Introduction

CompoWay/F Communications

The program for the communications functions is created in the host computer and the K3N□'s parameters are monitored/set from the host computer, so the explanation provided here is from the viewpoint of the host computer.

CompoWay/F is OMRON's standard communications format for general serial communications. This format uses a standard frame format as well as the FINS commands which have proven successful in OMRON's PCs, so it can simplify communications between components or between personal computers and components.

The FINS (Factory Interface Network Service) protocol provides message communications between PCs in OMRON FA networks.

Use a K3N□ with Communications Output Board, FLK1/2/3/4/5/6 for CompoWay/F communications. The K3N-series has the following communications functions.

- Reading/Writing parameters
- Operational control
- Switching setting levels

The communications functions are limited to the following conditions.

- Parameters can be written only during remote operation.
- Only the set value can be written while in RUN mode. All other parameters are read-only.
- Parameters cannot be written or read when a sensor error has occurred (K3NH).
- Parameters cannot be written or read during startup lock (K3NX).

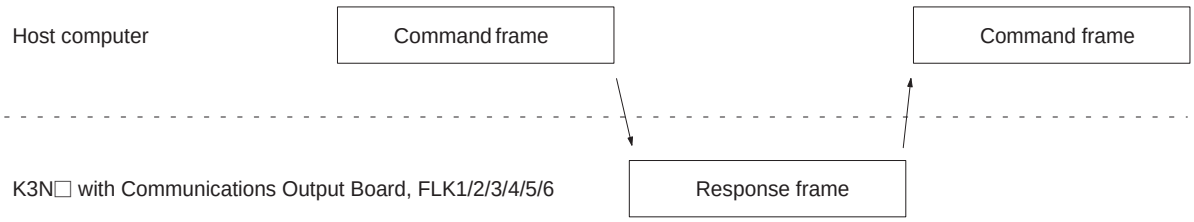
Communications Specifications

Transmission line connection:	Multiple point
Communications method:	RS-232C or RS-422 (4-wire, half-duplex) RS-485 (2-wire, half-duplex)
Synchronization method:	Start-stop synchronization
Communication speed:	1,200/2,400/4,800/9,600/19,200/38,400 bps (default: 9,600 bps)
Communication code:	ASCII
Data bits:	7 or 8 bits (default: 7 bits) (An 8-bit code is made by adding a 0 to the 7-bit code.)
Stop bits:	1 or 2 bits (default: 2 bits)
Error detection:	Vertical parity (none, even, or odd) (default: even parity) BCC (block check character) Start-stop synchronization data composition

Transmission Procedure

When the host computer transmits a command frame, the K3N□ transmits a response frame that corresponds to the command frame. A

single response frame is returned for each command frame. The following diagram shows the operation of the command and response frames.



Interface

Communications with the host computer are carried out through a standard RS-232C, RS-422, or RS-485 interface. The model numbers indicate which interface is incorporated in the models.

- K3N□ with Communications Output Board, FLK1/4: RS-232C
- K3N□ with Communications Output Board, FLK2/5: RS-422
- K3N□ with Communications Output Board, FLK3/6: RS-485