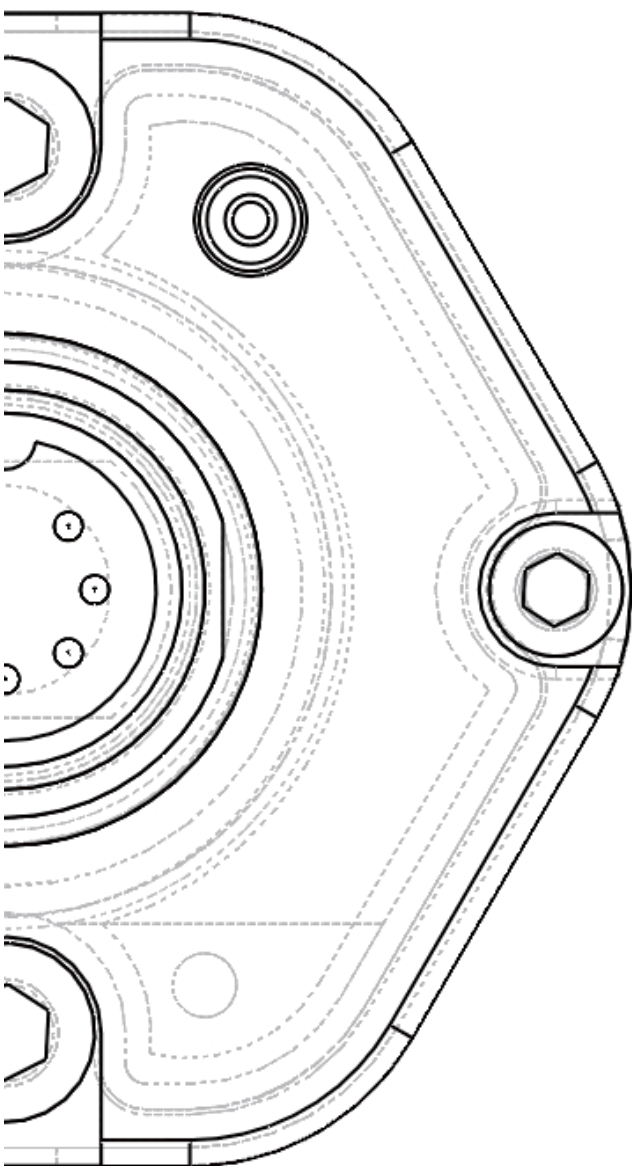


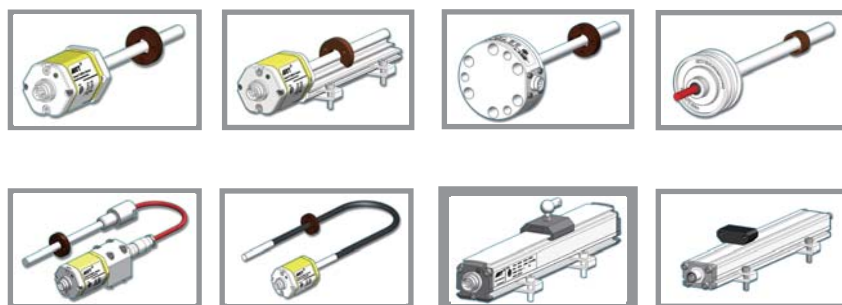
**AMT**<sup>®</sup>

线性位移传感器  
Linear Position Sensor

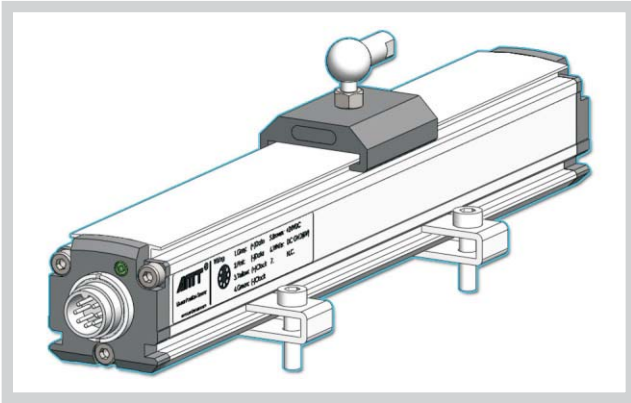


RF系列 - 选型手册

RF series - Product Catalog



# RS Series | analog output: 4~20mA, 0~20mA, 0~10V, -10V~+10V



- **Product features**
  - External installation, Easy to use
  - Absolute position output, No need to return to zero
  - Non-Contact Sensing with Highest Durability
  - High resolution, Analog output 16 bit D/A, Infinite resolution
  - Non-linearity is less than 0.01% of the range
  - Repeatability is higher than 0.001% of the range
  - Low-power consumption design, Effectively reduce the system wenpiao
  - Slider magnet with joint bearings, can bear the big lateral stress
  - Suspended magnet, The allowable maximum vertical clearance can reach 15mm

## ■ Technical Data

Project name	Data/Index
<b>Measurement parameters</b>	
Measuring range	50~4500mm
Out put	0~20mA ( min/max: 0/500 Ω )
	4~20mA ( min/max: 0/500 Ω )
	0~10V ( min > 5k Ω )
	-10~+10V ( min > 5k Ω )
Resolution	16 bit
linearity	< ±0.01% F.S. ( Minimum ±50 μm )
Repeatability	< ±0.002% F.S. ( Minimum ±2 μm )
Update time	0.5ms(ms < 1m ) 1.0ms(1m < ms < 2m )
	2.0ms(2m < ms < 4m ) 4.0ms(4m < ms < 7.6m )

## ■ Electrical characteristics

Leading-out mode	cable outlet or 6 pin connector
Input voltage	24VDC ( -15/+20% )
Current drain	< 50mA ( With the range of variation )
Polarity protection	up to -30VDC
Overvoltage protection	up to 36VDC
Electric strength	500V ( DC ground to machine ground )
Diagnostic display	LEDs beside connector

## ■ Design, material

Sensor head	built-in
Sensor stroke	Aluminium
Mounting flange	AISI 304

## ■ Installation

Mounting direction	any
Mounting mode	Screw mounted, M5x20 or User customization
Position magnet	V-magnet, M-magnet, N-magnet

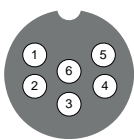
## ■ Operating conditions

Magnet speed	any
Operating temperature	-40°C ~ +85°C
Dew point/humidity	90%rel.humidity, no condensation
Temperature coefficient	< 30ppm/°C
Protection	IP65

## ■ Electrical connection

Analog output pin definition

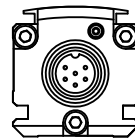
Pin	Cable	Function
1	Grey	( + ) Output
2	Pink	( - ) Output
3	Yellow	Prog.
4	Green	Com.
5	Brown	+24Vdc
6	White	DC GND ( 0 Vdc )



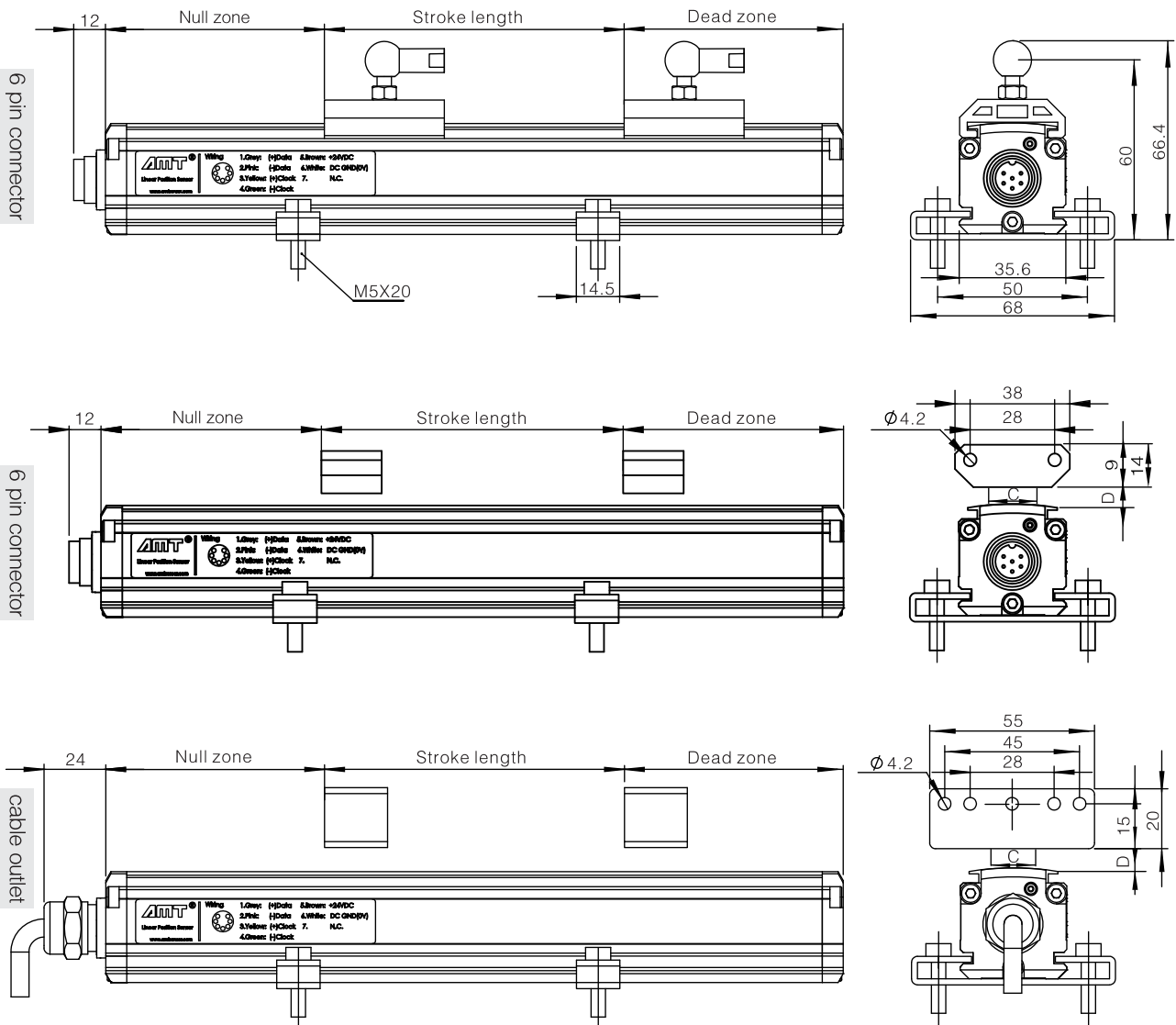
Male insert sensor plug rear of cable connector

## ■ Status indicator

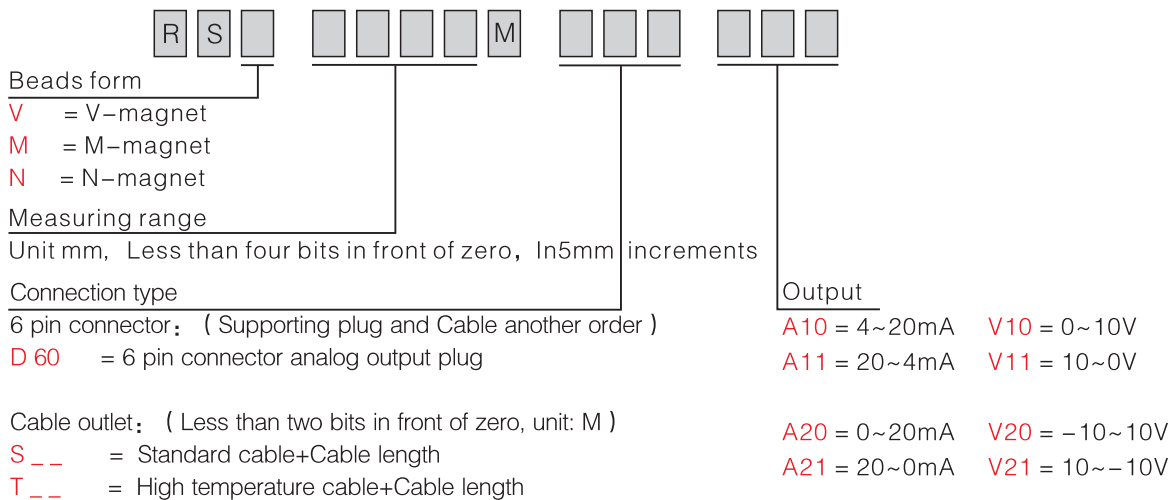
Indicator lamp status	Definition
The green on	Normal working
The green flashing	Program status
The red flashing	magnet out of effective range
The red on	magnet not detected or magnet damaged



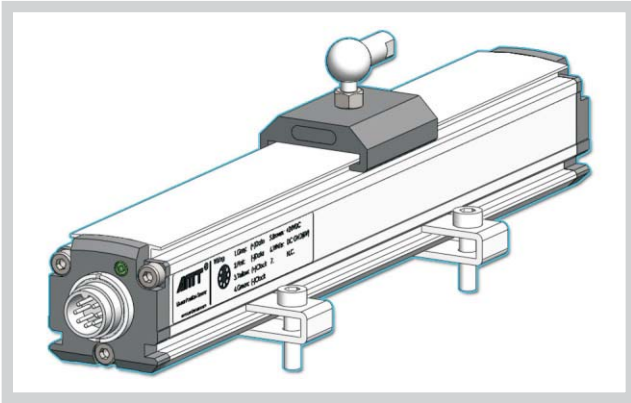
Outline dimensions



Style guide



# RS Series | SSI output: 24, 25, 26 bit binary or gray



### Product features

- External installation, Easy to use
- Absolute position output, No need to return to zero
- Non-Contact Sensing with Highest Durability
- High resolution, SSI output up to 2 μm
- Non-linearity is less than 0.01% of the range
- Repeatability is higher than 0.001% of the range
- Low-power consumption design, Effectively reduce the system power consumption
- Slider magnet with joint bearings, can bear the big lateral stress
- Suspended magnet, The allowable maximum vertical clearance can reach 15mm

### Technical Data

Project name	Data/Index
<b>Measurement parameters</b>	
Measuring range	50~4500mm
Out put	24、25、26 bit binary or gray
Data speed	70kBd~1MBd
	length: < 3 < 50 < 100 < 200 < 400 m
	rate: 1000 < 400 < 300 < 200 < 100 kBd
Resolution	2/5 / 10 / 20 / 50 / 100um
linearity	< ±0.01% F.S. (Minimum ± 40 μm)
Repeatability	< ±0.002% F.S. ( ± 1 bit )
Update time	length: 300 750 1000 2000 5000 mm
	rate: 3.7 3.0 2.3 1.2 0.5 kHz

### Electrical characteristics

Leading-out mode	cable outlet or 7 pin connector
Input voltage	24VDC ( -15/+20% )
Current drain	< 60mA ( With the range of variation )
Polarity protection	up to -30VDC
Overvoltage protection	up to 36VDC
Electric strength	500V ( DC ground to machine ground )
Diagnostic display	LEDs beside connector

### Project name Data/Index

### Design, material

Sensor head	built-in
Sensor stroke	Aluminium
Mounting flange	AISI 304

### Installation

Mounting direction	any
Mounting mode	Screw mounted, M5x20 or User customization
Position magnet	V-magnet, M-magnet, N-magnet

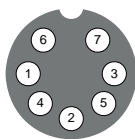
### Operating conditions

Magnet speed	any
Operating temperature	- 40°C ~ +85°C
Dew point/humidity	90%rel.humidity, no condensation
Temperature coefficient	< 15ppm/°C
Protection	IP65

### Electrical connection

SSI output pin definition

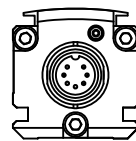
Pin	Cable	Function
1	Grey	( + ) Output
2	Pink	( - ) Output
3	Yellow	Prog.
4	Green	Com.
5	Brown	+24Vdc
6	White	DC GND ( 0 Vdc )
7		NC



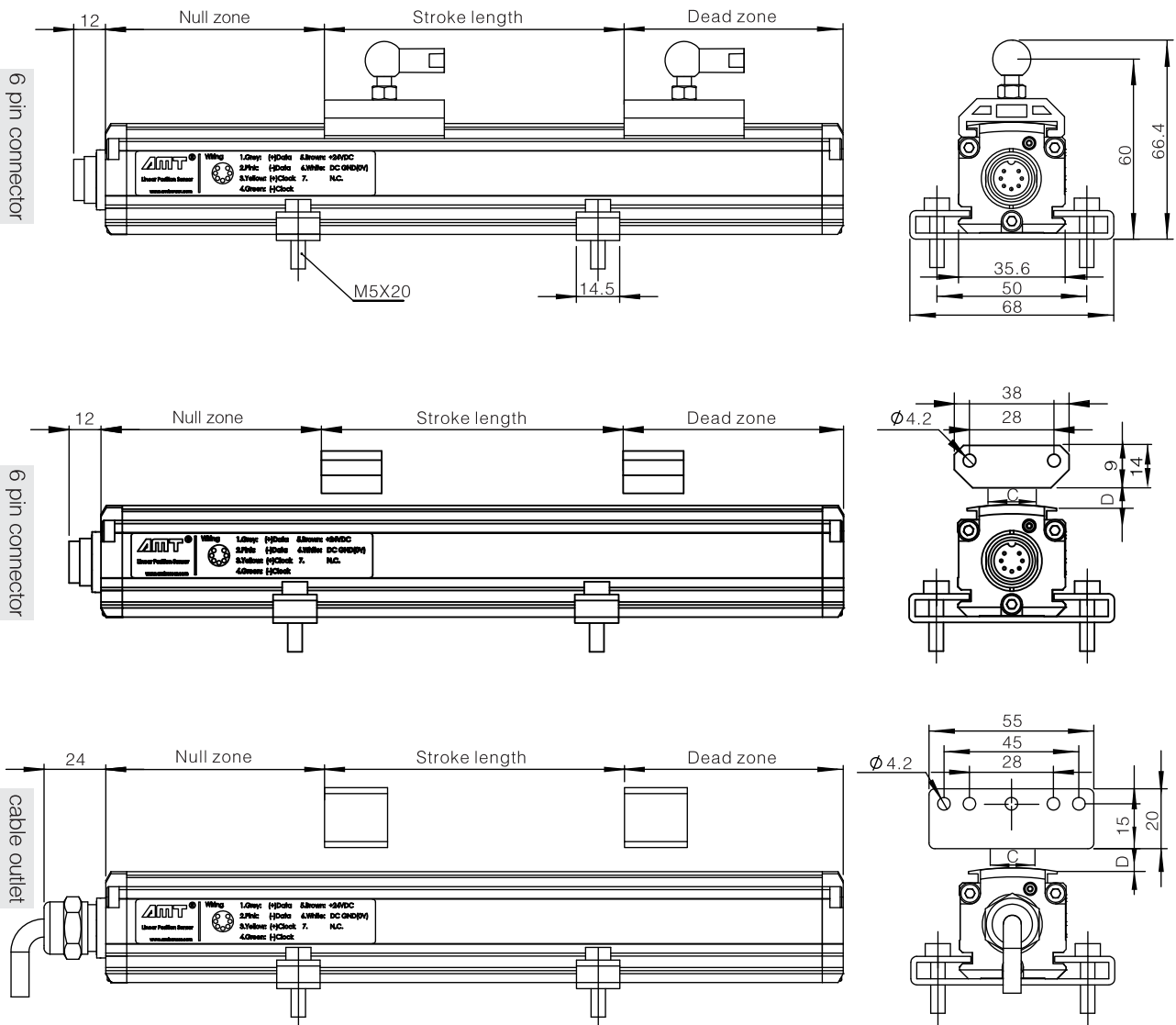
Male insert sensor plug rear of cable connector

### Status indicator

Indicator lamp status	Definition
The green on	Normal working
The green flashing	Program status
The red flashing	magnet out of effective range
The red on	magnet not detected or magnet damaged



Outline dimensions



Style guide

<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">R</div> <div style="border: 1px solid black; padding: 2px;">S</div> <div style="border: 1px solid black; padding: 2px;"> </div> <div style="border: 1px solid black; padding: 2px;"> </div> <div style="border: 1px solid black; padding: 2px;"> </div> <div style="border: 1px solid black; padding: 2px;"> </div> <div style="border: 1px solid black; padding: 2px;"> </div> <div style="border: 1px solid black; padding: 2px;">M</div> <div style="border: 1px solid black; padding: 2px;"> </div> <div style="border: 1px solid black; padding: 2px;"> </div> <div style="border: 1px solid black; padding: 2px;"> </div> <div style="border: 1px solid black; padding: 2px;">S</div> <div style="border: 1px solid black; padding: 2px;"> </div> <div style="border: 1px solid black; padding: 2px;"> </div> <div style="border: 1px solid black; padding: 2px;"> </div> </div>	<p><b>Beads form</b></p> <p>V = V-magnet</p> <p>M = M-magnet</p> <p>N = N-magnet</p> <p><b>Measuring range</b></p> <p>Unit mm, Less than four bits in front of zero, In5mm increments</p> <p><b>Connection type</b></p> <p>7 pin connector: ( Supporting plug and Cable another order )</p> <p>D 70 = 7 pin connector SSI output plug</p> <p><b>Cable outlet:</b> ( Less than two bits in front of zero, unit: M )</p> <p>S__ = Standard cable+Cable length</p> <p>T__ = High temperature cable+Cable length</p>	<p><b>Output direction</b></p> <p>0 = forward    1 = reverse</p> <p><b>Resolution</b></p> <p>2 = 0.002mm    5 = 0.02mm</p> <p>3 = 0.005mm    6 = 0.05mm</p> <p>4 = 0.01mm    7 = 0.1mm</p> <p><b>Data format</b></p> <p>1G = 25Bit Gray    1B = 25Bit Binary</p> <p>2G = 24Bit Gray    2B = 24Bit Binary</p> <p>3G = 26Bit Gray    3B = 26Bit Binary</p>
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