

CAMAC Equipment

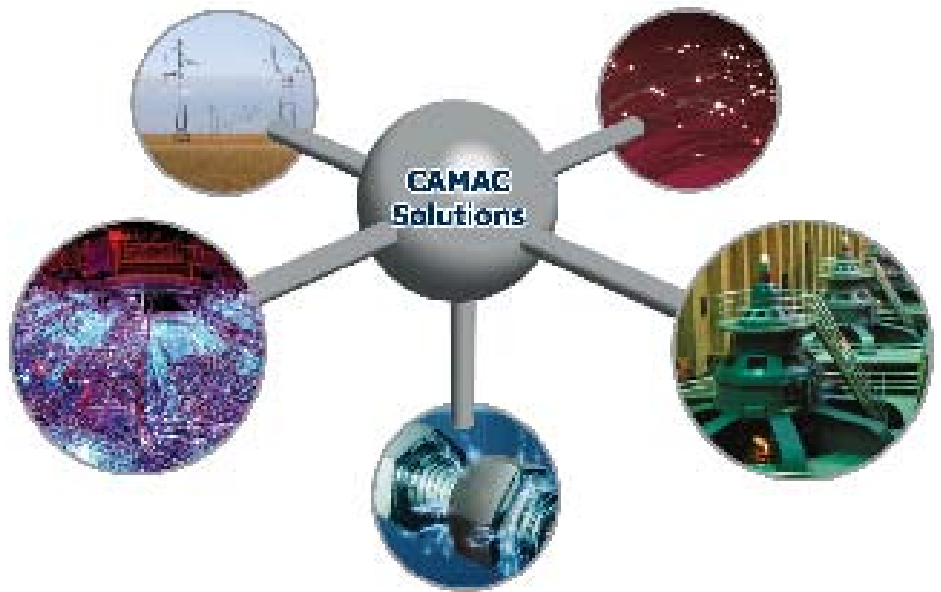
CAMAC, Computer Automated Measurement And Control, is an IEEE-standard (583), modular, high-performance, realtime data acquisition and control system concept.

Since 1969, CAMAC has been used in many thousands of scientific, industrial, aerospace, and defense test systems around the world.

APPLICATIONS

Pressure measurements
Wind tunnel measurements
Jet engine testing
Rocket engine testing
Analog signal multiplexing

3585 Pressure Scanner Interface



The Model 3585 is a single-width CAMAC module providing a high-performance interface to electronic pressure scanners from either Pressure Systems, Inc. (PSI) or Scanivalve Corporation.

FEATURES

- High performance, with 1024-channel capability
- 16-bit resolution (one part in 65,536)
- Interface for Pressure Systems, Inc. (PSI) and Scanivalve pressure scanning subsystems
- ADC and channel control for other external multiplexed devices
- Internal buffer memory
- 50,000 channels/sec sample rate (higher sample rates with multiple 3585s)

GENERAL DESCRIPTION

The Model 3585 is a single-width CAMAC module providing a high-performance interface to electronic pressure scanners from either Pressure Systems, Inc. (PSI) or Scanivalve Corporation. This module accepts analog signals (2.5 volts, 5 volts, or 10 volts full scale) from the pressure scanners and furnishes the multiplexer control for these scanners. The 3585 contains a scan table that can be downloaded from the host computer. This scan table is contained in a 1024 x 16 RAM memory, allowing the 3585 to monitor up to 1024 pressure channels in a user-selected order. This module also contains scan control circuitry, a multiplexer for the analog signals from the pressure scanners, a sample/hold amplifier, and a 16-bit ADC. The digital values from the ADC are loaded in a second 1024 x 16 RAM memory. Data from this memory is read via the CAMAC Dataway. The data memory is fully dual-ported and can be read in Enhanced Serial Highway mode.

Each 3585 (in conjunction with the pressure scanners) provides an aggregate sample rate of 50,000 channels per second (128 channels in 2.56 milliseconds or 1024 channels in 20.48 milliseconds, for example). The 3585 can be software-configured (via the scan table) to monitor any number of pressure channels up to a maximum of 1024. System performance requirements generally dictate the number of pressure scanner units that can be "chained" to a single 3585. This module controls and monitors up to 1024 channels of the following pressure scanner interfaces:

Scanner Supplier Interface Type Description

Scanner Supplier	Interface Type	Description
PSI	S1600-HD-RK	16 channels per S1600 module; 128 channels per rack
	S3200-RK-50	32 channels per S3200 module; 192 channels per rack
	84-IFC	16 BP or ESP scanners per 84-IFC interface
Scanivalve	ZOC12	16 or 32 channels per module; cable serviced
	ZOC14	16 or 32 channels per module; cable serviced
	ZOC16/16Px	16 channels per module; 128 channel per rack
	ZOC22/32Px	32 or 64 channels per module; cable serviced
	ZOC23/32Px	32 or 64 channels per module; cable serviced

OPERATIONS

The 3585 can be used in single-scan or auto scan mode. In single-scan mode, a scan is initiated by an F(25)• A(0) command. Channels selected by the Scan Table are scanned, and the Converted Data memory is written. Reading can be accomplished at the next scan period or as a result of a LAM interrupt. In autoscan mode, reading is totally asynchronous. The latest data for any particular channel is read from the dual-port Converted Data memory. A front-panel LEMO connector is also provided to allow external control of the scan cycle.

When used in combination with the pressure scanner interfaces, the 3585 has a sample rate of 50,000 channels per second. In a 512-channel system with one 3585, one complete scan requires 10.24 milliseconds. However, if four 3585s are used, each 128-channel group is scanned in parallel, and scanning time is reduced to 2.56 milliseconds. Total time to read the data memories for these 512 channels, using four Enhanced block transfers from the Serial Highway Diver's list processor, is about 535 microseconds (not including computer DMA setup overhead for the list).

POWER REQUIREMENTS

volts — 1720 mA
 volts — 480 mA
 -24 volts — 62 mA

WEIGHT:

.62 kg. (1 lb. 6 oz.)

ACCESSORIES

- Scanivalve ZOCENCL 19-inch Rack Enclosure for ZOC16 Pressure Scanners
- PSI S1600-HD-RK, S3200-RK-50, or 84-IFC
Pressure Scanner Interfaces
- Model 5862-Fxyz Interconnection Cable Assembly (PSI scanner interface to 3585)
- Model 5862-Pxyz Interconnection Cable Assembly (Scanivalve scanner interface to 3585)
- Model 3585-001 18 Volt Power Supply for PSI Scanners

ORDERING INFORMATION

MODEL	DESCRIPTION
3585-E1A	Pressure Scanner Interface for PSI Scanners (separate power supply required)
3585-E1D	Pressure Scanner Interface for Scanivalve Scanners

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