

Knowledge Base Article

Product Group: IMx Product: IMx-S Version: N/A

Abstract

This article explains how to add non-standard IMx POINTs in SKF @ptitude Analyst software. Only single channel POINTs are discussed in this guide.

Overview

The following items will be addressed in this document:

- Selecting device type, application, sensor, and corresponding units
- Specific POINTs identified: AC, DC, Logic, Speed
- Configuration at channel level required for individual POINTs

Note: Schedule/compliance, relays, alert/danger settings, etc. are the same for all POINT types. The main changes take place in the **Setup** tab under **Properties**.





AC/DC POINTs

Follow the steps below to add non-standard AC/DC POINTs into SKF @ptitude Analyst.

 Non-standard vibration POINTs (AC/DC/Logic/Speed) require proper initialization under the Configuration settings for the corresponding IMx (Data Acquisition Device). From the SKF @ptitude Analyst main menu, select Customize, and then Online Settings. [Figure 1]





2. The **Online Settings** dialog box will appear. Ensure that the correct IMx unit is selected, and then press the **[Config...]** button. [Figure 2] This will display the IMx channel configuration settings.

vices Sensor Setup Gatin	ים 		
wailable hardware devices:	IMx 1		
Properties			
Device name:	IMx 1		
DAD type:	IMx-S	~	Config
IMx service:	TSG	~	Hosts
Settings			
Communication type:	Ethernet (TCP/IP)	*	

Figure 2. Selecting the Configuration for IMx

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- 3. There will be a total of 16 analog channels listed in the Configure IMx Channel window. Each one of these channels can be configured independently. Selections made here must be matched to a corresponding DIP switch located in the I/O board of the IMx. Please refer to the IMx installation guide for details related to DIP switch settings.
- 4. Enter the parameters for the POINT type selected. [Figure 3] With AC and DC POINTs, the **Sensitivity** will automatically be set to match the measurement type. Press the **[Save]** button when done.

nalog Dig	gital								
ensitivity	units:	English	~						
nalog cha	innels:								
Number	Name	Ena	Sensor type	Zero	offset Sensitivity	OK sta	Lowe	r Upper	Cun 🔨
1	Channel	1 Yes	Accelero	0	100	Enable	8	16	Disi
2	Channel 2	Yes	Accelerome	0	100	Enable	8	16	Disa
3	Channel 3	Yes	Accelerome	0	100	Enable	8	16	Disa
4	Channel 4	Yes	Accelerome	0	100	Enable	8	16	Disa
5	Channel 5	i Yes	Accelerome	0	100	Enable	8	16	Disa
6	Channel 6	Yes	Accelerome	0	100	Enable	8	16	Disa
7	Channel 7	Yes	Accelerome	0	100	Enable	8	16	Disa
8	Channel 8	Yes	Accelerome	0	100	Enable	8	16	Disa 🔨
<									>
Propertie	s								
Cha	annel enable	ed	Ľ		Channel name:	Channel 1			
Sensor	type:	Acceleron	neter	~	Sensitivity:	100	m\	//g	
Current	shunt:	AC Accelerom	eter		Zero offset:	0	Vo	its	
Che	ck sensor (Displacem Triax	ent Probe						
Lower li	mit:	Velocity Se	ensor		Upper limit:	16	Vo	lts	

Figure 3. AC/DC POINT selection

 Now, go back into the hierarchy to insert the desired points. In the machine of interest, right-click and select **Insert Item** from the menu [Figure 4]



⊖ 📜 IMx ⊖ 💑 Sample IMx Machine	
🗕 📜 WMx	Insert Item
\varTheta 📜 TMU	Out
🗕 🔃 LMU	Cut
🔴 📗 CMU	Сору
Figure 4. Entering a DO	C point in the hierarchy

6. In this example, **General** will be selected as the Application, and **DC** will be selected as the Sensor type. [Figure 5] Press the **[OK]** button to continue.

DAD/POINT T	ype Selection
<u>D</u> AD type:	IMx 💌
Application:	General 💌
<u>S</u> ensor type:	DC
<u>U</u> nits:	Vdc 💌
ОК	Cancel Help



Figure 5. DC point selection

7. The POINT Properties dialog will appear. The **General** tab simply shows a summary of the newly created POINT. A unique POINT name and description may be entered here.



8. The **Setup** tab provides the essential parameters that define a POINT. Ensure the correct IMx and corresponding channels are properly selected. [Figure 6]

POINT Properties						
Overall General	Speed Setup	Alarm IMx Setup	Messages Schedule	Notes Filter Keys	Images Setup Log	
Device: Full scale:	IMx 1 20	Vdc	Channel nam	e: <unassig <unassig (1) Chan</unassig </unassig 	gned> <mark>♥</mark> gned> nel 1	
Process label: Control POINT:	Process None	Value		(Select	

Figure 6. DC Point Setup Parameters

Note: As demonstrated in the example above, only POINTs that are designated as **DC** items will appear in the drop-down list.

10. The point is now ready to be downloaded to the IMx unit. All process POINTs follow similar steps.



Logic and Speed POINTs

Logic and Speed POINTs are similar in that both must be created under the Digital tab from within the Configure IMx Channel dialog box.

Logic POINTs

 Follow the instructions at the start of this document to get to the Configure IMx Channel dialog box, and then select the Digital tab. Ensure the channel of interest is enabled and the proper channel name is given. [Figure 7]

Configure IMx Chan	nel			
Analog Digital				
Digital channels:				
Number Name		Enabled	Pulse/Rev	
1 Channel 1		Yes	1	
2 Channel 2		Yes	1	
3 Channel 3		Yes	1	
4 Channel 4		Yes	1	
5 Channel 5		Yes	1	
6 Channel 6		Yes	1	
7 Channel 7		Yes	1	
8 Channel 8		Yes	1	
Properties				
Channel name:	Channel	1		
Channel enable	d			
Pulse per revolution	: 1			



Figure 7. Enabling Digital/Speed channels

At this stage of a digital/speed POINT creation, the only difference would be the **Pulse per revolution** field. This field may be left at the default value of '1' for any logic POINT, but must be changed accordingly for a speed/tachometer point where there might be a requirement for diameter ratio conditions (such as gearboxes, unique aftermarket transducer output, etc.).



 Next, create a new digital POINT at the machine level. The DAD/POINT Type Selection dialog for a logic POINT is shown in Figure 8. IMx Digital POINTs can only be configured as a **State** type. Therefore, in the **Setup** tab, the user must define whether to look for a transition from logic '0' to logic '1', or vice-versa.

DAD/POINT T	ype Selection
<u>D</u> AD type:	IMx 💌
Application:	General 💌
<u>S</u> ensor type:	Logic 💌
<u>U</u> nits:	State 💌
ОК	Cancel Help



- Figure 8. Logic Point Selection
- Open the POINT Properties window for the new POINT and click on the Setup tab. Figure 9 shows the parameters for a logic point. Select the proper IMx unit (Device) along with the corresponding channel (Channel name). Ensure the Active state setting is also defined.

General Setup Mx	Setup Schedule Filt	er Keys Setup Log	Notes Images	
Device	IMx 1	Channel name	(1) Channel 1	
Active State			(1) Channel 1 (2) Channel 2	^
 Unassigned 	O Low	O Hig	(3) Channel 3 (4) Channel 4	
			(5) Channel 5 (6) Channel 6	=
			(7) Channel 7 (8) Channel 8	~

Figure 9. Logic Point Parameter Entry

Note: Only eight channels will be shown (as opposed to 16 analog).

4. Set the other parameters as desired in the remaining tabs and then save the changes by pressing [OK] at the bottom of the screen.



Speed POINTs

Speed-related POINTs are set up slightly differently than traditional digital POINTs.

1. In the DAD/POINT Type Selection dialog, select **Vibration** for the Application and **RPM** for the Units. [Figure 10]

DAD/POINT T	ype Selection
<u>D</u> AD type:	IMx 💌
Application:	Vibration 💌
<u>S</u> ensor type:	Tach 💌
<u>U</u> nits:	RPM 💌
ОК	Cancel Help



Figure 10. Speed/Tachometer Selection

The parameters for a speed POINT are somewhat similar to those of a logic point. [Figure 11] In the Setup tab, select the proper IMx unit (Device) along with the corresponding channel (Channel name). The Full Scale value must be defined in *RPM*. Measurement units are defined in RPM by default. This unit of measure cannot be changed.

INT Propertie	es				
Overall	Speed Ala	arm	Messages	Notes	Images
General	Setup	IMx Setup	Schedule	Filter Keys	Setup Log
Device: Full scale: Control POINT:	IMx 1 5000 None	RPM	Channel nam	e: <unassi (1) Chan (2) Chan (3) Chan (4) Chan (5) Chan (6) Chan (7) Chan (8) Chan</unassi 	gned>

Figure 11. Speed/Tachometer Setup tab



3. Set the other parameters as desired in the remaining tabs and then save the changes by pressing the **[OK]** button at the bottom of the screen.

This concludes non-standard IMx POINT implementation. Please refer to the IMx installation guide for details related to DIP switch settings.

For further assistance, please contact the Technical Support Group by phone at 1-800-523-7514 option 8, or by email at <u>TSG-Americas@skf.com</u>.

