DIGITAL INDUSTRIES SOFTWARE

Simcenter Anovis Modules for Signal Recording Device in 19-inch housing

Simcenter/AN-SRD-BAM/AN-SRD-SAM/AN-SRD-OPD/ AN-SRD-MUX/AN-SRD-POW/AN-SRD-COM/ AN-SRD-COM-EC/2024/20240313

Product Information Sheet

Summary

The Simcenter Anovis Signal Recording Device (SRD) in 19-inch housing is a state-of-the-art data acquisition system suited for the requirements of quality testing in industrial production. It can be equipped with additional modules. It is the standard signal recording hardware of the Simcenter Anovis Software.

BENEFITS

- Modules fit to each type of Simcenter Anovis Signal Recording Device (SRD) in in 19-inch housing
- Easy channel extension or replacement by modularity
- Various modules available: BAM for acquisition of sensor data and tacho signals, OPD for operational data acquisition, MUX for switching between inputs, COM for TCP-IP connection, COM-EC for EtherCAT communication

FEATURES

- Industrial grade components with extended temperature range for optimized reliability
- LED front-panel indicators for enhanced user feedback

AN-SRD-BAM

Simcenter Anovis basic module providing 2 signal channels plus 2 trigger/tacho channels

AN-SRD-SAM

Simcenter Anovis signal acquisition module providing 4 signal channels

AN-SRD-OPD

Simcenter Anovis operational data module providing 8 data channels with lower sample rate Simcenter Anovis switching module providing 2 simultaneously driven “four-to-one” switches

AN-SRD-POW

Simcenter Anovis wide-range AC power supply (94 - 264 V, 50 - 60 Hz)

AN-SRD-COM

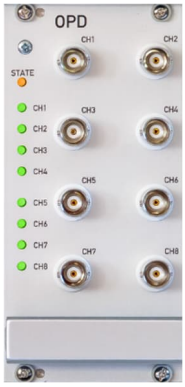
Simcenter Anovis communication module for TCP/IP connection to PC

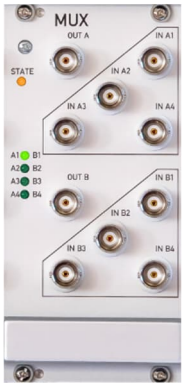
AN-SRD-COM-EC

Simcenter Anovis communication module with additional EtherCAT connection

Technical Data	
Product Code	AN-SRD-BAM 
Analog input (basic module)	
Sensor channels	2 synchronous channels – 24-bit sigma-delta converters
Input ranges	• SNR > 115 dB / 120 dB / 115 dB for input ranges: ±10 V, ±1 V, ±0.1 V and sample rate 6.4 kHz • SNR > 100 dB / 105 dB / 105 dB for input ranges: ±10 V, ±1 V, ±0.1 V and sample rate 51.2 kHz • SNR > 100 dB / 95 dB / 100 dB for input ranges: ±10 V, ±1 V, ±0.1 V and sample rate 102.4 kHz • SNR > 85 dB / 85 dB / 95 dB for input ranges: ±10 V, ±1 V, ±0.1 V and sample rate 192.2 kHz
Coupling	• DC coupling, AC coupling with additional high-pass filter 75 Hz, 150 Hz
Sampling frequencies	3.2 kHz, 6.4 kHz, 12.8 kHz, 25.6 kHz, 38.4 kHz, 51.2 kHz, 76.8 kHz, 102.4 kHz, 153.6 kHz, 192 kHz
Max. bandwidth	75 kHz
Supported sensors	• microphones, accelerometers, laser Doppler vibrometers, voltage • switchable ICP power supply +5 mA, signalized by LED • ICP error signalized by LED (sensor short connected, no sensor connected)
Tacho Channels	
Tacho channels	2 channels – 10-bit resolution
Input ranges	• input voltage range: 20 V_{pp} • input impedance 4.6 kΩ
Coupling	• DC coupling, low-pass filters 6 kHz, 150 kHz, 20 MHz
Sampling frequency	48 MHz
Triggering	• trigger level 10 bit – in the range of -42 V to +42 V • TTL output (3.5 mm jack) • falling edge, rising edge, falling and rising edge, displayed by LED
Display	• LED display: active, inactive, overclocked
Power consumption	
	typ. 10W

Technical Data	
Product Code	AN-SRD-SAM 
Analog input (signal acquisition module)	
Sensor channels	4 synchronous channels – 24-bit sigma-delta converters
Input ranges	• SNR > 115 dB / 120 dB / 115 dB for input ranges: ±10 V, ±1 V, ±0.1 V and sample rate 6.4 kHz • SNR > 100 dB / 105 dB / 105 dB for input ranges: ±10 V, ±1 V, ±0.1 V and sample rate 51.2 kHz • SNR > 100 dB / 95 dB / 100 dB for input ranges: ±10 V, ±1 V, ±0.1 V and sample rate 102.4 kHz • SNR > 85 dB / 85 dB / 95 dB for input ranges: ±10 V, ±1 V, ±0.1 V and sample rate 192.2 kHz
Coupling	• DC coupling, AC coupling with additional high-pass filter 75 Hz, 150 Hz
Sampling frequencies	3.2 kHz, 6.4 kHz, 12.8 kHz, 25.6 kHz, 38.4 kHz, 51.2 kHz, 76.8 kHz, 102.4 kHz, 153.6 kHz, 192 kHz
Max. bandwidth	75 kHz
Supported sensors	• microphones, accelerometers, laser Doppler vibrometers, voltage • switchable ICP power supply +5 mA, signalized by LED • ICP error signalized by LED (sensor short connected, no sensor connected)
Power consumption	
	typ. 9 W

Technical Data	
Product Code	AN-SRD-OPD 
Operation data channels: • *Operation data are slowly varying measurement signals with a maximum bandwidth of 1 kHz, e. g. temperature, pressure.* • *For analysis and classification, the same algorithms as in Anovis-professional or Anovis-lite are applicable.*	
Channels	8 channels – 12-bit resolution
Input ranges	SNR > 60 dB for input voltage ±1 V or ±10 V
Input impedance	33 kΩ
Electric strength	230 V AC (short-term)
Coupling	• DC coupling • AC coupling with low-pass filter 20 Hz
Sampling frequencies	2 kHz
Maximum bandwidth	1 kHz
LED display	1 per channel (active, inactive, overclocked)
Power consumption	
	typ. 8 W

Technical Data	
Product Code	AN-SRD-MUX 
Input switch module • *For alternating connection of sensors to the measurement channels of the module BAM, SAM or OPD*	
Channels	2 four-to-one switches, simultaneously driven
Power consumption	
	typ. 2 W

Technical Data	
Product Code	AN-SRD-19-POW 
Power supply module • *Simcenter Anovis SRD in 19'' housing is available either for connection to external 24 V DC or with POW module*	
Input voltage	94 ... 264 V
Output voltage	24 V
Max. output current	4 A
Power supply buffering	> 80 msec

Technical Data		
Product Code	AN-SRD-COM 	AN-SRD-COM-EC 
Communication module		
Voltage outputs	• 24 V output; 5 V output (e.g. for light barrier)	
Communication port	• Ethernet interface, 10/100 Mbit • UDP, TCP/IP, freely configurable • 8 MByte real time memory	• EtherCAT interface for integration into existing EtherCAT infrastructure
Power consumption		
	typ. 6 W	typ. 7 W

Miscellaneous	
Front panel height	3 U
Front panel width	6 DU for AN-SRD-BAM, AN-SRD-SAM , AN-SRD-COM, AN-SRD-POW 12 DU for AN-SRD-OPD, AN-SRD-MUX, AN-SRD-COM-EC
Environmental temperature	0 – 40 °C for all modules
Protective class	IP 50 when mounted in 19'' signal recording device
Remarks:	
	• software license not included
Deliverables:	
	• refitting of signal recording device included (SRD needs to be sent to a Siemens Industry Software site) • technical documentation in English