

Air Sensor ISA3 Setting Method for 1-Port Sensing Clamp Series



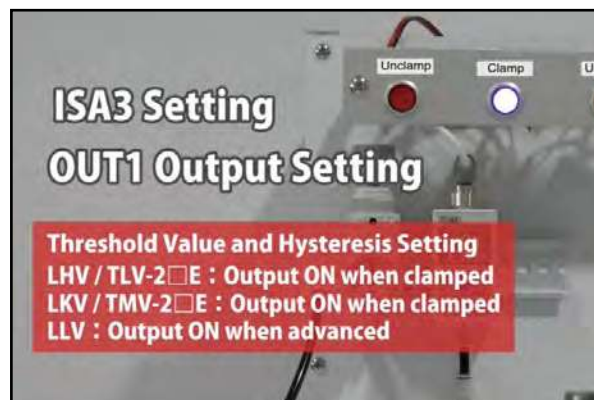
How to Display Outgoing Pressure

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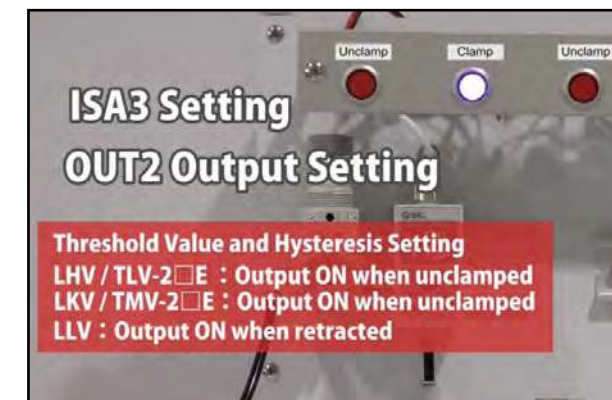
OUT1 Setting Method

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OUT2 Setting Method

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1-Port Sensing

Swing Clamp model LHV / TLV-2□E

Link Clamp model LKV / TMV-2□E

Lift Cylinder model LLV

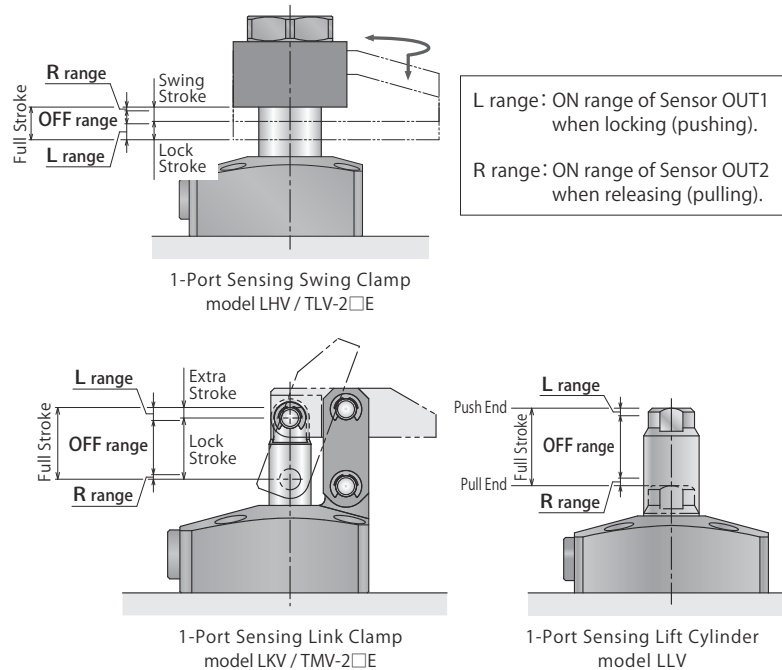
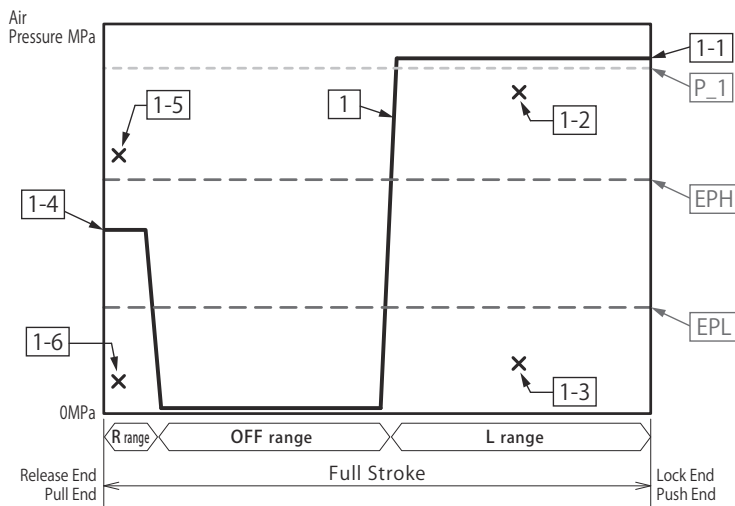
Air Sensor Setting

※ Please use an SMC-made Digital Seating Switch (model : ISA3-G□A, ISA3-G□B) for an air sensor.

Air Sensing Chart

The followings are a sensing chart image showing the relationship between clamp/cylinder operation and sensor outgoing side circuit pressure, and threshold value setting reference.

※ Refer to the product catalog for further information of operating positions.



Symbol	Description	Note
1	It shows pressure performance curve when clamps/cylinders operate normally.	
1-1	Pressure when all clamps/cylinders are locked normally. It becomes the same as supply pressure.	
1-2	【Error】 Pressure in case a clamp/cylinder is stopped in released state when locking for some cause.	Recommend to check with an actual circuit.
1-3	【Error】 Pressure in case a clamp/cylinder is stopped in the middle of swing action when locking for some cause.	
1-4	Pressure when all clamps/cylinders are released normally.	
1-5	【Error】 Pressure in case a clamp/cylinder is stopped in locked state when releasing for some cause.	
1-6	【Error】 Pressure in case a clamp is stopped in the middle of swing action when releasing for some cause.	
P_1	It shows threshold value of ON signal output of OUT1.	Set threshold value to 10.
EPH	It shows the upper limit value of the ON signal output range of OUT2. It should be set higher than 1-4 and lower than 1-5.	Refer to the standard setting value list. (Recommend to set it by checking an actual circuit pressure.)
EPL	It shows the lower limit value of ON signal output range of OUT2. It should be set higher than 1-3 and lower than 1-4.	

※ When using Lift Cylinder(s), LOCK = PUSH and RELEASE = PULL in the description above.

Sensor Threshold Value Setting List (Standard)

Refer to the following values and set the threshold value depending on the model, the number of connected clamps and air pressure.
(These standard values may not be applicable to actual conditions. Please set the value after measuring an actual circuit pressure.)

Applicable Model			LHV • LKV • TLV-2□E • TMV-2□E			LLV	
Air Pressure [MPa]	Setting Point		No. of Connected Clamps			No. of Connected Cylinders	
			2	3	4	1	2
0.200	OUT1		10			10	
	OUT2	EPH [kPa]	187	160	129	195	170
		EPL [kPa]	95	80	65	100	80
0.150	OUT1		10			10	
	OUT2	EPH [kPa]	139	118	92	145	125
		EPL [kPa]	70	60	50	75	60
0.100	OUT1		10			10	
	OUT2	EPH [kPa]	91	75		95	80
		EPL [kPa]	45	40		50	35

- Along with threshold value setting, hysteresis setting is needed. It should be set as [0] for both OUT 1 and 2.
- Higher air pressure enables stable detection. It is recommended to set air pressure as high as possible.