TECH NOTE :: QuantumX / catmanAP and Multi IO Module

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Abstract
This Tech Note describes how to parameterize QuantumX digital inputs and outputs of MX879 in catmanAP.

Initialization

Basic initialization

- Activate the digital IO you want to use (left column) by a mouse click on 🎉
- Name inputs and outputs according to your needs
  - Our Example: DigIn_1 (physical port 1), DigOut_1 (physical port 5)
- Right mouse click on “sensor / function” and parameterize digital IO

You can test the output ports by using the push buttons.

Example: Port 1-4: input, Port 5-8: output
Setting Alarms

Create an ALARM when load is too high
Example: force > 50 N will set port 5 to HIGH, change curve colour and so forth.

Create and configure a limit switch:

Now go to force channel and right mouse click in column “limit value monitoring”:

Now select the newly created limit value:

In case this ALARM shall disappear again after a certain level is reached create a second limit value on the same channel.
TECH NOTE – QuantumX / catmanAP using digital inputs and outputs of Multi IO module

![Image of software interface]

**Configure limit value and event monitoring**

- **Type of monitoring**: High level crossing, Low level crossing, Frequency spectrum, Digital input, Time interval, Keyboard event, Script.
- **Thresholds**: Alarm level, Warning level, Mismatch level.
- **Actions on alarm**: Set digital output, Play sound file, Log message, Use file holder, Send Email, Data storage/saving, Change curve color, EasyScript function.

**Limit value monitoring**

- **Channel**: M0040A
- **Limit value**: Force > 50 N
- **Description**: U4B (full bridge) 0.00000 N, LV1: force > 50 N LV2: force < 50 N

**Table**

<table>
<thead>
<tr>
<th>Slot</th>
<th>Limit value monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M0040A U4B 0.00000 N</td>
</tr>
<tr>
<td>2</td>
<td>M0040A U4B 0.00000 N</td>
</tr>
<tr>
<td>3</td>
<td>M0040A U4B 0.00000 N</td>
</tr>
<tr>
<td>4</td>
<td>M0040A U4B 0.00000 N</td>
</tr>
<tr>
<td>5</td>
<td>M0040A U4B 0.00000 N</td>
</tr>
<tr>
<td>6</td>
<td>M0040A U4B 0.00000 N</td>
</tr>
<tr>
<td>7</td>
<td>M0040A U4B 0.00000 N</td>
</tr>
<tr>
<td>8</td>
<td>M0040A U4B 0.00000 N</td>
</tr>
</tbody>
</table>
Create an ALARM on a logical combination of digital inputs
Create the following logical combination in catman:
“DigIn_1" AND "DigIn_2" AND "DigIn_3"= ALARM Machine Status
ALARM activates "DigOut_1"

Use catman's powerful online math functionality and create a virtual channel:

Drag and drop inputs to math expression field and “create computation” as new signal which is calculated online:
IF “ALARM 3 DigIn HIGH” is active the DAQ job could start for example.

Or this ALARM can be monitored again by a certain limit value.

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