Volt AC/DC as signal input

**Low Voltage Input:** Allows A103 to accept 15 to 30 VAC or VDC as signal input

**AC Power Supply:** Provides 10 - 20 VDC @ 50mA for display backlighting and/or sensor. Requires connection to 115 or 230 VAC, 50/60 Hz

Model No.	Description		
A103-005	A103 Rate Meter & Totalizer		
A103-009	A103 Rate Meter & Totalizer w/Pulse Output		
<b>The following option modules attach to the rear of the A103 :</b>			
Model No.	AC Power Supply	Low Voltage Input	High Voltage Input
A103-A12	X		
A103-A17		X	
A103-A19	X	X	
A103-A10			X
A103-A14	X		X

## Dimensions:

