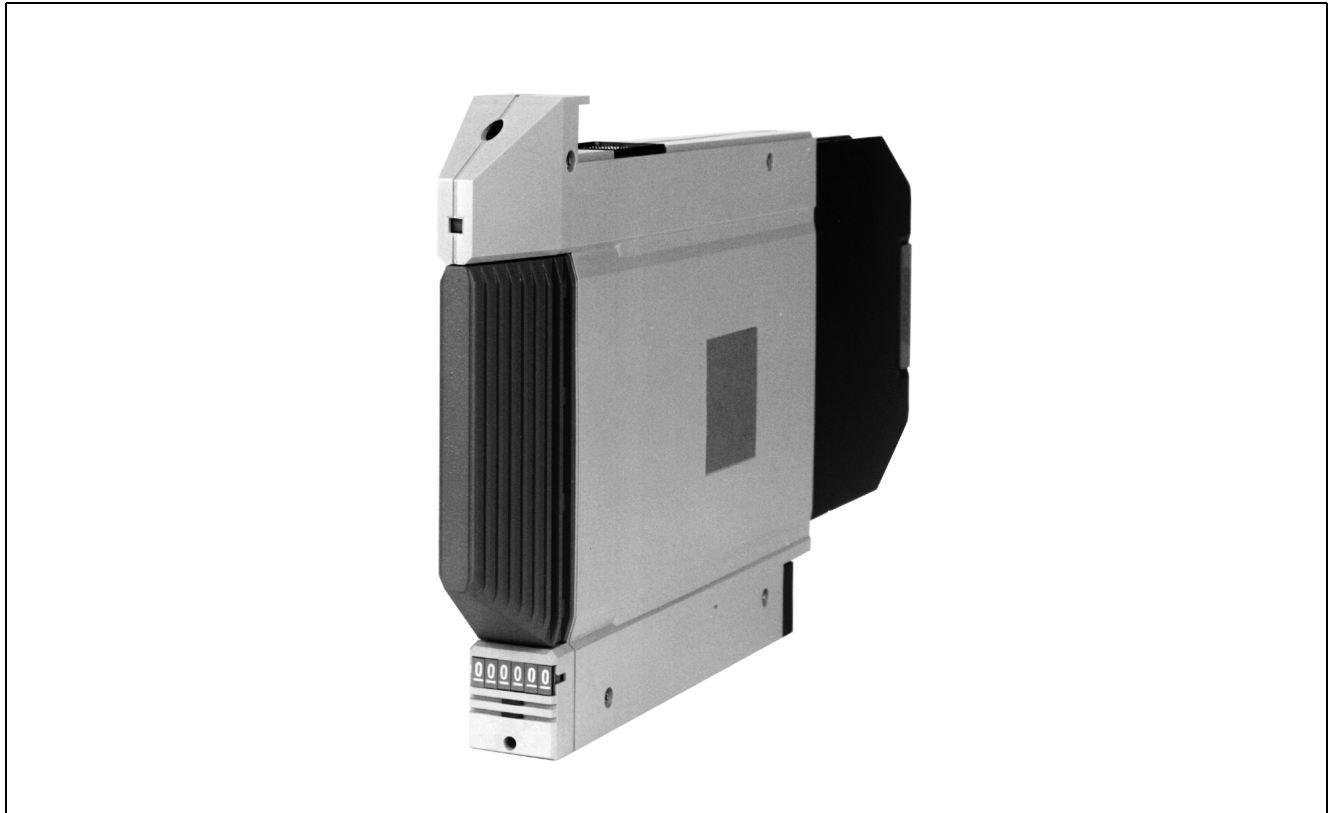


## **I/A Series® Hardware Communications Processor 15**



The Communications Processor 15 is a station on the I/A Series System network providing interconnection of peripherals/devices, instruments and controllers. It has up to four RS-232-C compatible serial ports asynchronous enabled, or one of the ports synchronous enabled as required by various devices. By using a converter, RS-485 compatible devices may be attached with adapters and interfaced to the system.

The communications processor is responsible for translating standard messages received from stations on the network into device specific messages. User programs can also send messages already formatted for a particular device. In this case no translation is performed.

Depending upon its software and device- or controller-specific programming, the processor offers the user a range of features including:

- Access to Data for a Number of Devices and Controllers
- Performance as a Master or Slave
- Communications Protocol Handling

### **ACCESS TO DATA**

Any station on the I/A Series network has access to all data variables imported to the system from attached devices or controllers. Additionally, stations can initiate communication of data values to the attached devices or controllers.

### **PERFORMANCE AS A MASTER OR SLAVE**

Based on its programming for data and message exchanges, the processor can perform as a master or slave type device. Where necessary it can also function as a master/slave device.

### **COMMUNICATIONS PROTOCOL HANDLING**

Protocol-specific message exchanges are handled using standard communications verification and checking procedures. These include the generation of ACKs, NAKs, message addressing and message retries.

### **DIAGNOSTICS**

The communication processor utilizes three types of diagnostics to detect and/or isolate faults:

- Power-up Self Checks
- Run-time and Watchdog Timer Checks
- Off-line Diagnostics

Power-up self checks are self-initiated when power is applied to the communication processor. These checks perform sequential tests on the various processor functional elements. Red and green indicators at the front of the processor module reflect the successful (or non-successful) completion of the startup sequence.

The run-time and watchdog timer checks provide continuous monitoring of communication processor functions during normal system operations. The operator is informed of a malfunction by means of printed or displayed system messages.

Off-line diagnostics are temporarily loaded into the system for the purpose of performing comprehensive tests and checks on various stations and devices. Using the off-line diagnostics, a suspected fault in the processor can be isolated and/or confirmed.

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