IHP24

Troubleshooting

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1 Identification

Contact information

Name	
Company	
Phone	
Mail	

Model no.*	
Serial no.*	

*Nos. are printed on device name plate

Software ID*	
Software version*	

*On the IHP24 keyboard push: Status →2.Identification

System information

Actuator type	☐ Hydraulic ☐ Pneumatic ☐ Rotary ☐ Linear
Position sensor mounted on the actuator	☐ 4-20mA (passive) ☐ 4-20mA (active) ☐ Potentiometer
Sensor model (only for 4-20mA)	

Problem description

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2 Trouble shooting

Actuator is operational	☐

Auto calibration sequence successful	☐

Errors in the error log*	

*On the IHP24 keyboard push: Error.

Travel time open*	
Travel time close*	

If travel time is less than 10 sec

1. Slow down the system.

2.1 Test valve configuration

By manual calibration visually confirm that the actuator is operational. Also verify stay-put state.

Push Calibration →2.Manual

Actuator can open	
Actuator can close	
Actuator can stay-put	

2.2 Test the position feedback

By manual calibration operate the actuator, and note the ADC values shown on the screen.

Push Calibration →2.Manual

ADC value at open	
ADC value at approx. 50% travel	
ADC value at close	

If both values are less than 100:

1. Check that the IHP24 is configured with correct position input.
2. Check sensor wiring
3. Check if the 4-20mA sensor is active or passive. Active sensors require special wiring: See IHP24 manual and sensor manual.

For a 4-20mA position loop feedback. If one value is less than 2600.

1. Adjust the positon sensor to operate within 4-20mA range. See sensor manual

If the difference is less 100:

1. Verify that the position sensor is connected to the actuator

If the difference is less 1500:

1. Increase signal span from the sensor: See sensor manual

The difference between the Open ADC value and the 50% ADC value shall be approximately equal to the difference between the Close ADC value and 50% ADC value.

1. Check the signal from the position sensor

2.3 Test the control loop / AI0

Send 4mA followed by a 20mA signal from DCS or a loop calibrator

Push Status →1.Live status and push down arrow down until SP-mA is shown.

From DCS or loop calibrator	IHP24 Live menu - SP-mA
4mA	
20mA	

If signals are 0 mA

1. Check wiring

If 4 mA and 20 mA signals are "off"

1. Perform a signal calibration of AI0/Control loop: See IHP24 manual

2.4 Test the transmitter loop / AO0

Verify that the position signal transmitted from the IHP24 and the position signal received by DCS or loop calibrator are identical

Push Status →1.Live status and push down arrow down until TM-mA is shown.

IHP24 Live menu - TM-mA	Readout from DCS or loop calibrator

If TM-mA is 3.5 mA

1. Verify that there are no errors in the error log

If 0 mA is received by DCS or loop calibrator

1. Check wiring
1. Check if the sensor is active or passive. AO0 is for use of passive transmitters, i.e. output is active: See IHP24 manual

If 4 mA and 20mA signals are "off"

2. Perform a signal calibration of the transmitter loop: See IHP24 manual

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3 Tips and tricks

3.1 ValConnect

In order to make Val Controls support more efficient it is recommended to “read” out the configuration data from the IHP24 through ValConnect, export the configuration and mail it to Val Controls.

3.2 4-20mA loop

When troubleshooting a 4-20 mA loop it is generally a good idea to

1. Break the loop
2. Connect a loop calibrator to the position transmitter and verify that a signal is transmitted
3. Connect a loop calibrator to the receiver and verify that a signal is measured

3.3 Factory reset

If “troubleshooting” does not help you, a factory reset might be necessary. After a reset, the IHP24 shall be reconfigured.

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