

VX3701 Synchro/Resolver Module



TECHNICAL DATA SHEET

Features

VXI

LAN

cPCI

PXIe

GPIB

USB

RS232
485

external
PCIe

- Synchro/Resolver to Digital Converter (SDC)
- Digital to Synchro/Resolver Converter (DSC)
- SDC and DSC combined in one Instrument
- SDC and DSC simultaneous operating mode
- SDC and DSC independently programmable
- DSC output can be switched to SDC input
- Fully isolated and floating inputs and outputs
- Internal reference allows self-testing capabilities

Product Information

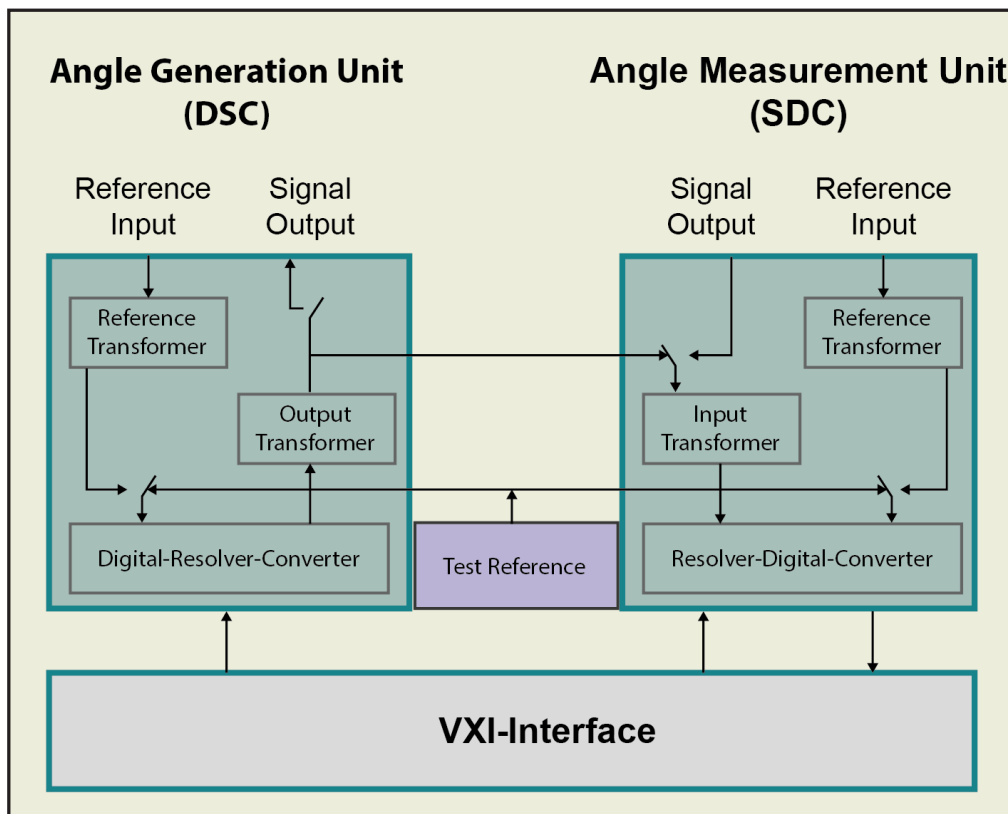
The VX3701 is a register based C-size single slot VXI module containing:

- One Synchro/Resolver to Digital Converter (SDC) angle Measurement Unit
- One Digital to Synchro/Resolver Converter (DSC) angle generation unit

Both instruments are totally independent from each other and can be programmed to operate in either the Synchro- or the Resolver-mode at 11.8, 26, or 90 Volt Line-to-Line over the frequency range of 360Hz to 1,000Hz.

The angle Measurement Unit (SDC) has a resolution of 16 Bit and an accuracy of 0.01° . The accuracy of the angle generation unit is 0.025° at 16 Bit resolution. Each analog input and analog output is fully isolated and floating. To perform an internal self test both instruments can be connected together internally under software control.

The VX3701 is designed for high throughput production testing. The instrument calibration is done digitally and is fully automatic. The calibration data are stored in an on-board EEPROM. Each channel is fully isolated to PE.



General	Specification	Comment
Module size	VXI: 1 slot "C"-Size	
Module weight	<2.0kg	
Front connector type	9-pin D-SUB male 9-pin D-SUB female	
Operating temperature	0 ... 40°C	
Operating altitude	<2,000m	
Relative humidity	Up to 85% at 35°C	
Storage temperature range	-25 ... 70°C	
Electrical safety	According EN61010-1	
Isolation input to PE	250V CAT I, Pollution Degree 2	

Angle Signal Measurement Unit

Synchro/Resolver-Digital-Converter	Specification	Comment
Measurement range	0° ... 360°	
Resolution	16 Bit (0.0055°)	
Accuracy	0.01°	

Signal Input	Specification	Comment
Type	Transformer Isolated	Scott transformer
Format	Synchro or Resolver	Programmable
Voltages	11.8V, 26V or 90V	Programmable
Frequency	Reference input	See below
Input impedance	>100 kΩ	
Harmonics Content	<10%	At full accuracy

Reference Input	Specification	Comment
Type	Transformer Isolated	
Voltage range	26V ... 115V	External signal
Frequency range	360Hz ... 1,000Hz	External signal
Input impedance	>20 kΩ	
Phase relative to signal	-10° ... +10°	

Notes: All product data are specified for 1 year at an ambient temperature of 23°C ±5°C (after 1 hour warm-up time). Product specification and description in this document are subject to change without notice.

Angle Signal Generation Unit

Digital-Synchro/Resolver-Converter	Specification	Comment
Angle range	0°...360°	Programmable
Resolution	16 Bit (0.0055°)	
Accuracy	0.025°	1.5 minutes

Signal Output	Specification	Comment
Type	Transformer Isolated	Scott transformer
Format	Synchro or Resolver	Programmable
Voltages	11.8V, 26V or 90V	Programmable
Output power	1.5 VA	
Frequency	Reference input	See below

Reference Input	Specification	Comment
Type	Transformer Isolated	
Voltage range	26V or 115V	Programmable
Frequency range	360Hz...1,000Hz	External signal
Input impedance	>20kΩ	
Harmonics Content	<10%	