

RT-4WRKE.-3X-30

Integrated proportional amplifier with
electrical position feedback, double electromagnet
Design number: 30 series
Power supply range: 19~35VDC
Command types: $\pm 10V$, 4~20mA
(confirmed before leaving the factory)
Types of control valves: all 4WRKE-3Xseries



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Features

- Application range: Applicable to controlling 4WRKE-3X series of proportional valves.
- Zero position and gain adjustable: The zero position and gain of the valve can be adjusted through a potentiometer.
- Wide Voltage: Wide voltage input ranging from 19 to 35VDC

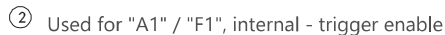
Ordering Model

RT-4WRKE	10	-	-	3X	-	30	/	A1
01	02	03		04		05		06

01	RT-4WRKE	Integrated proportional amplifier for controlling 4WRKE - 3X proportional valves
02	10	10- way nominal diameter
	16	16- way nominal diameter
	25	25- way nominal diameter
	32	32- way nominal diameter
	35	35- way nominal diameter
03	空	Double-electromagnet standard type
	EA or WA	Single electromagnet, compatible with valves of EA or WA functions
04	3X	Proportional valve series number
05	30	The amplifier design number is of the 30 series.
06	A1	The command is $\pm 10V$
	F1	The command is 4~20mA
	A5	The command is $\pm 10V$ with enable input

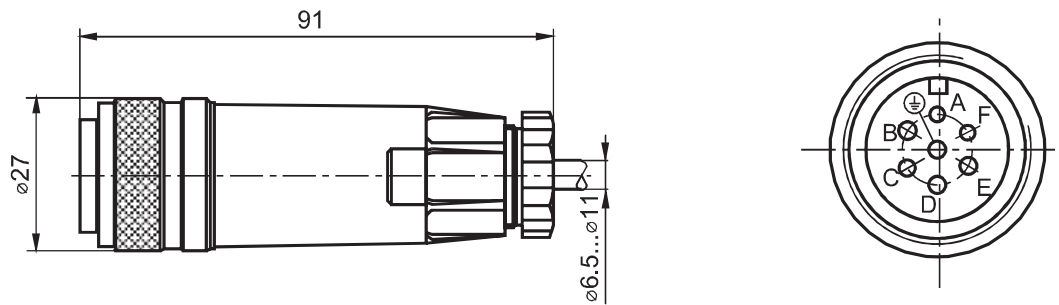
4WRKE

Principle Block Diagram



Terminal Definition

The plug complies with the standard DIN EN 175201-804 see the picture below). It needs to be ordered separately, and the order model is: RT - QXCT.



	Plug	Type A1	Type A5	Type F1
Power Supply Voltage	A	24VDC (19~35VDC) ; I _{max} =2A		
	B	0V		
Reference Potential (actual value)	C	Reference potential of the actual value	Enable signal (connected to 24V)	Reference potential of the actual value
Differential Input	D	Set value $\pm 10V$; $R_e \geq 100K\Omega$		Set value 4~20mA; $R_e = 100\Omega$
	E	Reference potential of the set - point value		
Measured Output (actual value)	F	Set value $\pm 10V$; Current - limiting at 1mA, $R_e \geq 100K\Omega$. (There ference point of Type A5 is B)		Set value 4~20mA; $R_e \leq 300\Omega$
	PE	Internally connect to the valve body		

Set Value:

- A positive given input value (0 to +10V or 12 to 20mA) applied to D and E will connect port P of the valve to port A and port B to port T;
- A negative given input value (0 to - 10V or 12 to 4mA) applied to D and E wil connect port P of the valve to port B and port A to port T;
- For valves with the structure of EA or WA, applying a positive set value of 0 to +10V (or 4 to 20mA) to D and E will connect port P of the valve to port B, and port A to port T.

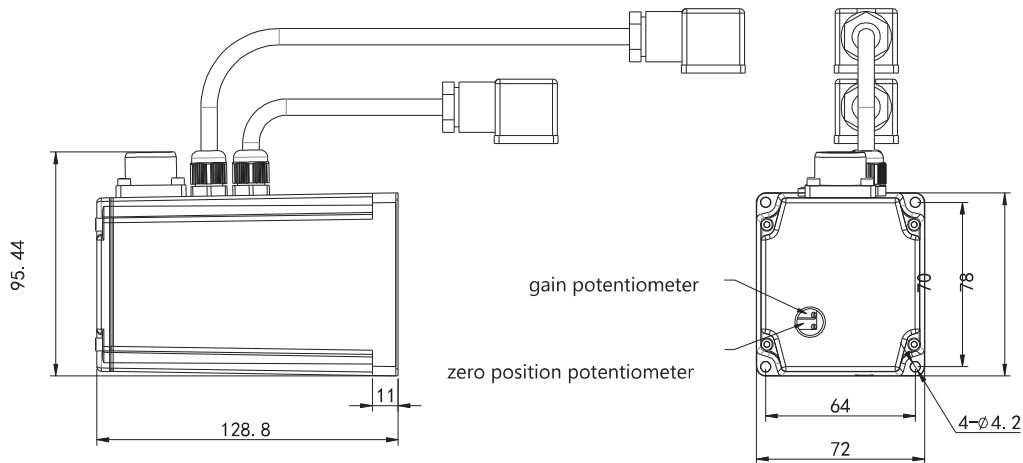
Note:

- For amplifiers with a 4 - 20mA command type, if the set value is less than 2mA, the amplifier will determine that the command line is broken. At this time, the output terminal of the amplifier will be powered off, and the valve spool wil return to its original position through the spring.

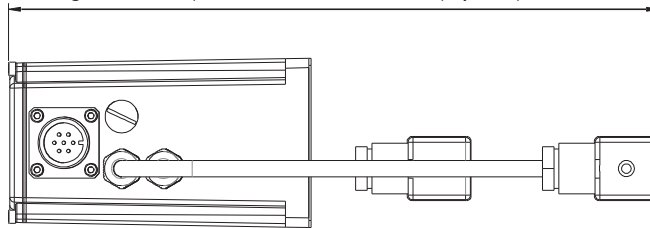
Actual Value:

- A positive actual value (0 to +10V or 12 to 20mA) on f and C indicates that port P of the valve is connected to port A, and port B isconnected to port T;
- A negative actual value (0 to -10V or 12 to 4mA) on f and C indicates that port P of the valve is connected to port B. and port A isconnected to port.

Overall Dimensions (Unit: mm)



Valve body lengths vary according to different port diameters. Refer to the physical product for the exact dimensions.



Name	Descriptions
Zero point potentiometer	Rotate clockwise: P - to - B flow increases; counter - clockwise: P - to - A flow increases.
Gain Potentiometer	Rotate clockwise: overall flow decreases; counter - clockwise: overall flow increases.

Precautions

- The openings on the housing are sealed with PG7 threaded plugs. During use, unscrew the plugs counter - clockwise. After use, please screw the threaded plugs back in clockwise to ensure that the amplifier restores its IP65 protection rating.
- Restore the IP65 protection level of the amplifier!
- The amplifier can only be plugged in or unplugged when the power is off!
- When measuring the amplifier, instruments with $R_i > 100k\Omega$ must be used!
- The distance from antennas, wireless power sources and radar equipment must be greater than 1m.
- Don't lay the electromagnet and the command value cables near the power cables!