

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.

TECHNICALSPECIFICATIONS

Product Name : LPRM Indicator (LPRM → Length / Pulse / RPM / MPM).

Model No. : A5003-X-PR-LPRM

Input : Pulses through Proximity (NPN/PNP)/Limit Switch/Push button.

Display : A5003-A: - 6 digits 0.56" RED seven segment display+ 4digits 0.39" GREEN seven segment display.

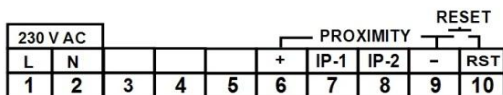
Power Supply : 230VAC ± 10%, 50Hz.

A5003-A (96mm x 96mm) & A5003-F (48mm x 96mm) Terminal Wiring

MODEL: A5003-A-PR-LPRM

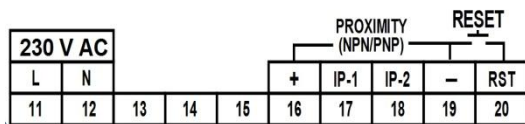
- L = LENGHT COUNTER
- C = PULSE COUNTER
- R = RPM
- M = MPM

APTUS
AUTOMATION

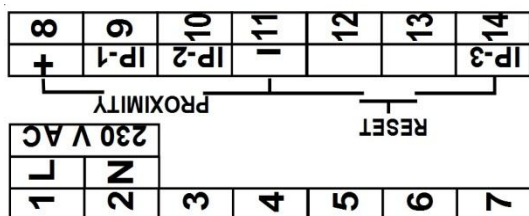


INPUT TYPE	A5003-A-PR-LPRM
230V AC Power	Terminal 1 & 2
NPN Pulse Input	Short Terminal 6 & 7, Terminal 6 (+Ve), 8 (NPN Signal) & 9 (-Ve)
PNP Pulse Input	Short Terminal 8 & 9, Terminal 6 (+Ve), 7 (PNP Signal) & 9(-Ve)
Reset Input	Terminal 9 & 10 (Potential Free contact)

NPN I/P = SHORT + & IP1, PROXIMITY CONNECTION = +, IP2,
PNP I/P = SHORT - & IP2, PROXIMITY CONNECTION = +, IP1,



INPUT TYPE	A5003-F-PR-LPRM
230V AC Power	Terminal 11 & 12
NPN Pulse Input	Short Terminal 16 & 17, Terminal 16 (+Ve), 18 (NPN Signal) & 19 (-Ve)
PNP Pulse Input	Short Terminal 18 & 19, Terminal 16 (+Ve), 17 (PNP Signal) & 19(-Ve)
Reset Input	Terminal 19 & 20 (Potential Free contact)



INPUT TYPE	A5003-D-PR-LPRM
230V AC Power	Terminal 1 & 2
NPN Pulse Input	Short Terminal 8 & 9, Terminal 8 (+Ve), 10 (NPN Signal) & 11 (-Ve)
PNP Pulse Input	Short Terminal 10 & 11, Terminal 8 (+Ve), 9 (PNP Signal) & 11 (-Ve)
Reset Input	Terminal 11 & 14 (Potential Free contact)

CONFIGURATION MENU

- To enter in configuration menu, press SET+UP Key till 1 second. Parameter will appear on display as shown below table.
- Configure all parameter as per your requirement.

KEY	DISPLAY	FUNCTION	RANGE
SET+UP	PASS	Password: This is the Password parameter used to configure device. Press SET Key.	-
SET	0000	To Go into configuration menu enter password value 808, then press ENTER key, and go to next parameter.	0~9999
ENTER	C.tYP	Counter type: To select the type of Indicator. You can select counter as a Length Indicator, Pulse indicator, RPM indicator or MPM Indicator. Press SET Key.	-
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) according to	Length/ Pulse/ RPM/ MPM
SET	dP	Decimal Point: To select mode of decimal point. Press SET Key. (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 below parameter. Disable: In this mode, the decimal point will be disabled from the display. Using UP Key change the dp mode according to your requirement. (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. Press SET Key. (This parameter is not available if C.tYP is set to MPM)	-
SET	9999.99	Using SHIFT Key set the parameter value according to your requirement. (For RPM indicator, this parameter range will be of four digits from 9.999 to 9999 only)	9.99999~999999
SET	FCtr	Factor: Set the Factor Value for input pulse count. Press SET Key. (This parameter is not available if C.tYP is set to Length or MPM)	-
SET	001.000	Using SHIFT Key set the parameter value according to your requirement.	000.001~999.999
SET	F.SET	Factor on SET key Menu: This parameter is used for allowing factor on SET key menu. (This parameter is not available if C.tYP is set to Length or MPM)	-
SET	EnAbLE	Enable – The Factor parameter is allowed in SET key menu for configuration. Disable – The Factor parameter is not allowed in SET key menu for configuration.	EnabLE/dIsAbL
SET	F.rSt	Front Reset (Key): This is the Front Reset parameter. This parameter is used to Enable or Disable the Front Reset Key to Reset the Value. (This parameter is not available if C.tYP is set to MPM)	-
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 not available if C.tYP is set to RPM or MPM)	-
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.	-
ENTER	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 .	UL.LOW/ Low / MEdiUm/ FAST

PARAMETER SETTING MENU

- To set parameters which are required to change frequently, go in parameter setting menu.
- Press SET Key till 1 sec to enter in this menu.
- Use UP and SHIFT key to change value, set current parameter and press SET key, to save and goes to next parameter.
- After last parameter first parameter will be repeated. To exit press Enter Key.
- So parameter list will appear according selected counter.

FOR LENGTH INDICATOR:

KEY	DISPLAY	FUNCTION	RANGE
SET	dIA	Diameter: This parameter is the Diameter. Set the value of diameter. Press SET Key.	-
ENTER	318.400	Using UP Key & SHIFT Key set the parameter value according to your requirement.	000.001~999.999 (mm)

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.)	-
ENTER	001.000	Using UP Key & SHIFT Key set the parameter value according to your requirement.	000.001~999.999

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.)	-
Enter	001.000	Using UP Key & SHIFT Key set the parameter value according to your requirement.	000.001~999.999

FOR MPM INDICATOR:

KEY	DISPLAY	FUNCTION	RANGE
SET	dIA	Diameter: This parameter is the Diameter. Set the value of diameter. Press SET Key.	-
ENTER	318.400	Using UP Key & SHIFT Key set the parameter value according to your requirement.	000.001~999.999 (mm)

Display Indication:**Power On display**

Length

**Run mode display**

Length indicator

Pulse



Pulse indicator

RPM



RPM indicator

MPM



MPM indicator

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:

This is the LPRM Indicator. Working is described below.

[1] Length Indicator – Principle of operation > > >

Total Length = [3.14 x dia (mm) x No. of Revolutions]/1000

- So the *Total Length* will be increased according to the set *Diameter* and *No. of Revolution*.**[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 RPM]/1000

- So the MPM Value will be increased according to the set *diameter* and *No. of Revolution*.