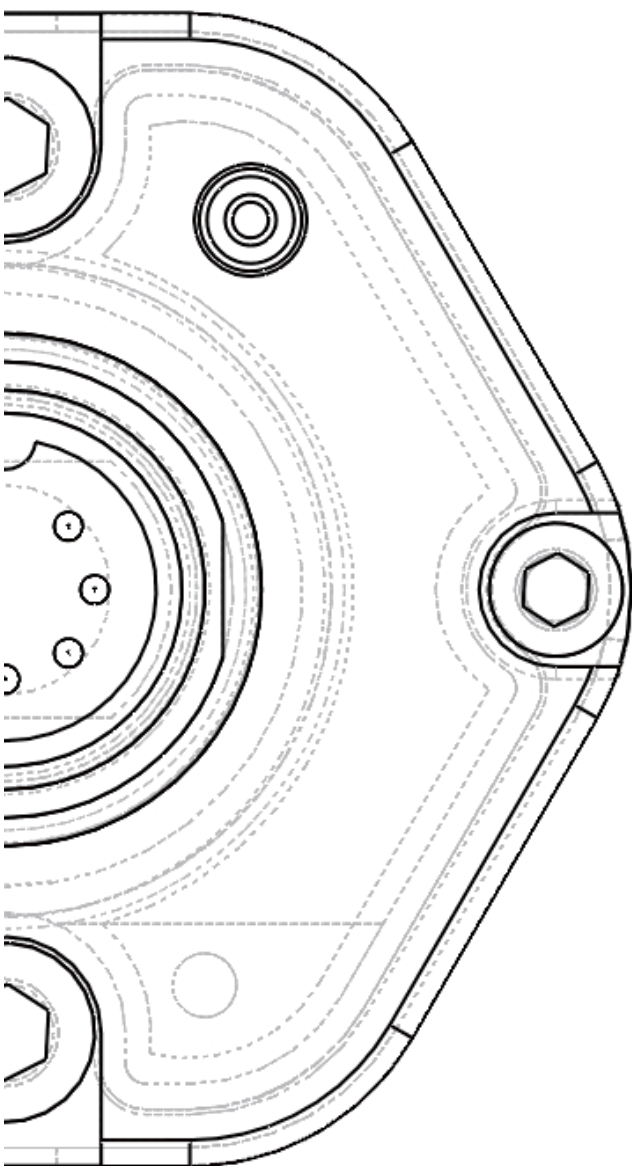


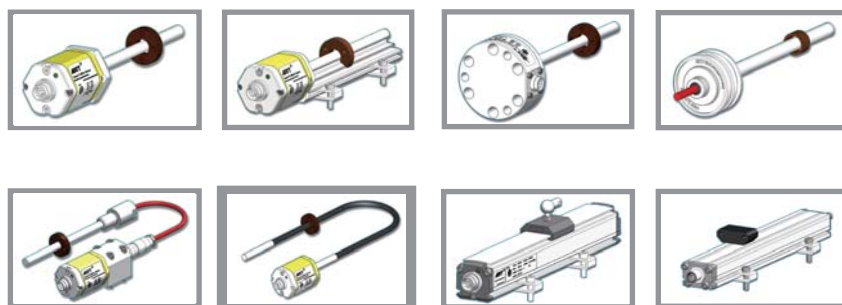
**AMT**<sup>®</sup>

**线性位移传感器**  
**Linear Position Sensor**

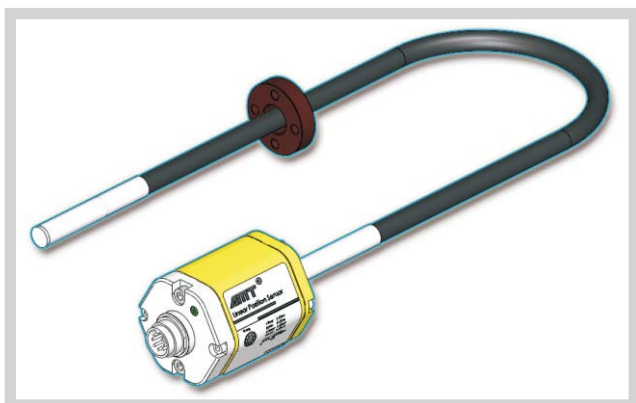


RF系列 - 选型手册

RF series - Product Catalog



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



### Product features

- Soft rod, big range only minimal when replace space
- Absolute position output, No need return to zero
- Non-Contact Sensing with Highest Durability
- LEDs for real-time sensor diagnostics

RF series products are applicable to the occasions where measuring stroke is large and replacement space is small. Flexible measuring rod can measure both linear displacement and curve displacement. Compared to rigid measuring rod, flexible measuring rod on one hand drastically reduce the space for replaced installation, on the other hand reduce the transport difficulties.

### Technical Data

Project name	Data/Index
<b>Measurement parameters</b>	
Measuring range	500~10000mm
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	< ±0.02% F.S. ( Minimum ± 100 μ m )
Repeatability	< ±0.001% F.S. ( Minimum ± 1 μ m )
hysteresis	< 4 μ m

### 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

### Project name Data/Index

#### Design, material

Sensor head	AISI 304
Sensor stroke	AISI 304 Soft tube
Mounting flange	AISI 304 ( matching )

#### Installation

Mounting direction	any
Mounting mode	Two M4X59 screw, pressure outer tube M18X1.5
Position magnet	Ring magnet OD33, OD25.4, U-magnet

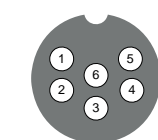
#### Operating conditions

Magnet speed	any
Operating temperature	- 40°C ~ +85°C
Dew point/humidity	90%rel.humidity, no condensation
Temperature coefficient	< 15ppm/°C
Protection	Sensor IP30 ontology, load voltage can be up to IP67 outer pipe
Pressure rating	350bar/700bar peak

### Electrical connection

Analog output pin definition

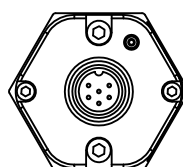
Pin	Cable	Function
1	Grey	( + ) Output
2	Pink	( - ) Output
3	Yellow	Prog.
4	Green	Com.
5	Brown	+24Vdc
6	White	DC GND ( 0 Vdc )



Male insert sensor plug rear of cable connector

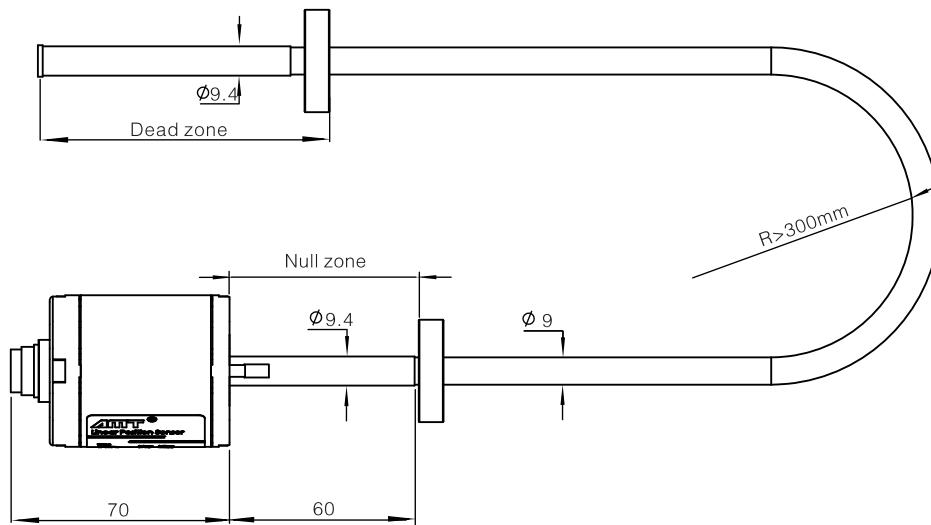
### Status indicator

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

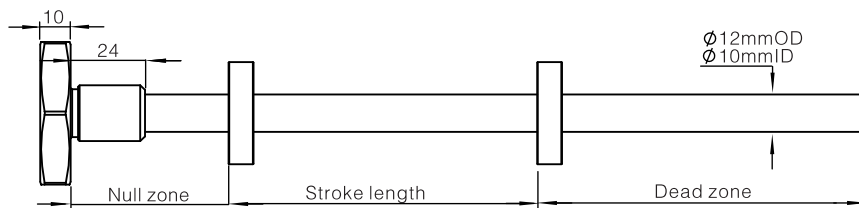


Outline dimensions

Body size

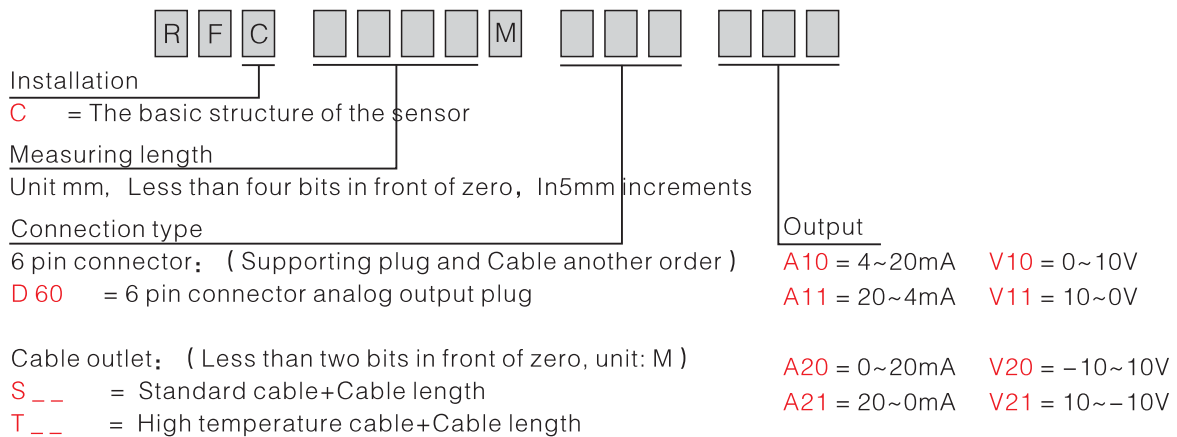


Pressure outer tube

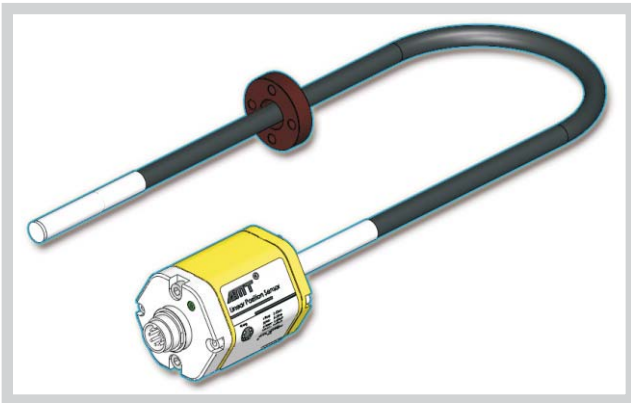


**Explain:** RF series products have soft rod, suitable for measuring stroke, replace the space is little use occasion. If the advance will be matched pressure outer tube bending QuCheng specific shape, it can realize arbitrary curve (minimum bending radius R in a 300 mm) displacement (position) measurement, and form a complete set of vernier magneticron that can choose ring magnet, also can choose open magnet in order to install and replace.

Style guide



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



### Product features

- Soft rod, big range only minimal when replace space
- Absolute position output, No need return to zero
- Non-Contact Sensing with Highest Durability
- LEDs for real-time sensor diagnostics

RF series products are applicable to the occasions where measuring stroke is large and replacement space is small. Flexible measuring rod can measure both linear displacement and curve displacement. Compared to rigid measuring rod, flexible measuring rod on one hand drastically reduce the space for replaced installation, on the other hand reduce the transport difficulties.

### Technical Data

Project name	Data/Index
<b>Measurement parameters</b>	
Measuring range	500~10000mm
Out put	24、25、26bit 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	< ±0.02%F.S.(Minimum ± 80 μ m)
Repeatability	< ±0.001%F.S. ( ± 1bit )
hysteresis	<4 μ m

### Electrical characteristics

Leading-out mode	cable outlet or 7 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

### Project name Data/Index

#### Design,material

Sensor head	AISI 304
Sensor stroke	AISI 304 Soft tube
Mounting flange	AISI 304 ( matching )

#### Installation

Mounting direction	any
Mounting mode	Two M4X59 screw, pressure outer tube M18X1.5
Position magnet	Ring magnet OD33, OD25.4, U-magnet

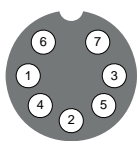
#### Operating conditions

Magnet speed	any
Operating temperature	- 40°C ~ +85°C
Dew point/humidity	90%rel.humidity, no condensation
Temperature coefficient	< 15ppm/°C
Protection	Sensor IP30 ontology, load voltage can be up to IP67 outer pipe
Pressure rating	350bar/700bar peak

### Electrical connection

SSI output pin definition

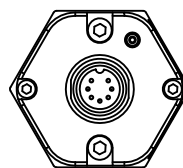
Pin	Cable	Function
1	Grey	( + ) Output
2	Pink	( - ) Output
3	Yellow	Prog.
4	Green	Com.
5	Brown	+24Vdc
6	White	DC GND ( 0 Vdc )
7		NC



Male insert sensor plug rear of cable connector

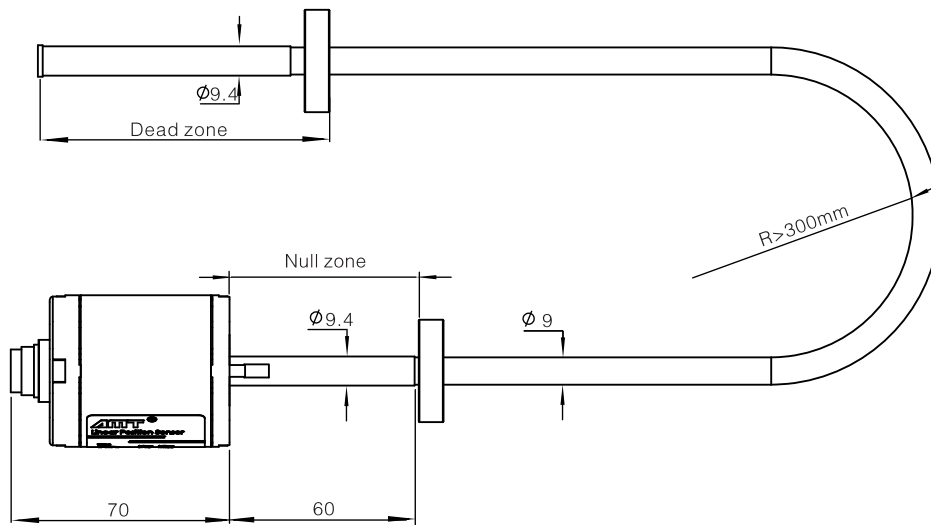
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Indicator lamp status	Definition
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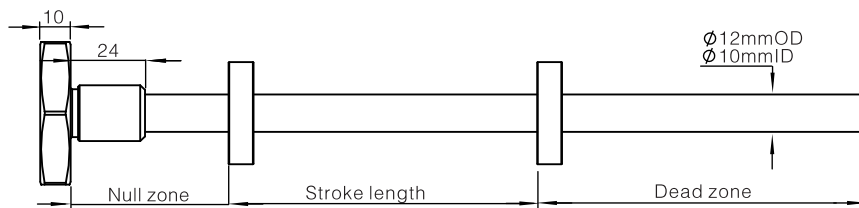


Outline dimensions

Body size



Pressure outer tube



**Explain:** RF series products have soft rod, suitable for measuring stroke, replace the space is little use occasion. If the advance will be matched pressure outer tube bending QuCheng specific shape, it can realize arbitrary curve (minimum bending radius R in a 300 mm) displacement (position) measurement, and form a complete set of vernier magneticron that can choose ring magnet, also can choose open magnet in order to install and replace.

Style guide

