

Knowledge Base Article

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

Abstract

This note describes a brief procedure on how to create Orbit and Shaft Center Line (SCL) IMx POINTs in SKF @ptitude Analyst.

Overview

Typical applications include implementation in monitoring of turbo machinery faults. [Figure 1]



Figure 1. Orbit and SCL Scheme



This procedure was written with the assumption that an IMx has already been created.

- 1. Start by inserting a new POINT for an IMx device. [Figure 2] For **Application**, select 'Orbit/SCL' from the drop-down menu.
 - Ensure the corresponding Sensor type and Units are also chosen.

E O III IMX		DA	D/POINT Ty	ype Selection 🛛 🛛 🔀
	Insert Item Cut Copy Paste Paste Multiple Delete Properties	D A S U	AD type: pplication: ensor type: nits: OK	IMx IMx Orbit/SCL Displacement Probe Imils Cancel Help

Figure 2. Inserting a new POINT

2. In the **General** tab under POINT Properties, input the POINT name and check the *Enable data collection* option. [Figure 3]

las la la la la la la
essages Notes Frequencies Images Band Envelope
Bearing 1 (x,y)
lection
IMX
Orbit/SCL
Displacement Probe
microns
rive end (DE)
OK Cancel Help



- 3. Go to the **Setup** tab and select the desired IMx device. Then, select the frequency type and remaining parameters, according to the application.
 - It is customary to select FFT, time and phase when there is a given speed reference. If this is not the case, just select FFT and time and then set the speed value manually. [Figure 4]

POINT Properties			
Speed Alarm N General Setup	Messages Notes Fr IMx Setup Orbit/SCL	equencies Images Schedule FilterKe	Band Envelope sys Setup Log Overall
Devi <u>c</u> e: <u>F</u> ull scale:	IMx 1	Detection:	Peak to peak 💌
Freq. <u>t</u> ype:	Order track	Lines:	400
Sa <u>v</u> e data:	FFT, time and phas 🗙	Window:	Hanning 🔽
Revolutions:	32	<u>S</u> peed:	1800 RPM
<u>E</u> nd order:	12.5 👻		
Low freg. cutoff:	0.5 Orders		
Linear fact <u>o</u> r:	0	Linear speed units:	
Control POINT:	None		Selec <u>t</u>
			Cancel Help





- 4. Next, select the **IMx Setup** tab. Enter any required parameters as needed (such as speed reference, alarm group, active range, etc.).
 - Ensure the correct speed reference is selected, as it is an essential parameter used in SCL points. [Figure 5]

POINT Properties	Ε
Speed Alarm Messages Notes General Setup Mx Setup Orbit/SC	Frequencies Images Band Envelope L Schedule Filter Keys Setup Log Overall
Alarm group:	View
Alert relay: qunassigned: Speed collection	Danger relay: unassigned>
Speed reference:	Select
peed Point Selection	
Clear Select speed reference POINT:	0 Unit: RPM
Wy Herarchies Hierarchy Occision Support	Select
Products Microlog Inspector DMx IMx	0 Unit Process Uni
CO Sample IMx Machine Tachometer Pt WMx WMx TMU TMU LMU	Law w
B CMU B III TrendOl	

Figure 5. IMx Setup tab for SCL Point



- In the Orbit/SCL tab, select the X and Y Channels and set their corresponding angle, in degrees. Next, input the proper Shaft rotation, Tacho angle, and Shaft centerline settings. [Figure 6]
 - > For **Cold gap position**, select:
 - Bottom, for horizontal shafts
 - Center, for vertical shafts
 - Top, for overhung shafts

Unassignec 💙 📖	X - <u>S</u> ensor angle:	135 degrees
Unassignec 🔽 📖	Y - S <u>e</u> nsor angle:	45 degrees
DC	🔲 Display tacho angle	
Counter clockwis 🔽	T <u>a</u> cho angle:	0 X.
js		
olts	Y - Col <u>d</u> gap:	-9 volts
ottom 🗸 🗸	Bearing clearance:	0 mils
	Unassignec V DC Counter clockwis V Counter clockwis V Counter clockwis V	Unassignec V Y - Sensor angle: DC Display tacho an counter clockwis V Tacho angle: volts Y - Cold gap: tottom V Bearing clearance:



Figure 6. Orbit/SCL tab

6. Input any additional settings in the other tabs as necessary, and then press **[OK]** to save. The Orbit/SCL POINT setup is complete.

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>.

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