

Aptus Automation

A5003-M1

User Manual

Notice before start-up

Please confirm the specification of instrument is to totally with your requirement before using it, also read this manual in detail.



Danger

Danger! Electric Shock!

DON'T touch AC power wiring terminals when instrument has been powered! Keep the power off until all of the wirings are completed!



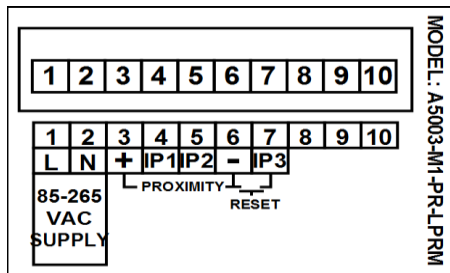
Warning

- 1) Please confirm the AC power wiring to instrument is correct, otherwise it would be caused aggravated damage on instrument.
- 2) Be sure to use the rated power supply, otherwise it would be caused aggravated damage on instrument.
- 3) Please confirm wires are connected with correct terminal (Power, Input and Output).
- 4) Avoid installing instrument in following spaces:
 - I. A place where the ambient temperature may reach beyond the range from 0 to 50°C
 - II. A place where the ambient humidity may reach beyond the range from 20 to 90% RH.
 - III. A place where the instrument likely to come into contact with water, oil, chemicals, steam and vapor.
 - IV. A place where the instrument is subject to interface with static electricity, magnetism and noise.
- 5) For proximity input, use shield compensating lead wire.

TECHNICAL SPECIFICATIONS

Product Name : LPRM Indicator (LPRM → Length / Pulse / RPM / MPM).
Model No. : A5003-M1-PR-LPRM
Input : Pulses through Proximity (NPN/PNP)/Limit Switch/Push button.
Display : 4 digits (4" INCH) RED seven segment display
Power Supply : 230VAC ± 10%, 50Hz.

A5003-M1 (380x175x70) Terminal Wiring



INPUT TYPE	A5003-M1
230V AC Power	Terminal 1 & 2
NPN Pulse Input	Short Terminal 3 & 4, Terminal 3 (+Ve), 5 (NPN Signal) & 6 (-Ve)
PNP Pulse Input	Short Terminal 6 & 5, Terminal 3 (+Ve), 4 (PNP Signal) & 6(-Ve)
Reset Input	Terminal 6 & 7 (Potential Free contact)

PARAMETER SETTING MENU

- Press SET Key till 1 sec to enter in this menu. [Parameter list will appear according selected counter.]
- Use UP and SHIFT key to change value, set current parameter and press SET key, to save and go to next parameter. To exit press Enter Key.

FOR LENGTH INDICATOR:

KEY	DISPLAY	FUNCTION	RANGE
SET	dIA	Diameter: This parameter is the Diameter. Set the value of diameter. Press SET Key. (This parameter is available only if F.Set is set to Enable.)	-
SET	318.4	Using UP Key & SHIFT Key set the parameter value according to your requirement.	000.1~999.9 (mm)
SET	FCtr	Factor Value: This is the Factor parameter used to in Counting of input Pulse. (This parameter is available only if F.Set is set to Enable.)	-
SET	1.000	Using UP Key & SHIFT Key set the parameter value according to your requirement.	0.001~9.999

FOR PULSE INDICATOR:

KEY	DISPLAY	FUNCTION	RANGE
SET	FCtr	Factor Value: This is the Factor parameter used to in Counting of input Pulse. (This parameter is available only if F.Set is set to Enable.)	-
SET	1.000	Using UP Key & SHIFT Key set the parameter value according to your requirement.	0.001~9.999

FOR MPM INDICATOR:

KEY	DISPLAY	FUNCTION	RANGE
SET	dIA	Diameter: This parameter is the Diameter. Press SET Key. (This parameter is available only if F.Set is set to Enable.)	-
SET	318.4	Using UP Key & SHIFT Key set the parameter value according to your requirement.	000.1~999.9 (mm)
SET	FCtr	Factor Value: This is the Factor parameter. This will multiply with running counts. (This parameter is available only if F.Set is set to Enable.)	-
SET	1.000	Using UP Key & SHIFT Key set the parameter value according to your requirement.	0.001~9.999

FOR RPM INDICATOR:

KEY	DISPLAY	FUNCTION	RANGE
SET	FCtr	Factor Value: This is the Factor parameter used to in Counting of input Pulse. (This parameter is available only if F.SET is set to Enable.)	-
SET	1.000	Using UP Key & SHIFT Key set the parameter value according to your requirement.	0.001~9.999

CONFIGURATION MENU:

- To enter in configuration menu, press SET+UP Key till 1 second. Configure all parameter as per your requirement.

KEY	DISPLAY	FUNCTION	RANGE
SET+UP	PASS	Password: This is the Password parameter used to configure device.	-
SET	0000	To go into configuration menu enter password value 808, then press ENTER key.	0~9999
ENTER	C.tYP	Counter type: To select the counter type of Indicator.	-
SET	LEnGth	Length: In this mode indicator will indicate the Total Length according to Diameter. Pulse: In this mode indicator will indicate the Total input Pulse. RPM: In this mode indicator will indicate the RPM of input Pulse. MPM: In this mode indicator will indicate the MPM (meter per minute) .	Length/ Pulse/ RPM/ MPM
SET	dP	Decimal Point: To select mode of decimal point. (This parameter is available if C.tYP is set to RPM or MPM)	-
SET	Auto	Auto: In this mode, the decimal point will be automatically shifted from 0.001 to 9999 Enable: In this mode, the decimal point is can be adjusted by user from rsln parameter. Disable: In this mode, the decimal point will be disabled from the display. (The Enable mode is available if C.tYP is set to RPM)	Auto/ EnabLE/ dIsAbL
SET	rSLn	Resolution: Set the resolution (decimal point) for Indicator value. (This parameter is available if C.tYP is set to LENGTH or RPM)	-
SET	9999	Using SHIFT Key set the resolution parameter according to your requirement. (For LENGTH indicator, this parameter range will be of 9999 / 999.9 only)	9999/ 999.9/ 99.99/ 9.999
SET	dIA	Diameter: This parameter is the Diameter. Set the value of diameter. (This parameter is available if C.tYP is set to LENGTH or MPM)	-
SET	318.4	Set the diameter value as per requirement.	000.1~999.9 (mm)
SET	FCtr	Factor: Set the Factor Value for input pulse count.	-
SET	1.000	Set the factor value as per requirement.	0.001~9.999
SET	F.SET	SET key Menu: This parameter is used for allowing factor & dia on SET key menu.	-
SET	EnAbLE	Enable – The dia & Factor parameter is allowed in SET key menu for configuration. Disable – The dia & Factor parameter is not allowed in SET key menu for configuration.	EnabLE/dIsAbL
SET	F.rSt	Front Reset (Key): This parameter is used to Enable/ Disable Front Reset Key to Reset counter. (This parameter is only available if C.tYP is set to LENGTH or PULSE)	-
SET	EnAbLE	Enable – reset by front reset key is enabled. Disable – reset by front reset key is disabled.	EnabLE/dIsAbL
SET	m.r.t.1	Manual reset time-1: Set a manual reset time to reset Running Pulse Or Running Length. To reset manually press RST/ENT key till m.r.t.1 second. (This parameter is only available if C.tYP is set to LENGTH or PULSE & F.rSt is set to Enable)	-
SET	02	Using UP Key & SHIFT Key set the parameter value according to your requirement.	01~99 sec
SET	SPEEd	Speed mode : Set the Speed mode as per requirement.	-
SET	FASt	Ultra-Low: used for RPM range < 500. Low: used for RPM range < 1500. Medium: used for RPM range < 5000. FAST: used for RPM range > 5000.	ULLOW/ Low / MEdiUm/ FAST

Keys & Terminal Function:

- [1] Length Indicator: External Reset (Back RST) ----- = to reset Total Length
Front Reset Key till manual reset time-1(m.r.t.1) ----- = to reset Total Length
- [2] Pulse Indicator: External Reset (Back RST) ----- = to reset Total Pulse
Front Reset Key till manual reset time-1(m.r.t.1) ----- = to reset Total Pulse

Working:

- [1] Length Indicator – Principle of operation > > >
Total Length = [3.14 x dia (mm) x Factor]/1000
- So the Total Length will be increased according to the set *diameter* and *factor*.
- [2] Pulse Indicator – Principle of operation > > >
- Running Counter Value will be increase with the input pulse.
- **Factor** is multiply with input pulse count, so final Total Counter Value will be increase according to the *factor*.
- [3] RPM Indicator – Principle of operation > > >
- RPM Value will be increase with the input pulse.
- **Factor** is multiply with input pulse count, so final RPM Value will be increase according to the *factor*.
- [4] MPM Indicator – Principle of operation > > >
Total Meter/Min = [3.14 x dia (mm) x Factor]/1000
- So the MPM Value will be increased according to the set *diameter* and *factor*.