



16 K-Chief 700

16.27.01 IO Configuration

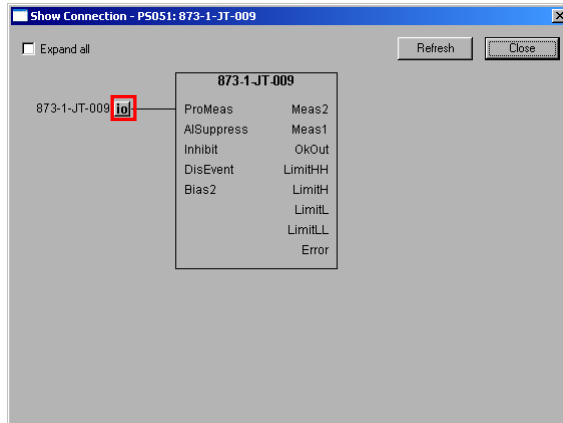
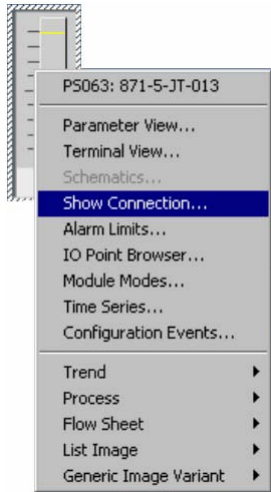
DMS no:



Objectives

- Know how to configure IO

IO Connections



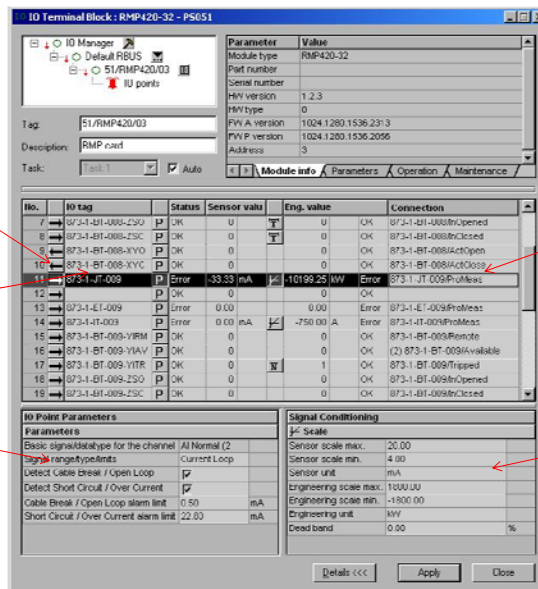
IO Terminal Block



Click for Loop Typical

IO Tag

IO Point Parameters



Connection

Signal Conditioning

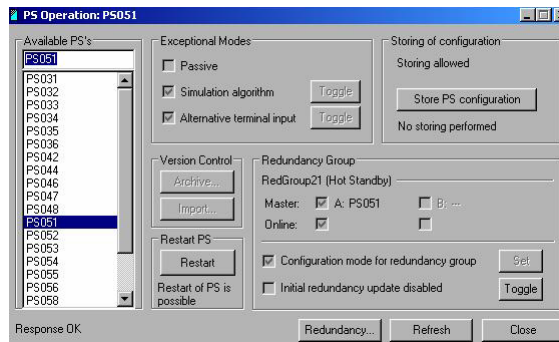
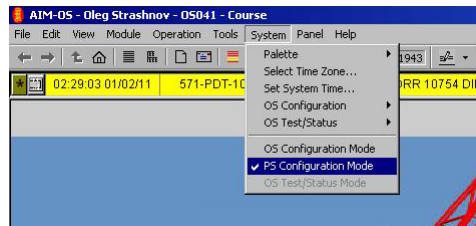
Login and necessary settings



- Log in as Chief
- Select PS Configuration Mode

Redundant PS:

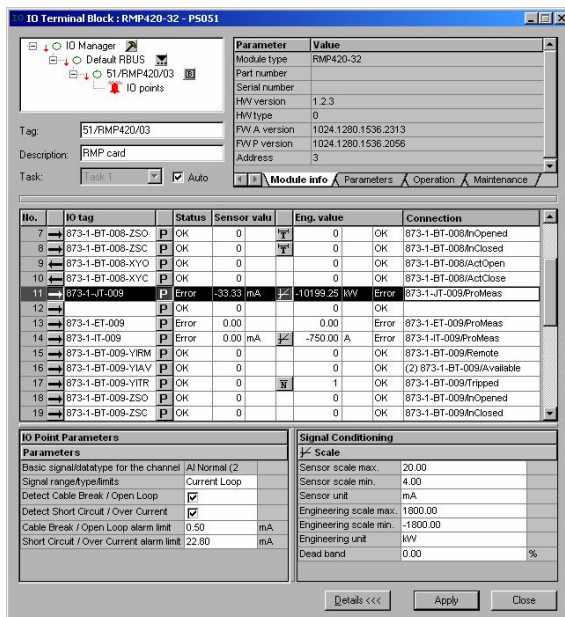
- Set Configuration Mode for Redundancy Group



Changing IO Point



- Take note of all IO Point settings
- Make sure spare is available
- New IO Point have to be on same PS



Disconnect



No.	IO tag	Status	Sensor value	Eng. value	Connection
7	873-1-BT-008-ZSO	OK	0	0	OK 873-1-BT-008InOpened
8	873-1-BT-008-ZSC	OK	0	0	OK 873-1-BT-008InClosed
9	873-1-BT-008-XYO	OK	0	0	OK 873-1-BT-008InOpen
10	873-1-BT-008-XYC	OK	0	0	OK 873-1-BT-008InActClose
11	873-1-JT-009	Error	-33.33 mA	10199.25 kW	Error 873-1-JT-009ProMeas
12	873-1-ET-009	OK	0	0	OK 873-1-ET-009ProMeas
13	873-1-IT-009	Error	0.00	0.00	Error 873-1-IT-009ProMeas
14	873-1-JT-009	Error	0.00 mA	-750.00 A	Error 873-1-JT-009Remote
15	873-1-BT-009-YIRM	OK	0	0	OK 873-1-BT-009Remote
16	873-1-BT-009-YIAY	OK	0	0	OK (2) 873-1-BT-009Available
17	873-1-BT-009-YITR	OK	0	1	OK 873-1-BT-009Tripped
18	873-1-BT-009-ZSO	OK	0	0	OK 873-1-BT-009InOpened
19	873-1-BT-009-ZSC	OK	0	0	OK 873-1-BT-009InClosed

• Click *Connection*

Connect/Disconnect Terminal: 873-1-JT-009

Connection target:

Existing connections:

873-1-JT-009

Connect

Disconnect

Close

Set Loop Typical on Spare IO Point



• Click the *Arrow*

Select IO Point Typical: 51/RMP420/03 / 12...

Possible IO point typical names:

- AI Normal (2w)
- AI Potmeter (2w)
- AI PT100 (2w)
- AI Sin/Cos Potmeter (2w)
- AI Normal (3w)
- AI Potmeter (3w)
- AI PT100 (3w)

Right-click on IO point typical to view Loop Typical.

Selected typical reconfigures these points:

No.	Status
12	

OK Cancel Apply

No.	IO tag	Status	Sensor value	Eng. value	Connection
7	873-1-BT-008-ZSO	OK	0	0	OK 873-1-BT-008InOpened
8	873-1-BT-008-ZSC	OK	0	0	OK 873-1-BT-008InClosed
9	873-1-BT-008-XYO	OK	0	0	OK 873-1-BT-008InOpen
10	873-1-BT-008-XYC	OK	0	0	OK 873-1-BT-008InActClose
11	873-1-JT-009	Error	0.00 mA	-2700.00 kW	Error
12	873-1-ET-009	OK	0	0	OK
13	873-1-IT-009	Error	0.00 mA	-125.00 V	Error 873-1-IT-009ProMeas
14	873-1-JT-009	Error	0.00 mA	-750.00 A	Error 873-1-JT-009Remote
15	873-1-BT-009-YIRM	OK	0	0	OK 873-1-BT-009Remote
16	873-1-BT-009-YIAY	OK	0	0	OK (2) 873-1-BT-009Available
17	873-1-BT-009-YITR	OK	0	1	OK 873-1-BT-009Tripped
18	873-1-BT-009-ZSO	OK	0	0	OK 873-1-BT-009InOpened
19	873-1-BT-009-ZSC	OK	0	0	OK 873-1-BT-009InClosed

Connect



No.	IO tag	Status	Sensor value	Eng. value	Connection
7	873-1-BT-008-ZSO	OK	0	0	OK 873-1-BT-008InOpened
8	873-1-BT-008-ZSC	OK	0	0	OK 873-1-BT-008InClosed
9	873-1-BT-008-XYO	OK	0	0	OK 873-1-BT-008InActOpen
10	873-1-BT-008-XYC	OK	0	0	OK 873-1-BT-008InActClose
11	873-1-JT-009	Error	0.00 mA	-2700.00 kW	Error
12	873-1-JT-009/ProMea	OK	-33.3	-33.33	OK
13	873-1-ET-009	Error	0.00 mA	-125.00 V	Error 873-1-ET-009ProMeas
14	873-1-IT-009	Error	0.00 mA	-750.00 A	Error 873-1-IT-009ProMeas
15	873-1-BT-009-YIRM	OK	0	0	OK 873-1-BT-009Remote
16	873-1-BT-009-YIAV	OK	0	0	OK (2) 873-1-BT-009/Available
17	873-1-BT-009-YITR	OK	0	1	OK 873-1-BT-009/Tripped
18	873-1-BT-009-ZSO	OK	0	0	OK 873-1-BT-009InOpened
19	873-1-BT-009-ZSC	OK	0	0	OK 873-1-BT-009InClosed

- Double click *Connection*

Connect/Disconnect Terminal: 51/RMP4...

Existing connections: 873-1-JT-009/ProMeas

Connection target: 873-1-JT-009/ProMea [Connect]

Existing connections: 873-1-JT-009/ProMea [Disconnect]

IO Point Parameters



IO Point Parameters

Parameters

- Basic signal/datatype for the channel: AI Normal (2)
- Signal range/type/limits: Current Loop
- Detect Cable Break / Open Loop:
- Detect Short Circuit / Over Current:
- Cable Break / Open Loop alarm limit: 0.50 mA
- Short Circuit / Over Current alarm limit: 22.80 mA

- Set correct *IO Point Parameters*

Signal Conditioning



IO Terminal Block : RMP420-32 - P5051

No.	IO tag	Status	Sensor valu	Eng. value	Connection
7	873-1-BT-008-ZSO	OK	0	0	OK 873-1-BT-008InOpened
8	873-1-BT-008-ZSC	OK	0	0	OK 873-1-BT-008InClosed
9	873-1-BT-008-XYO	OK	0	0	OK 873-1-BT-008ActOpen
10	873-1-BT-008-XYC	OK	0	0	OK 873-1-BT-008ActClose
11	873-1-JT-009	Error	0.00 mA	-2700.00 kW	Error
12	873-1-JT-009ProMea	Error	-33.3	-33	Error 873-1-JT-009ProMeas
13	873-1-ET-009	Error	0.00 mA	-125	Error 873-1-ET-009ProMeas
14	873-1-IT-009	Error	0.00 mA	-750	Error 873-1-IT-009ProMeas
15	873-1-BT-009-YIRM	OK	0	0	OK 873-1-BT-009Remote
16	873-1-BT-009-YIIV	OK	0	0	OK (2) 873-1-BT-009IAvailable
17	873-1-BT-009-YITR	OK	0	1	OK 873-1-BT-009Tripped
18	873-1-BT-009-ZSO	OK	0	0	OK 873-1-BT-009InOpened
19	873-1-BT-009-ZSC	OK	0	0	OK 873-1-BT-009InClosed

- Set Signal Conditioning

Signal Conditioning(Eng): 873-1-JT-009/ProMeas - P5051

Configuration (Execution order)

Element	Value
Scale	0.00

Library:

- Scale
- Multi scale
- PT100
- Fail-safe
- Filter
- Engineering unit

Scale

Parameter	Value
Sensor scale max.	20.00
Sensor scale min.	4.00
Sensor unit	mA
Engineering scale max.	1800.00
Engineering scale min.	-1800.00
Engineering unit	kW
Dead band	0.00 %

IO Tag



- IO Tag: cut and paste to new IO Point

IO Point Tag: 873-1-JT-009 - P5051

Tag: 873-1-JT-009

Desc: ASB 1 BUSTIE ESB CB POWER

IO Terminal Block : RMP420-32 - P5051

No.	IO tag	Status	Sensor valu	Eng. value	Connection
7	873-1-BT-008-ZSO	OK	0	0	OK 873-1-BT-008InOpened
8	873-1-BT-008-ZSC	OK	0	0	OK 873-1-BT-008InClosed
9	873-1-BT-008-XYO	OK	0	0	OK 873-1-BT-008ActOpen
10	873-1-BT-008-XYC	OK	0	0	OK 873-1-BT-008ActClose
11	873-1-JT-009	Error	0.00 mA	-2700.00 kW	Error
12	873-1-JT-009ProMeas	Error	-33.33 mA	-10199.2 kW	Error 873-1-JT-009ProMeas
13	873-1-ET-009	Error	0.00 mA	-125.00 V	Error 873-1-ET-009ProMeas
14	873-1-IT-009	Error	0.00 mA	-750.00 A	Error 873-1-IT-009ProMeas
15	873-1-BT-009-YIRM	OK	0	0	OK 873-1-BT-009Remote
16	873-1-BT-009-YIIV	OK	0	0	OK (2) 873-1-BT-009IAvailable
17	873-1-BT-009-YITR	OK	0	1	OK 873-1-BT-009Tripped
18	873-1-BT-009-ZSO	OK	0	0	OK 873-1-BT-009InOpened
19	873-1-BT-009-ZSC	OK	0	0	OK 873-1-BT-009InClosed

Backup RCU A and Restart RCU B



The screenshot shows two windows from the PS Operation software. The top window is for PS051, and the bottom window is for PS151. Both windows have a list of available PS units on the left. In the PS051 window, the 'Restart PS' button is highlighted with a red arrow pointing to the text 'Restart RCU B'. In the PS151 window, the 'Store PS configuration' button is highlighted with a red arrow pointing to the text 'Store PS Configuration'.

RIO Connection



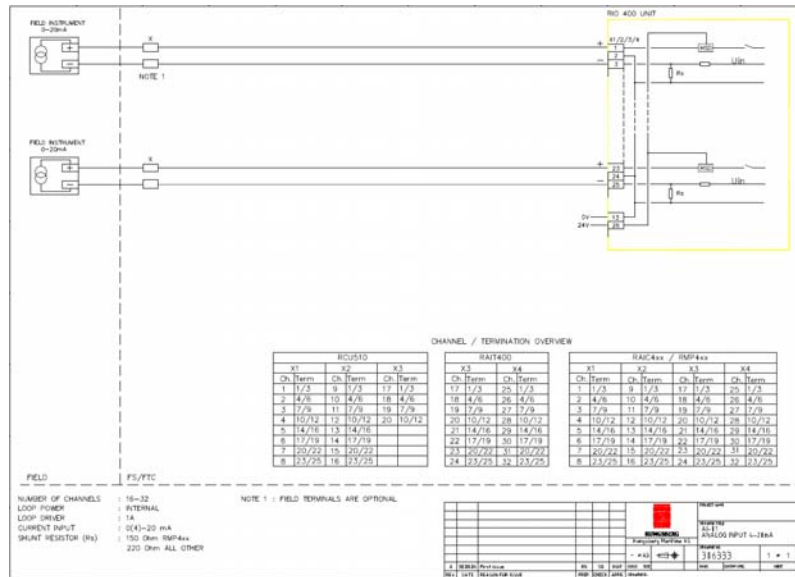
The screenshot shows the 'IO Terminal Block : RMP420-32 - PS051' configuration window. It includes a tree view on the left, a parameter table on the right, and a main table of IO points. The main table has columns for 'No.', 'IO tag', 'Status', 'Sensor value', 'Eng. value', and 'Connection'. The 'IO Point Parameters' and 'Signal Conditioning' sections are also visible at the bottom.

No.	IO tag	Status	Sensor value	Eng. value	Connection
7	873-1-BT-008-ZSO	OK	0	0	OK 873-1-BT-008InOpened
8	873-1-BT-008-ZSC	OK	0	0	OK 873-1-BT-008InClosed
9	873-1-BT-008-XYO	OK	0	0	OK 873-1-BT-008ActOpen
10	873-1-BT-008-XYC	OK	0	0	OK 873-1-BT-008ActClose
11	Broken	Error	0.00 mA	-2700.00 kW	Error
12	873-1-IT-009	Error	-33.33 mA	-10188.2 kW	Error 873-1-IT-009PromMess
13	873-1-ET-009	Error	0.00 mA	-125.00 V	Error 873-1-ET-009PromMess
14	873-1-IT-009	Error	0.00 mA	-750.00 A	Error 873-1-IT-009PromMess
15	873-1-BT-009-YIRM	OK	0	0	OK 873-1-BT-009Remote
16	873-1-BT-009-YIAY	OK	0	0	OK (2) 873-1-BT-009Available
17	873-1-BT-009-YITR	OK	0	1	OK 873-1-BT-009Tripped
18	873-1-BT-009-ZSO	OK	0	0	OK 873-1-BT-009InOpened

- Connect field signals to the new IO Point on RIO
- Connect according to correct Loop Typical



Loop Typical – AI-01



Exercises:

- Exercise: IO SW
- Exercise: Loop typical
- Exercise: Changing IO-point



Summary



- Login level
- PS configuration mode
- Configuration mode for redundancy group if necessary
- Left click on connection to disconnect
- Double left click on connection to connect
- Set IO Point Parameters and Signal Conditioning
- Move the wires
- Backup PS (A)
- Reset PS B
- Remove PS configuration mode