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Lead Switch Flow Meter
Instruction Manual

Lead Switch Flow Meter

MODEL RK1975 SERIES

Lead Switch Flow Meter for Large Flow Rate

MODEL RK2005 SERIES

Thank you for your selection of “KOFLOC Area Flow Meter.”
Prior to use, read this manual thoroughly to ensure your new meter will work to its fullest capacity.

CAUTION

This product is designed for controlling the flow rate and its maximum working pressure is limited to:

RK1975 : 0.5MPa(G)

RK2005 : 0.7MPa(G)

The use of fluids, such as toxic gas, other than those marked on the flow meter or the use of the product at a temperature or pressure above the maximum limits could result in personal injury. Such a way of use is strictly prohibited.

Note that if solenoid valves are installed before and after the flow meter and they are opened and closed under pressure, the float will jump up to break the glass. Be sure the flow meter will not be subjected to direct pressure fluctuations.

Foreword

Thank you for your selection of Model RK1975/Model RK2005 Series.

- The contents of the manual are subject to change without notice.
- The manual has been created meticulously. Should, however, you notice any deficiencies, errors or omissions, you are kindly requested to notify us.
- The warranty period of this product is one (1) year after shipment.
- Failures attributable to KOFLOC which may occur during the warranty period will be remedied free of charge.
- KOFLOC shall not be held responsible whatsoever for breakdown or trouble of equipment which results from negligence of the precautions described in this manual or using the product by methods other than the described procedures.

1. Features

This is a compact, low-price lead switch flow meter for monitoring gas and liquid flow rates. This meter is most suitable for cooling water process control.

2. Installation and Piping

Select either installation method; embedding in the panel (secured together with the front cover) or mounting on the panel (secured with included nuts). (Model 2005 Series is only by embedding in the panel.)

3. How to Use

3-1 Basic Handling Procedures of the Flow Meter

For the basic handling procedures, see KOFLOC standard "Flow Meter Instruction Manual."

3-2 Handling of the Lead Switch Sensor

3-2-1 Setting the switch position

(1) Magnetic substances such as iron affect the operation of the lead switch flow meter. Avoid using the meter near magnetic substances. Prior to use, verify the operation with the actual equipment on which the meter is to be installed.

(2) After installing the flow meter, let fluid flow and set a flow rate to operate the float.

(3) Loosen the lead switch fixing screw slightly and locate the lead switch in the lowest position.

(4) Gradually slide up the lead switch and tighten to secure the lead switch fixing screw where the contact operates.

(5) For verification of the operation after setting, move the float up and down several times (by flow adjustment) to see if the contact operates (closes or opens) in the desired position.

(6) If the position is not correct, finely adjust the lead switch up or down.

(7) Note that there is a difference in positions of the float where the contact closes (ON) and opens (OFF).

3-2-2 Lead wire of the lead switch flow meter

(1) Do not pull or push in the cable from the lead switch flow meter. (Lead wire length: Standard 65 cm)

(2) Connect the lead wire to equipment using a secure method such as a crimped terminal or connector.

(3) Do not apply a voltage nor let current flow above the rating of the switch.

Contact capacity: 100 VAC/100 VDC, 10 VA AC, 10 W DC

Note: The contact capacity in the case of connection to inductive load varies according to loading conditions.

(4) Give considerations to routing of the lead wire so that the wire will not be damaged by the flow meter installation condition.

3-2-3 Environment for the lead switch flow meter

(1) Protect the lead switch flow meter from water.

(2) Protect the lead switch flow meter from impact and vibration.

(3) Do not install the lead switch flow meter in places where it will be hit by direct sunlight or radiant heat.

(4) Do not install the lead switch flow meter in environment where corrosive gases are present.

－ RK1975 －

【Specifications】

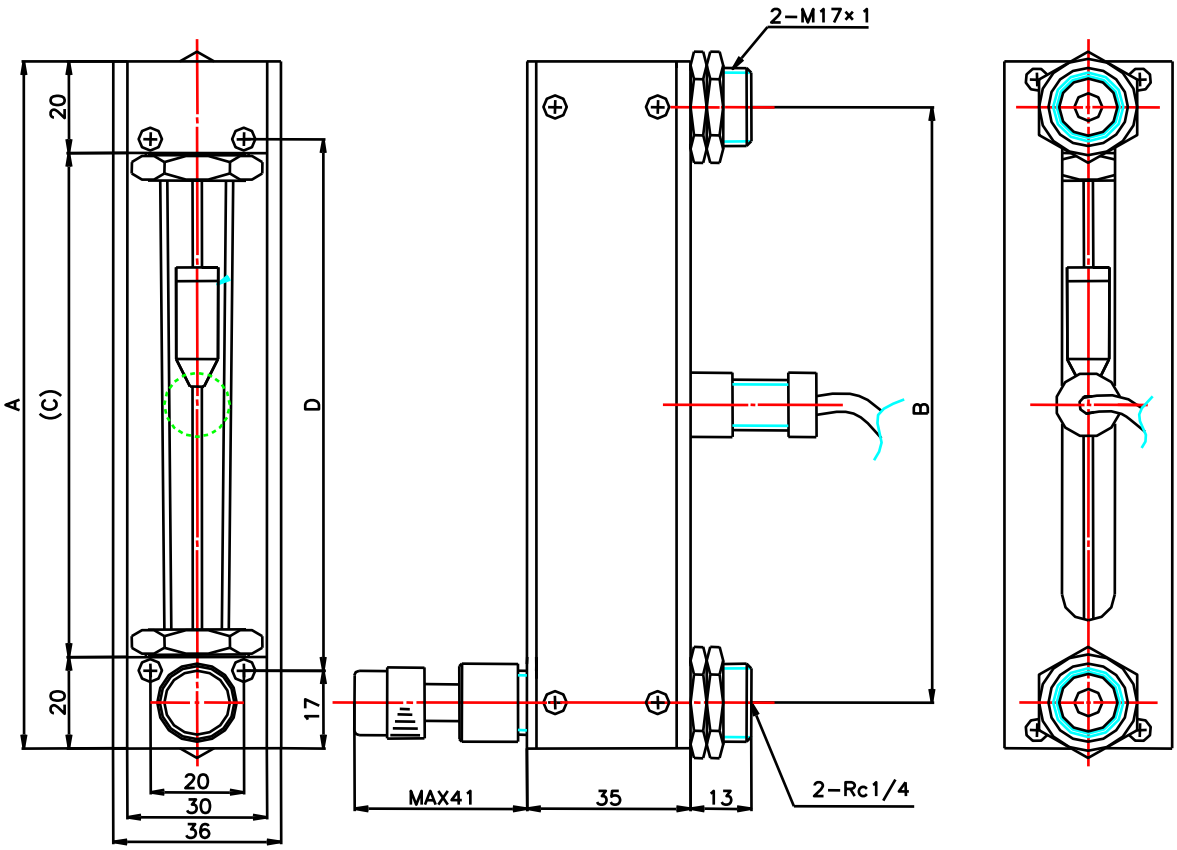
Fluid	H_2O、Gas (H_2 unavailable)
Accuracy	F.S. ±5%
Pressure resistance	Standard 0.5MPa(G)
Materials	SUS316、Hard Glass、FKM、POM (PTFE、Nylon)
Effective scale	10：1
Connection	Rc1/4
Ambient temperature	10℃～35℃ (No condensation)

【Standard】

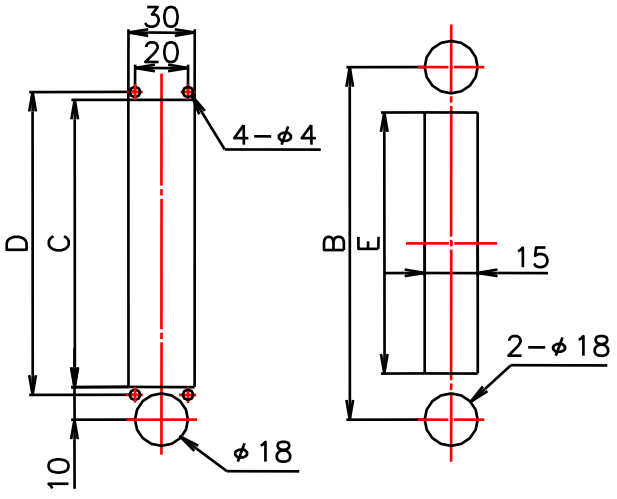
Standard	H_2O	AIR	A	B	C	D	E	Contact
15	0.1－1L/min 0.3－3L/min 0.5－5L/min	3－30L/min 10－100L/min 15－150L/min	150	130	110	116	100	(A) ON when up above setting. (B) ON when down below setting.
20	0.3－3L/min 0.5－5L/min	10－100L/min 15－150L/min	200	180	160	166	150	
Alarm conta –ct range	20%～90%F.S. common							
Contactcapa -city	AC100V／DC100V （AC10VA／DC10W）							
Cable length	65cm							

＊ The flow rate indication is based on air (atmospheric pressure) 20℃ or H_2O 20℃ (0.3 MPa).

【RK1975 External Dimensions】



Panel cut



Embedding in panel (Secured together with front cover)

Mounting on panel (Secured with included nuts)

＊ The figures are for the lower needle.

For the upper needle, the top/bottom dimensions are reversed.

－ RK2005 －

【Specifications】

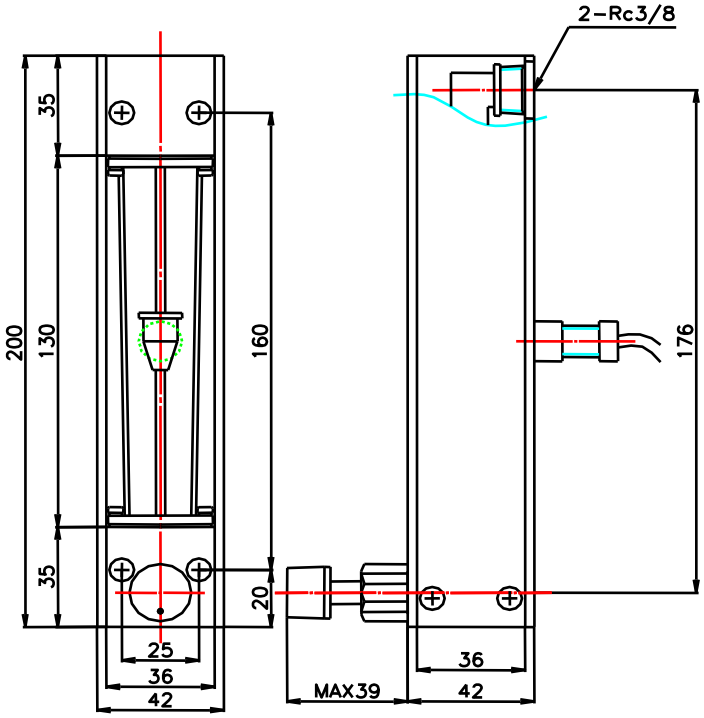
Fluid	H_2O、Gas (H_2 unavailable)
Accuracy	F.S. ±5%
Pressure resistance	0.7MPa (G)
Max. working pressure	0.6MPa(G)
Materials	(B) Brass、Hard Glass、NBR（SUS316、POM、PTFE、SUS304） (S) SUS304、Hard Glass、FKM（SUS316、PCTFE、PTFE）
Effective scale	10：1
Connection	Rc3/8、Rc3/4
Ambient temperature	10℃～35℃ (No condensation)

【Standard】

Standard	H_2O	AIR	Contact
20 connection Rc3/8	1.0－10L/min	10－100L/min 20－200L/min 25－250L/min 30－300L/min	(A) ON when up above setting. (B) ON when down below setting.
25 connection Rc3/4	2.0－20L/min 3.0－30L/min	40－400L/min 50－500L/min 70－700L/min 100－1000L/min	
Alarm contact range	20%～90% F.S. common		
Contact capacity	AC100V／DC100V （AC10VA／DC10W）		
Cable length	65cm		

＊ The flow rate indication is based on air (atmospheric pressure) 20℃ or H_2O 20℃ (0.3 MPa).

【RK2005 Dimensions (Connection Rc3/8)】



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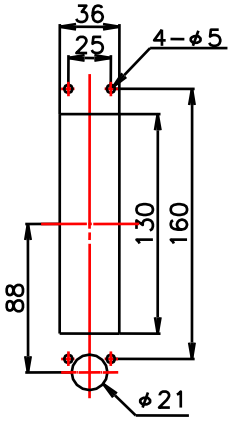
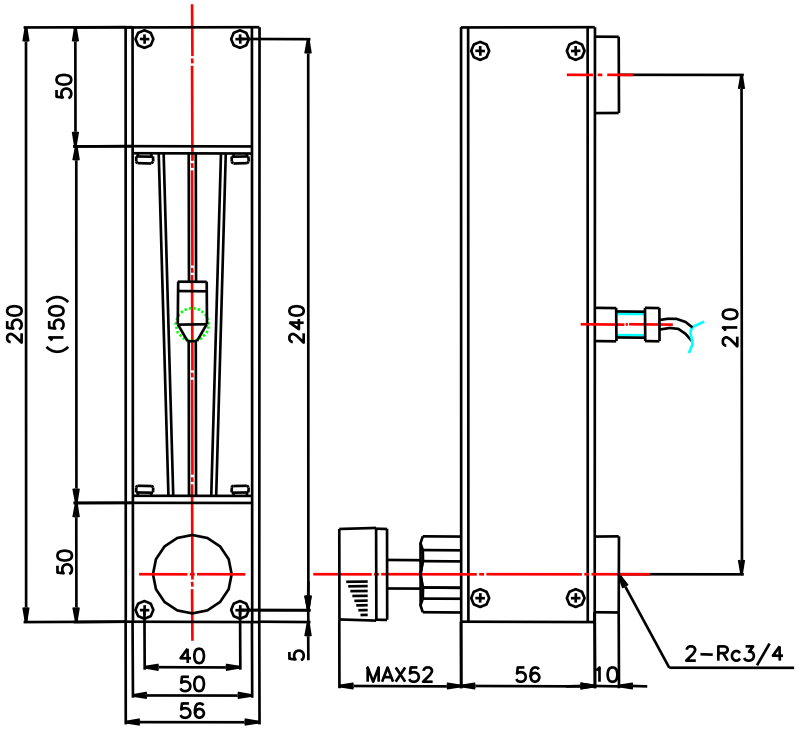


Embedding in panel (Secured together with front cover)

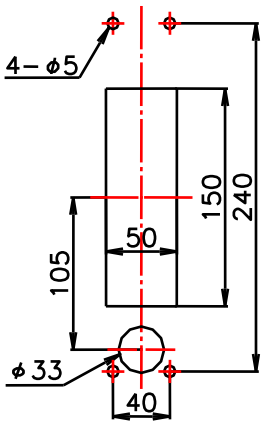
＊ The figures are for the lower needle.

For the upper needle, the top/bottom dimensions are reversed.

【RK2005 Dimensions (Connection Rc3/4)】



Panel cut



Embedding in panel (Secured together with front cover)

＊ The figures are for the lower needle.

For the upper needle, the top/bottom dimensions are reversed.

4. Product Warranty Policy

Thank you for your continued support of KOFLOC products.

Unless specified otherwise in quotations, contracts or specifications when you place orders for KOFLOC products, the following warranty policy will apply.

Warranty Policy:

① Warranty period

The warranty period is one (1) year from shipment, provided that the product is used within the KOFLOC specification.

② Scope of warranty

If the KOFLOC product fails during the warranty period due to a cause attributable to KOFLOC, KOFLOC shall, at its option and expense, provide a replacement product or repair the failed product at the KOFLOC factory.

This warranty, however, shall not cover damages due to a cause not attributable to KOFLOC; opportunity loss, lost profit, secondary disaster, accident compensation suffered by the customer and damage to other equipment and any other damages due to a failure of the KOFLOC product.

③ Non-warranty

The warranty shall not apply to the following failures and damages even if they occur during the warranty period:

a) Failure due to misuse or improper repair or modification. (Failures resulting from use under conditions different from the manufacturing specifications are included.)
b) Damage and failure due to dropping of the product after purchase.
c) Failure due to fire, earthquake, flood, lightning or other natural disaster; or riot, war or the like.
d) Failure due to intrusion of foreign matter from piping.
e) Failure caused by a specific problem due to combination with other incorporated equipment.
f) Other failures and damages which are considered not attributable to KOFLOC.

Please be aware that the warranty shall not cover opportunity loss suffered by you or your customer or damage to other equipment or any other damages due to a failure of the KOFLOC product.