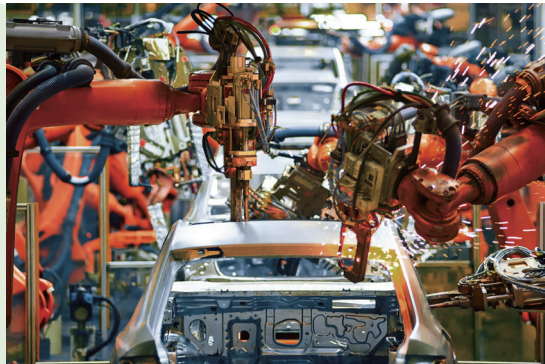



Application of industry

Automobile Automation




Laser Cutting



Wood and Metal Processing

Inkjet Printing



Solar Process Equipment

Pin Assignment

BiSS-C					
Function	Signal	Connector (Male) D-sub 15 Pin	Connector (Male) D-sub VGA 26 Pin	Connector (Male) D-sub 9 Pin	Flying Lead
Power Supply	+4.5V~28V DC	7	4	4	Brown
		8	5	5	Green
	GND	2	13	8	Gray
		15	14	9	White
Output Signal	SIN+	5	1	-	Yellow
	SIN-	10	10	-	Brown
	COS+	6	2	-	Green
	COS-	11	11	-	Brown
	MA+	3	7	2	White
	MA-	4	17	3	Yellow
	SLO+	13	23	6	Pink
	SLO-	14	24	7	Gray
Shield	Inner Shield	1	15	Case/Housing	Inner Shield
	Outer Shield	Case/Housing	Case/Housing		Outer Shield

H-code				
Function	Signal	Connector (Male) D-sub 15 Pin	Connector (Female) SCR 10 Pin	Flying Lead
Power Supply	+4.5V~28V DC	7	1	Brown
		8		Green
	GND	2		Gray
		15	2	White
Output Signal	PS+	3		Yellow
	PS-	4		Pink
Shield	Shielding	Case/Housing	Case/Housing	Shielding

HIWIN® MIKROSYSTEM

True absolute encoding system

Confirms the absolute position upon powering on

Protection IP68 rated

Waterproof, dustproof, and oil resistant



High position resolution and excellent repeatability

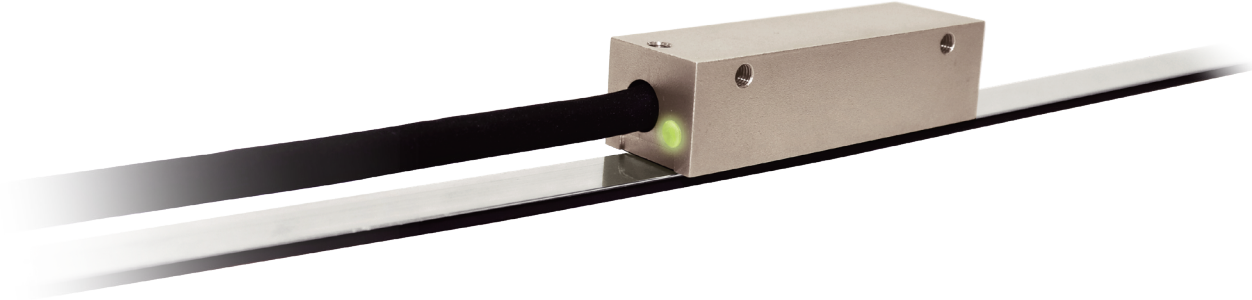
The minimum resolution of 1 µm and repeatability of ±1 µm

Easy to operate and install

LED state-assisted installation and full-stroke adaptation-free function

Highly compatible with major electronic control systems in the world

Connected with automation control systems of major brands, e.g. HIWIN MIKROSYSTEM E series, Beckhoff, Bosch drive.



HIWIN® MIKROSYSTEM

Global Sales And Customer Service Site

HIWIN MIKROSYSTEM CORP.
No.6, Jingke Central Rd.,
Taichung Precision Machinery Park,
Taichung 408211, Taiwan
Tel: +886-4-2355-0110
Fax: +886-4-2355-0123
www.hiwinmiko.tw
business@hiwinmiko.tw

HIWIN GmbH
OFFENBURG, GERMANY
www.hiwin.de
www.hiwin.eu
info@hiwin.de

HIWIN Schweiz GmbH
JONA, SWITZERLAND
www.hiwin.ch
info@hiwin.ch

HIWIN KOREA
SUWON · CHANGWON, KOREA
www.hiwin.kr
info@hiwin.kr

HIWIN USA
CHICAGO, U.S.A.
www.hiwin.com
info@hiwin.com

HIWIN s.r.o.
BRNO, CZECH REPUBLIC
www.hiwin.cz
info@hiwin.cz

HIWIN CHINA
SUZHOU, CHINA
www.hiwin.cn
info@hiwin.cn

HIWIN JAPAN
KOBE · NAGOYA · TOKYO · TOHOKU ·
NAGANO · SHIZUOKA · HOKURIKU ·
HIROSHIMA · FUKUOKA · KUMAMOTO,
JAPAN
www.hiwin.co.jp
info@hiwin.co.jp

HIWIN FRANCE
STRASBOURG, FRANCE
www.hiwin.fr
info@hiwin.de

HIWIN BULGARIA
SOFIA, BULGARIEN
www.hiwin.bg
info@hiwin.bg

HIWIN Srl
BRUGHERIO, ITALY
www.hiwin.it
info@hiwin.it

HIWIN SINGAPORE
SINGAPORE
www.hiwin.sg
info@hiwin.sg

APM Series

Absolute Position Measurement System

Features



- 1 True absolute encoding technology
- 2 Protection IP68 rated
- 3 Small volume
- 4 Resolution up to 1 μm
- 5 Repeatability up to $\pm 1 \mu\text{m}$
- 6 LED status assisted installation
- 7 Quick installation
- 8 Wide-range input voltage
- 9 Reverse voltage protection

APM Features

Specifications

System Data

Feature	Technical	Additional Information
Resolution	1 μm	-
Repeatability	$\pm 1 \mu\text{m}$	unidirectional
Maximum travel speed	7 m/s	BiSS-C@7 m/s; H-code@6 m/s
Maximum scale length	16.3 m	-
Pole pitch	2 mm	-
Hysteresis	$\pm 2 \mu\text{m}$	-
Gap	$0.5 \pm 0.3 \text{ mm}$	-
Accuracy	$\pm 20 \mu\text{m/m}$	20 °C

Electrical Data

Feature	Technical	Additional Information
Power supply	4.5~28 V	DC voltage
Set-up time after switch-on	11 ms	Only readhead
Current consumption	< 200 mA	When voltage input 5 V
Voltage drops	25 mV/m	-
Communication interface	BiSS-C/H-code	BiSS-C with analogy output
RoHS certified	Qualified	-

Environmental Data

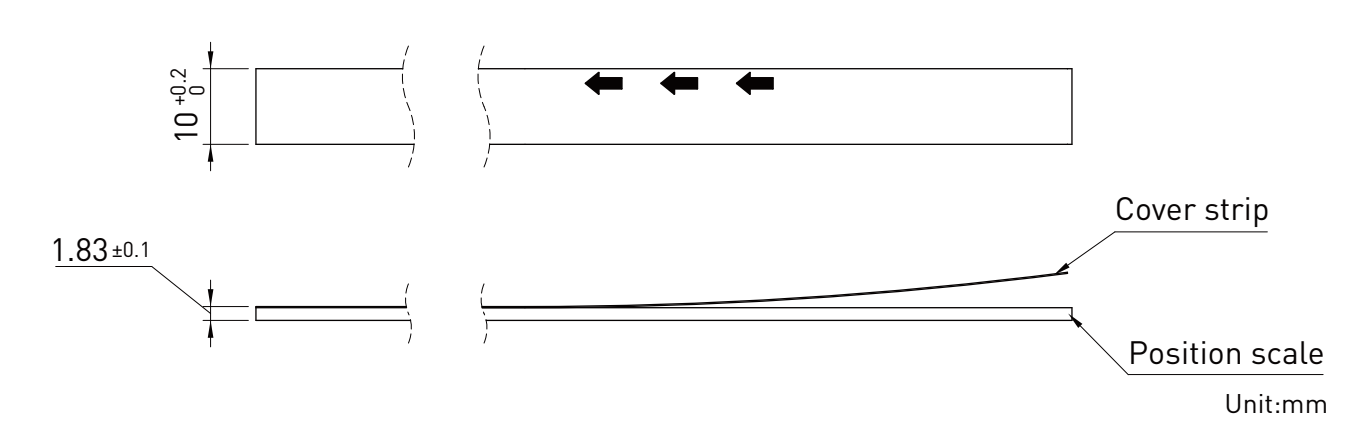
Feature	Technical	Additional Information
Operation temperature	-20°C ~ 60°C	-
Storage temperature	-20°C ~ 70°C	-
Relative humidity	0 to 100%	Condensation admissible
Protection category	IP 68	IEC60529
Vibration resistance	145 m/s ² (50 Hz~2000 Hz)	IEC60068-2-6
Shock resistance	1000 m/s ² (6 ms)	IEC60068-2-27
Maximum external magnetic field	$\pm 5 \text{ mT}$	-
EMC protection	EN61000-6-2 EN61000-6-4	-

Mechanical Data

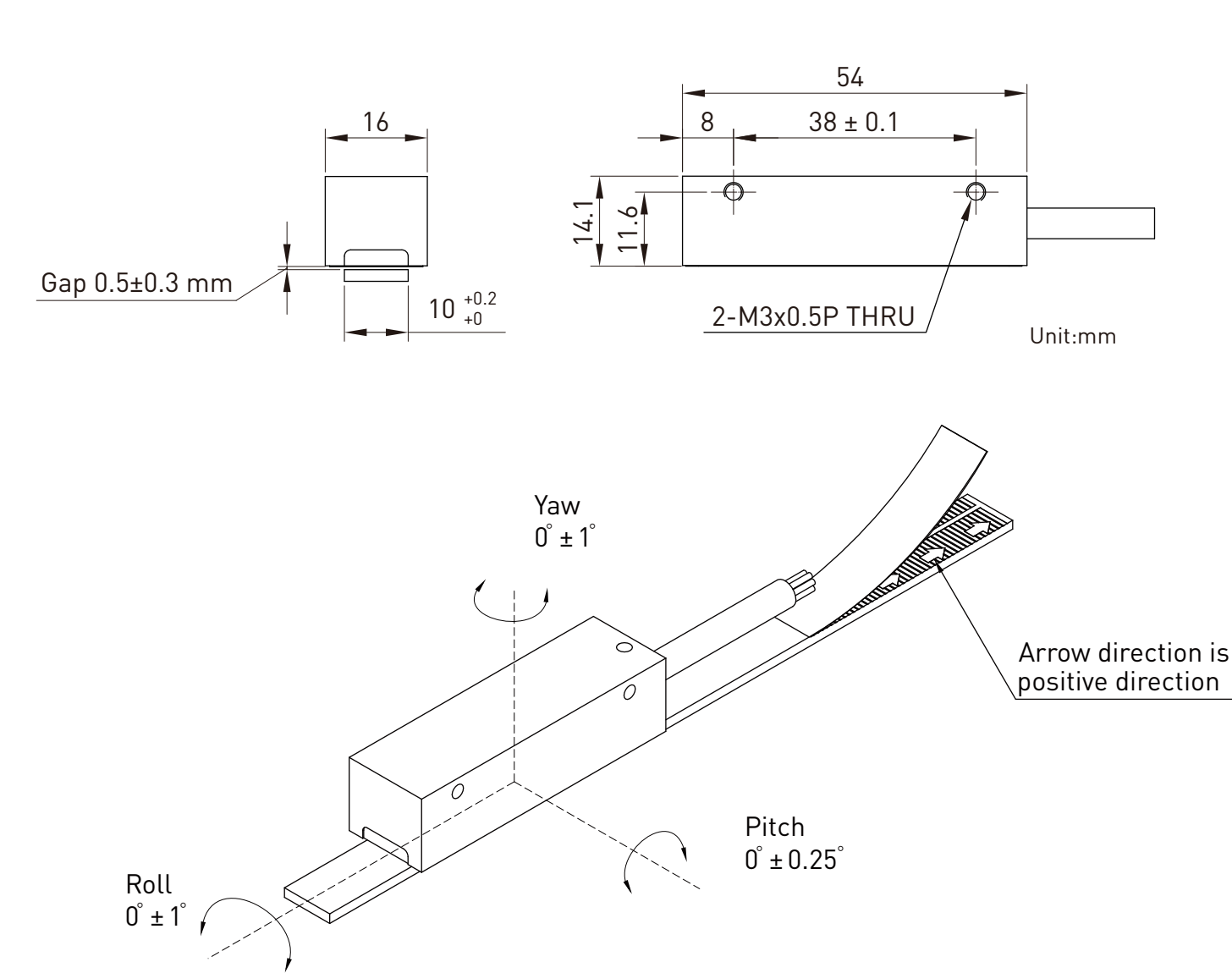
Feature	Technical	Additional Information
The mass of position scale	60 g	1 m
The width of position scale	10 mm	-
The thickness of position scale	1.83 mm	With cover strip
The mass of readhead	20 g	-

Dimension of APM

Scale



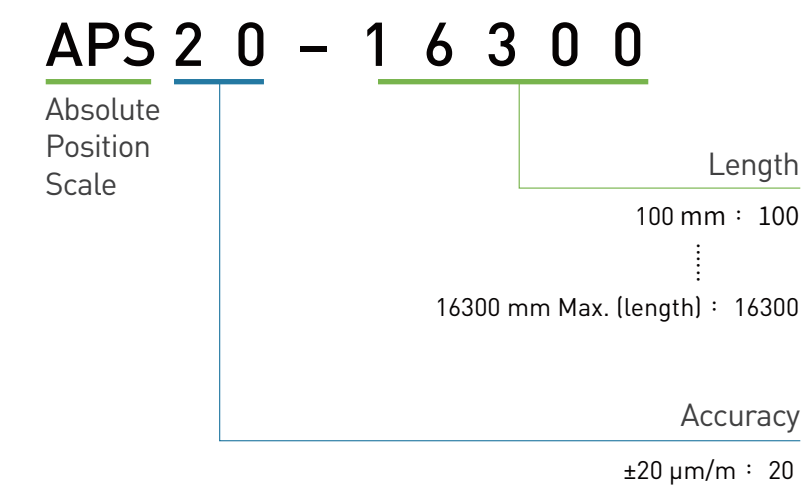
Readhead



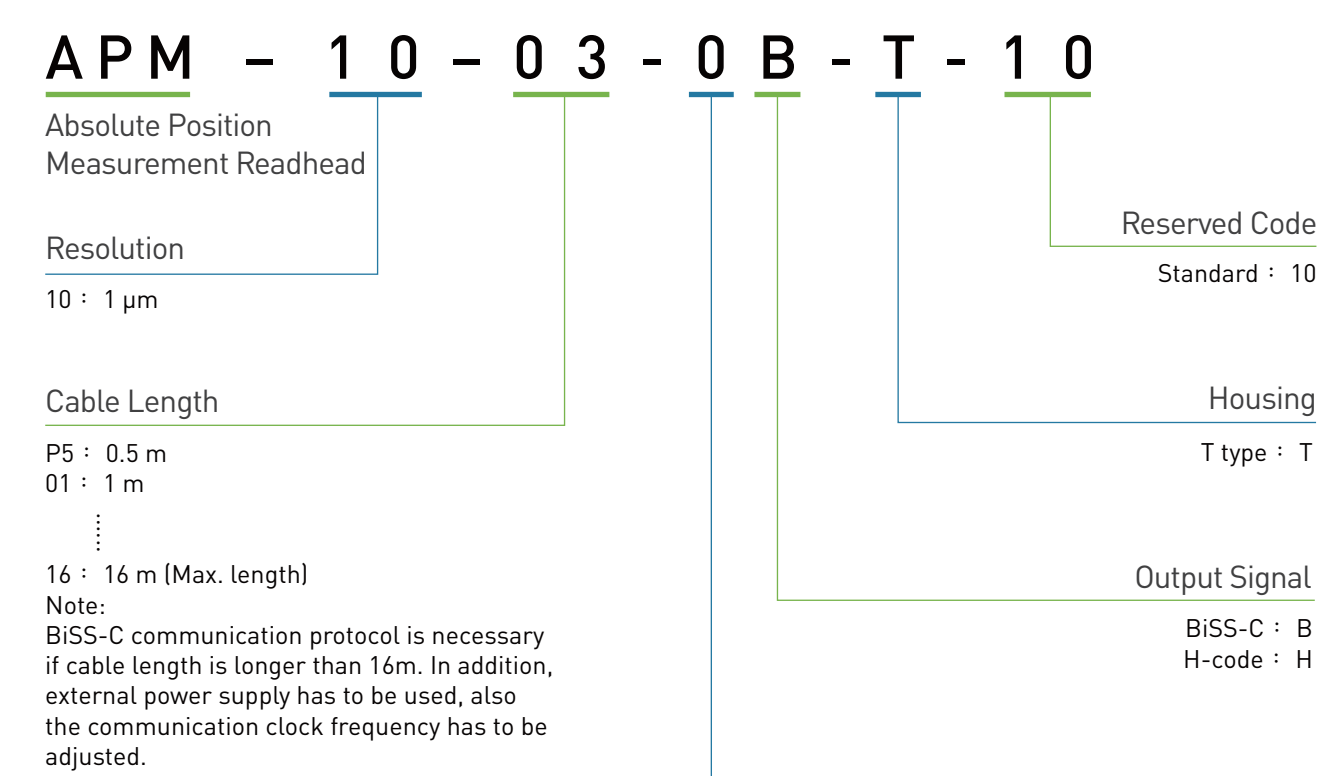
Reminder :
The output end of the absolute position measurement system is in the same direction as the arrow on the tape.

Model

Scale



Readhead



Connector Option

- 0 : Flying lead
 - 3 : D-sub 15 Pin
 - 7 : D-sub 9 Pin
 - 8 : SCR 10 Pin
 - 9 : D-sub VGA 26 Pin
- Note:
- 1. SCR 10 Pin only works with output signal H-code
 - 2. D-sub VGA 26 Pin only works with output signal BiSS-C
 - 3. D-sub 9 Pin works with output signal BiSS-C (without analog output)