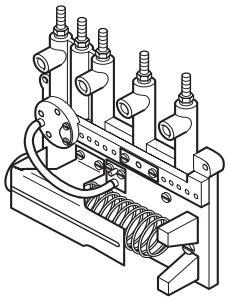
Single/Dual Transmitter Input Receiver Controllers

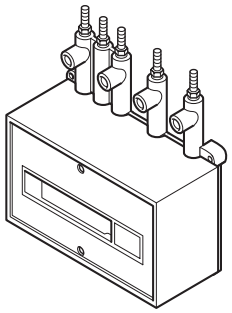
For use in conjunction with remote proportional transmitters for proportional control of pneumatic actuated dampers, valves, etc., in air conditioning systems. The transmitter-receiver-controller system may be used to control temperature, humidity, or pressure.

Features:

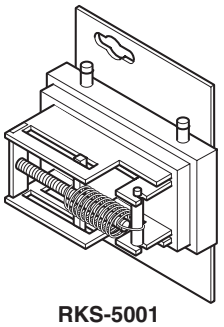
- Nozzle and flapper relay-type receiver controllers.
- Linear, stable and responsive.
- Models available for one, two or three inputs.
- Mounting provided for two (1/8 NPT) 1-1/2 in. stem-mounted receiver-gauges and two 1-1/2 in. stem-mounted pressure gauges.
- Barbed fittings for 1/4 in O.D. plastic tubing.
- Setpoint scales available to match transmitter ranges.



RKS-1001
(Shown without AKS-4 Cover)



RKSR-4000



RKS-5001

Model Chart

Model No.	Description	Remote SPA	Action[a]	Type	Authority[b]	Proportional Band
RKS-5001	Single input	None	D.A./R.A.	One Pipe	None	4% to 40% of input transmitter span adjustable
RKS-1001				Two Pipe		2-1/2% to 40% of primary (input 1) transmitter span adjustable
RKS-2001		±10% of primary transmitter span				
RKS-3002	Dual input[c]	None			10% to 200% of primary (input 1) transmitter span adjustable	
RKS-4002		±10% of primary transmitter span				
RKSR-4000	Replacement single or dual input					

[a] D.A. (Direct Acting) factory shipped: increases output pressure on rise in input 1 pressure. Field changeable to R.A.
R.A. (Reverse Acting): decreases output pressure on rise in input 1 pressure.

[b] Primary transmitter connects to input 1.

[c] Input 2 has a reverse acting reset only. For direct acting the output pressure increases as input 2 increases. For reverse acting the output pressure increases as input 2 decreases.

Specifications

Receiver-controller	Forced balanced pneumatic amplifier.
Setpoint	Adjustable, °F, °C, in. water, mm water, % relative humidity labels (included with controller).
Proportional band	Field adjustable (refer to Model Chart).
Input signals	3 to 15 psig (21 to 103 kPa). Maximum input pressure 30 psig (207 kPa).
Output air signal	0.5 psig (3.4 kPa) to supply air pressure -0.5 psig (-3.4 kPa).
Action	Direct. Field changeable to reverse (refer to Model Chart).

Specifications (Continued)

Authority	
RKS-3002, -4002, RKSR-4000	Field adjustable (refer to Model Chart).
RKS-1001, -2001, -5001	None.
RKS-5001	Can be used as a 1:1 reverse acting relay to reverse a transmitter signal to obtain direct reset when used as a signal into input 2 of RKS-3002, RKS-4002, or RKSR-4000.
Ambient temperature limits	
Shipping and storage	-40 to 150°F (-40 to 65°C).
Operating	40 to 150°F (4 to 65°C).
Humidity	10 to 98% RH, non-condensing.
Supply air pressure	Clean, oil free, dry air required (reference EN-123).
Nominal	20 psig (138 kPa).
Minimum	18 psig (124 kPa).
Maximum	30 psig (207 kPa).
Air connections	
Tubing	Barb connectors for 1/4 in. O.D. plastic tubing.
Gauge ports	Integral for AKS-6000 Series gauges (except for the RKS-5001).
Air consumption for sizing air compressor	
RKS-1001, 2001, 3002, 4002, RKSR-4000	13.8 scim (3.8 mL/s) plus 41.5 scim (11.4 mL/s) for each transmitter and remote setpoint.
RKS-5001	41.5 scim (11.3 mL/s).
Air capacity for sizing air mains	
RKS-1001, 2001, 3002, 4002, RKSR-4000	16 scim (4.4 mL/s) plus 36 scim (13.2 mL/s) for each transmitter and remote setpoint.
RKS-5001	48 scim (13.1 mL/s).
Cover	Order separately, except RKSR-4000 factory supplied, refer to Accessories. Used when mounting receiver-controllers remote from cabinet or where susceptible to damage.
Mounting	Upright on surface of wall or panel.
Dimensions	
RKS-1001 through 4002, RKSR-4000	5-23/32 H x 7 W x 4 D in. (145 x 178 x 102 mm).
RKS-5001	4 H x 3-3/4 W x 2-1/2 D in. (102 x 95 x 64 mm).

Accessories

Model No.	Description
AD-8953	Vinyl mounting track for RKS-5001 only.
AKS-4	Cover for RKS-1001 through 4002 and RKSR-4000.
AKS-5	Cover for RKS-5001.
AKS-1100	Remote setpoint adjustors.
AL-362	Stem mounted back connected 0 to 30 psi gauge.
AT-532-098-1-1	0.0075 restrictor (white).
AT-532-098-1-2	.005" restrictor (Red).
AT-532-098-1-3	.010" restrictor (Blue).
AT-532-111-1-01	0.0075 tee restrictor for 5/32 in. plastic tubing.
AT-532-111-1-03	.010" tee restrictor 5/32" tubing
AT-539	Pilot pressure kit for RKS-1001 through 4002 and RKSR-4000.
H53-301	Room humidity transmitter.
HKS-8065	Enthalpy transmitter.
T53-101	Room temperature transmitter.
TOOL-095-1	Pneumatic calibration tool kit.

Typical Applications

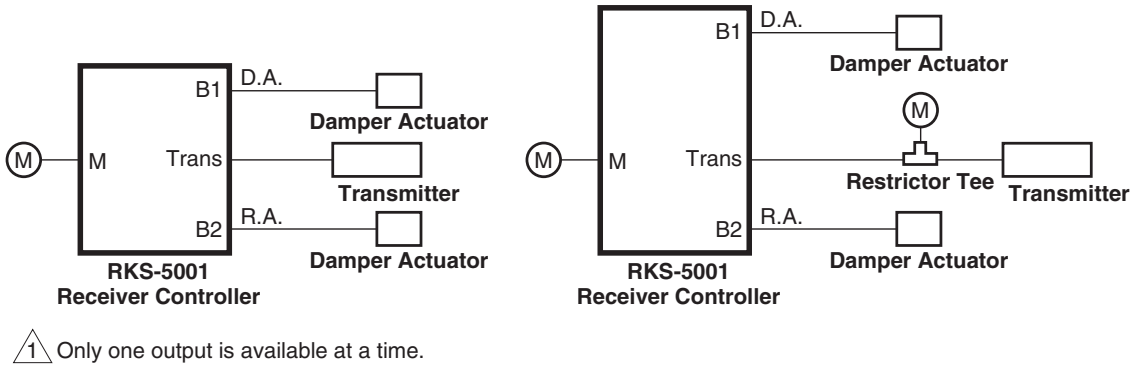


Figure 1 Typical Piping for RKS-5001 Receiver-Controller.

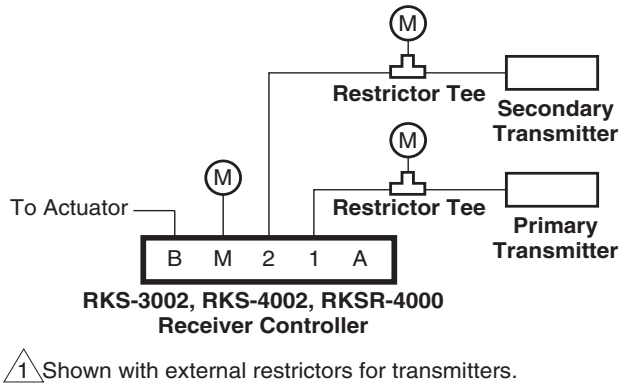


Figure 2 Typical Piping for RKS-3002, RKS-4002, RKSR-4000 Dual Input Receiver-Controller (External Restrictors for the Transmitters).

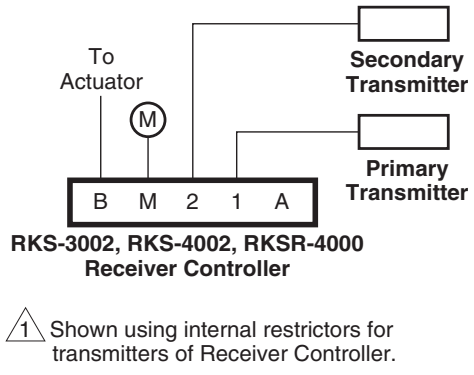


Figure 3 Typical Piping for RKS-3002, RKS-4002, RKSR-4000 Dual Input Receiver-Controller (Internal Restrictors for the Transmitters).

NOTES: These apply to all RKS Series Receiver-Controllers:

1. When internal restrictors are used, the transmitter must be located within 200 ft. (61 m) of the receiver-controller.
2. When external restrictors are used, the transmitter must be located within 1000 ft. (305 m) of the receiver-controller, and the restrictor must be located within 200 ft. (61 m) of the transmitter (preferably at the transmitter's location). Remove internal restrictors from receiver-controller and install blocking gaskets.