

GENERATOR ACCESSORIES

KOHLER POWER SYSTEMS

Generator System Monitoring and Control



Power System Communications

Applicable to the following generator sets using the Kohler®

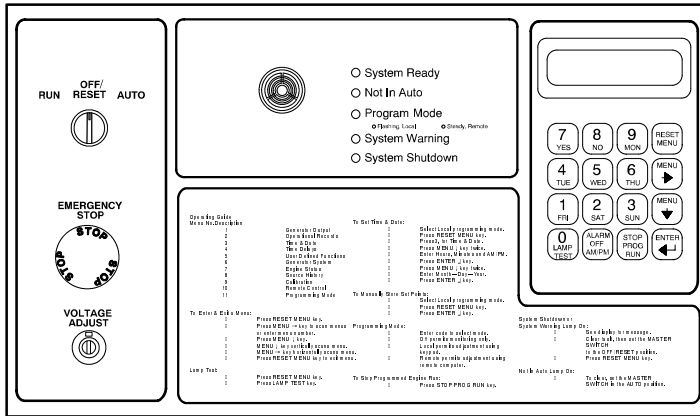
Decision-Maker™ 340 Controller:

- 20-100RZ
- 20-180ROZJ/REOZJ
- 20-180ROZP/REOZP
- 135-275RZD
- 200-2000ROZD

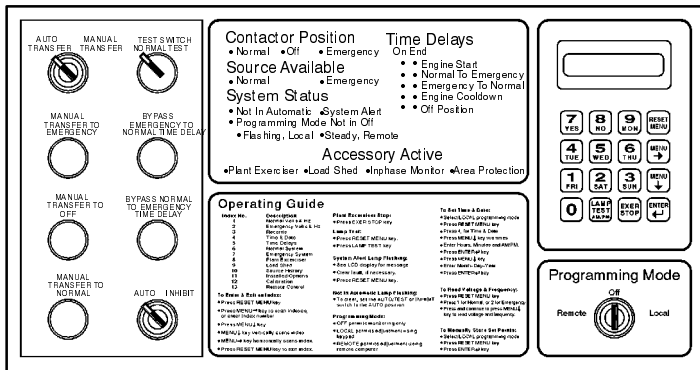
Applicable to the following transfer switch logics:

- M340
- M340+

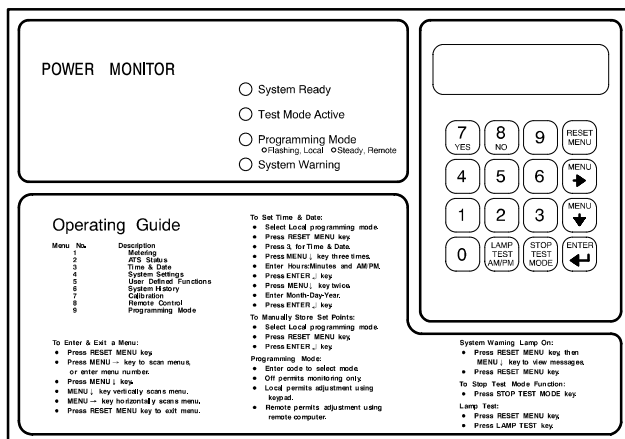
Applicable to the PM340 Power Monitor



Decision-Maker™ 340 Generator Set Controller



M340+ Transfer Switch Control Logic (shown with available options)



PM340 Power Monitor

• Monitor the power system, generator sets and transfer switches by an IBM compatible personal computer and Kohler software.

• Alter generator set, transfer switch, and power monitor parameters using a single menu-driven personal computer software.

• Direct PC connections are RS-232 up to 50 feet (15 m) or RS-485 up to 4000 feet (1219 m). Optional modems allow generator set control and monitoring over telephone lines.

• Years of successful worldwide communication system applications.

• Password-protected data access.

• Print capability of screen information.

• Address up to 128 sites (telephone numbers) with a single PC software package.

• Connect up to 128 generator set controllers, transfer switch controllers, and power monitors to a single local area network for total power system monitoring and control by a single personal computer.

• All communication products optional. Communications hardware available as factory options or field-installed kits.

Monitoring and Control System Features

Decision-Maker™ 340 Generator Set Controller

The supplied software permits the following displays, data inquiries, and program functions:

Displays

- Displays all fault and status messages
- Program mode
- Engine functions
 - Battery voltage
 - Coolant temperature (English and metric)
 - Engine speed
 - Oil pressure (English and metric)
- Generator output—status
 - Current L1
 - Current L2
 - Current L3
 - Frequency
 - Generator Voltage (line-to-line and line-to-neutral for all phases)
 - Kilowatt hours
 - Percent of rated kilowatts
 - Power factor
 - Total kilowatts

Data Inquiries

- Operational status
 - Generator initial start date
 - Generator run loaded or unloaded
 - Generator run duration
 - History of last 4 shutdowns
 - Last start date
 - Number of days of operation
 - Number of starts
 - Run time (loaded)
 - Run time (unloaded)

- System information—view
 - Battery voltage
 - Generator kilowatt rating
 - Load definition
 - Location
 - Model number
 - Number of phases
 - Serial number
 - Specification number
 - System frequency
 - System voltage

Program Functions

- Start and run engine
 - Fault display
 - Reset system faults
 - Run time
- Time delay settings—view and program
 - Auxiliary Inputs (1-4)
 - Crank on and pause time
 - Engine cooldown
 - Engine start
 - Number of crank cycles
 - Overvoltage and undervoltage
 - Starting aid
- Trip point setting—view and program
 - Battery high and low voltage
 - Overvoltage and undervoltage
 - Overspeed
 - Overfrequency and underfrequency
- System Identification Information—view and program
 - Designation, load, and location

Monitoring and Control System Features (continued)

M340 and M340+ Transfer Switch Controllers

The supplied software provides the following displays, data inquiries, and program functions:

Displays

- Accessories active
- Frequency—normal and emergency sources (line-to-line)
- Phase sequence
- Program mode
- Sources available
- Switch position
- System faults
- Time delays operation
- Transfer status
- Voltage—normal and emergency sources (line-to-line)

Data Inquiries

- Operational status
 - ATS initial start date
 - Days of operation
 - History of last 4 transfers
 - Hours not in normal position
 - Hours of emergency source
 - Last start date
 - Switch transfers
- System information—entry and then view
 - Amperage ratings of transfer switch
 - Load definition
 - Location
 - Number of phases
 - Number of poles
 - Serial number
 - System frequency
 - System voltage

Program Functions

- Start and run engine
 - Run time
 - Transfer load to generator
- Time delay settings—view and program
 - Emergency to normal
 - Engine cooldown
 - Engine start
 - Load shed
 - Normal to emergency
 - Off to emergency (M340+ only)
 - Off to normal (M340+ only)
 - Plant exerciser
 - Time of day
- Trip point settings—view and program
 - Loads for load shed
 - Overfrequency
 - Overvoltage
 - Underfrequency
 - Undervoltage
- System Identification Information—view and program
 - Designation, load, branch, location, and installed options.

PM340 Power Monitor

The supplied software permits the following displays, data inquiries, and program functions:

Displays

- System Status
- Program mode
- AC Power System Monitoring
 - Voltage (line to line and line to neutral for all phases)
 - Current L1, L2, and L3
 - Frequency
 - Power factor
 - Total kilowatt load
 - Kilo-volt-amps reactive
- Monitoring
 - DC supply voltage
 - Customer-defined analog auxiliary inputs (2)

Data Inquiries

- Operational status
 - History of last 4 auxiliary warnings or ATS tests
 - Hours in each contactor position—Normal, Off, or Emergency
- System information—view
 - System voltage
 - System frequency
 - Number of phases
 - Load designation
 - Load description
 - Load location
- ATS Information—view
 - Contactor position—Normal, Off, or Emergency
 - Contactor rating
 - Model number
 - Specification number
 - Serial number
 - Controller serial number

Program Functions

- ATS Test Mode—Test the complete power system
 - Manual Test
 - Timed test
- Time Delay Settings For Auxiliary Inputs—view and program
- System Identification Information—view and program
 - Designation, load, and location
- Analog Input Description—view and program

PC Communications

There are four ways a PC can communicate with generator set controller, transfer switch controllers, and/or power monitor devices.

Local Single Connection

A PC is connected directly to the device communication module with an RS-232 cable for applications where PC is within 50 ft. (15 m) from the device or RS-485 cable for applications where the PC is up to 4000 ft. (1220 m) from the device.

Local Area Network (LAN)

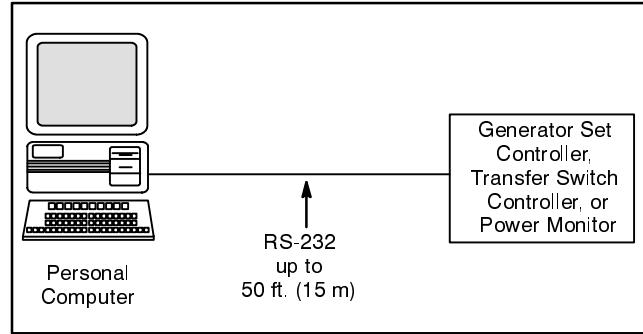
A PC is connected directly to the device's local area network. A LAN is a system of connecting more than one device to a single PC.

Remote Single Connection

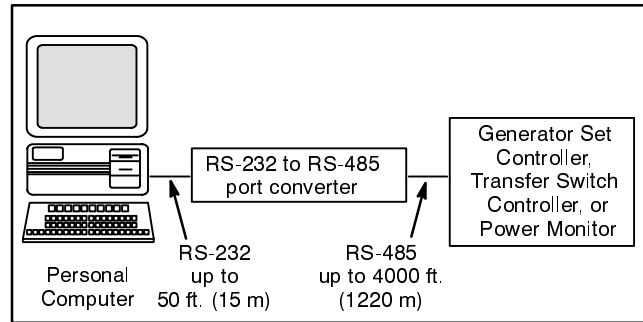
The PC and device are connected by modems. The PC communicates with the device via a telephone network and the PC can be located anywhere a telephone line can be accessed.

Remote Area Network

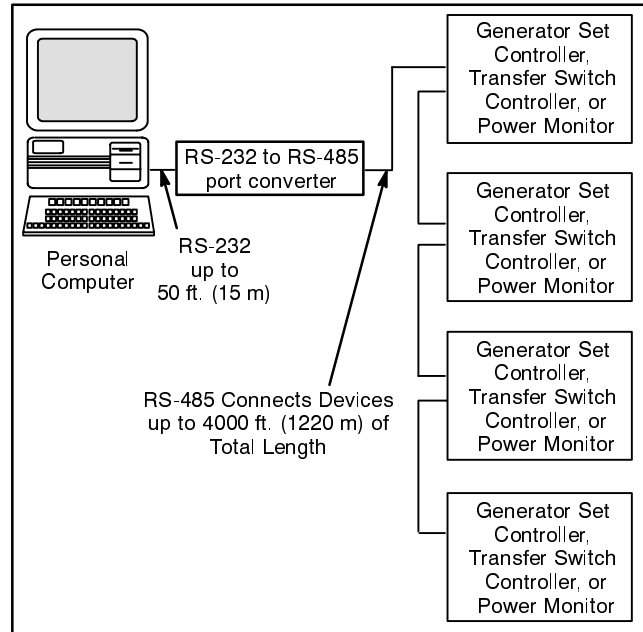
A PC is connected to a modem. The devices are connected as a LAN network. The PC communicates with the devices via a telephone network that interfaces to the LAN network. The PC can be located anywhere a telephone line can be accessed.



Local Single Connection up to 50 ft. (15 m)

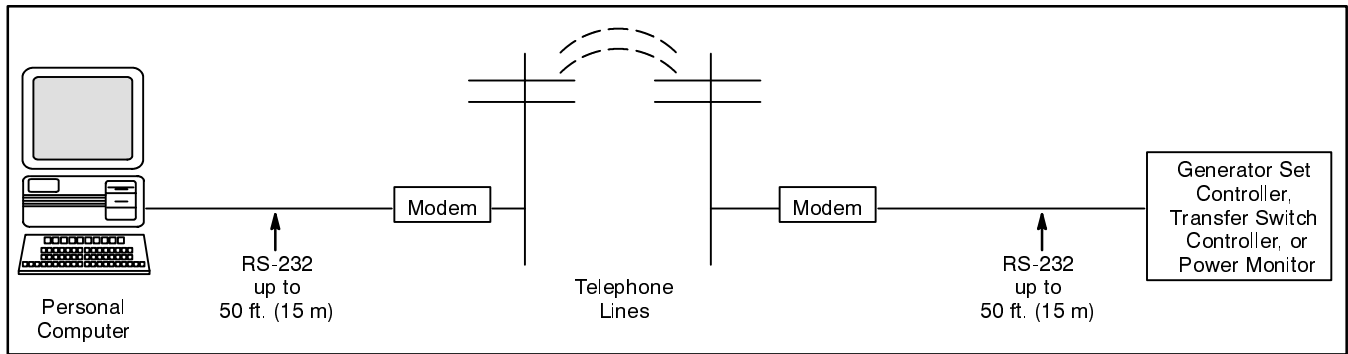


Local Single Connection up to 4000 ft. (1220 m)

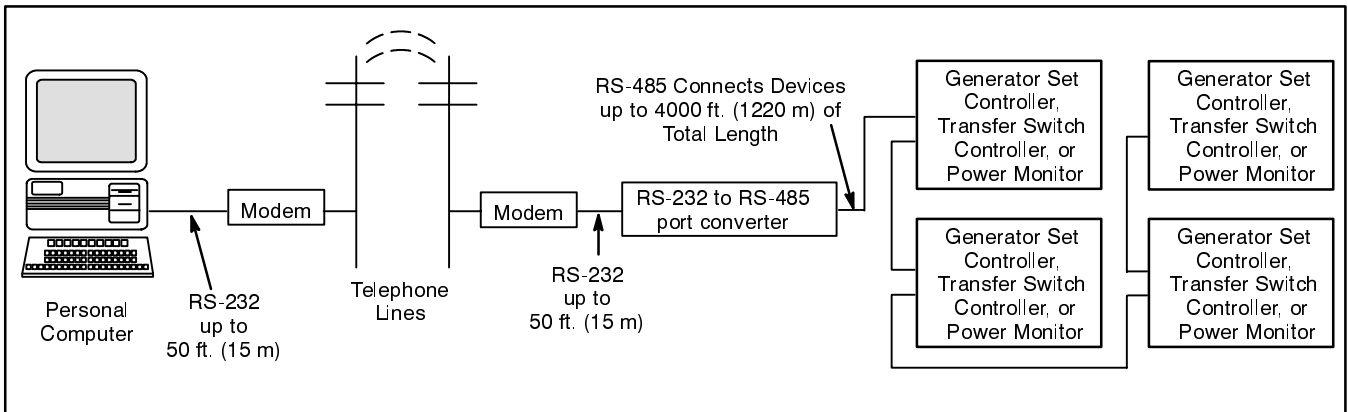


Local Area Network

PC Communications (continued)

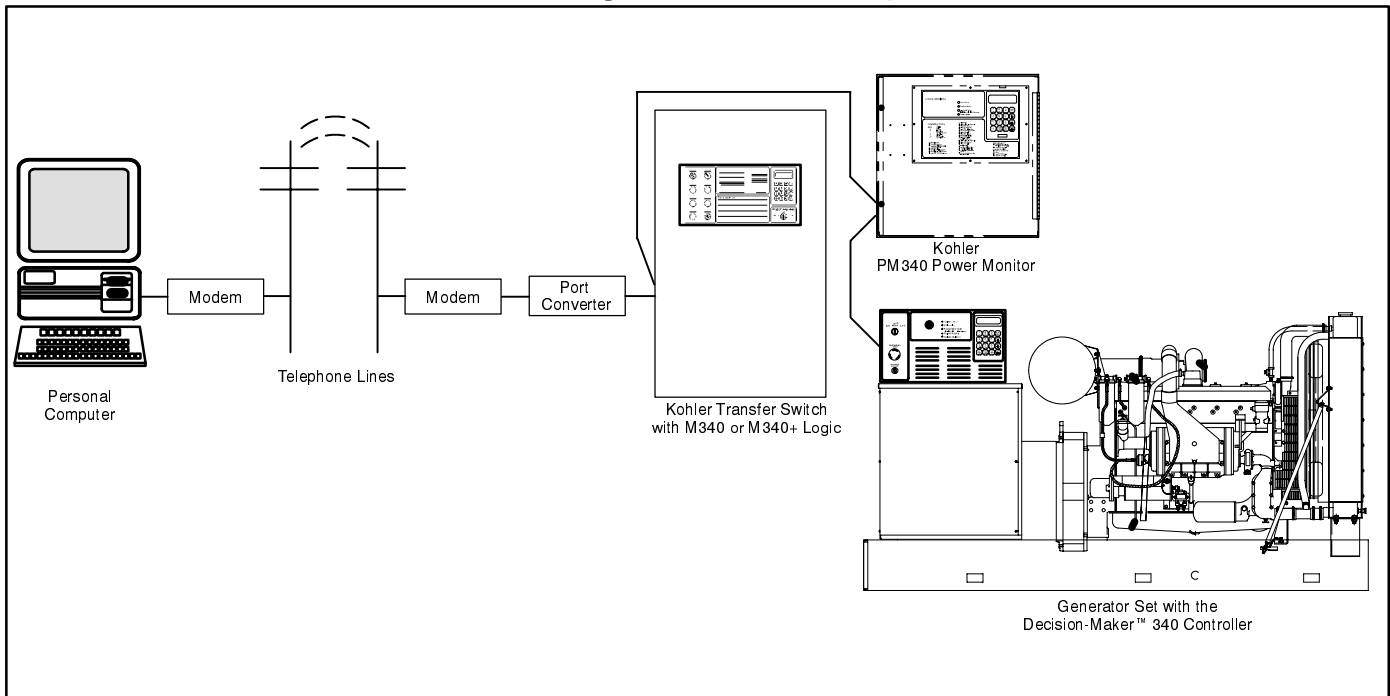


Remote Single Connection



Remote Area Network

Generator System Configuration



Power System Communication Network Configuration Using Telephone Lines

Communications Accessories

Communication Products

- RS-232 Communication Modules mount inside the following devices
 - Decision-Maker 340 generator set controller
 - M340 or M340+ transfer switch controller
 - PM340 Power Monitor
- RS-485 Communication Modules mount inside the following devices
 - Decision-Maker 340 generator set controller
 - M340 or M340+ transfer switch controller
 - PM340 Power Monitor
- RS-232 to RS-485 Port Converters
 - Internal version available for the Power Monitor only
 - External version for Decision-Maker 340 generator set controller, M340 and M340+ transfer switch controllers, and the PM340 Power Monitor. Add cable kit for direct connection to a PC
- Cable for direct connection to a PC
- External modem for Decision-Maker 340 generator set controller, M340 and M340+ transfer switch controllers, and the PM340 Power Monitor. Includes a 10 foot (3 m) RS-232 cable
- External modem for PC. Includes a 10 foot (3 m) RS-232 cable and adapter
- Software for monitoring and control. Usable with Decision-Maker 340 generator set controller, M340 and M340+ transfer switch controllers, and the PM340 Power Monitor

DISTRIBUTED BY:

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