# COM220
## Telephone Modem

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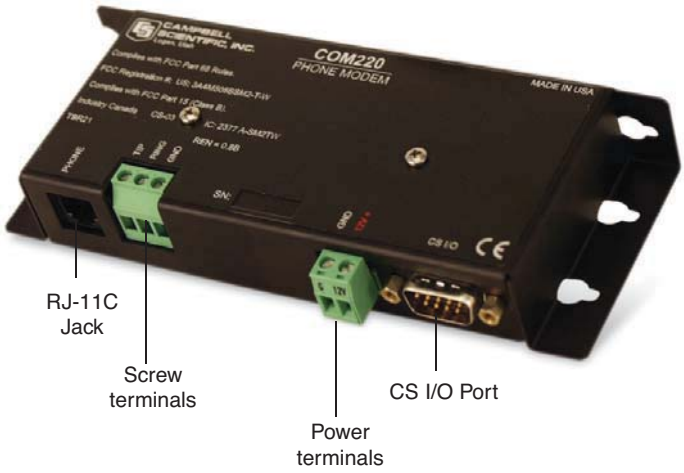
The COM220 modem enables communications between a computer and a Campbell Scientific datalogger over a public switched telephone network. A Hayes-compatible modem is required at the computer base station. The COM220 connects with the datalogger at the field site. The COM220's wide operating temperature range and low power requirements make it ideal for use at remote sites.

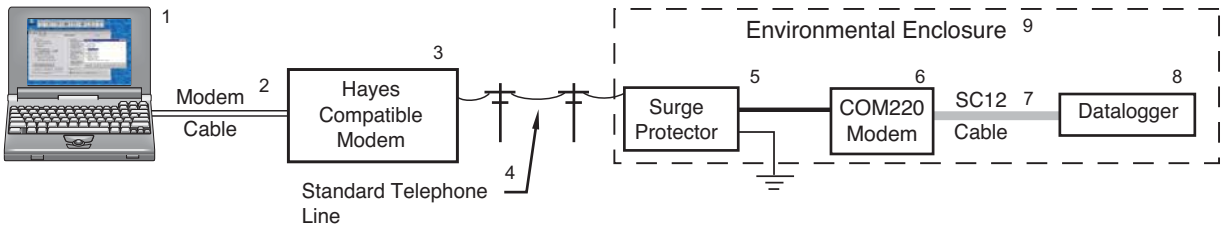



The datalogger connects with the CS I/O port on the COM220 via an SC12 or SC12R-6 cable. The RJ-11C jack is for attaching a surge-protected telephone line. Alternatively, the screw terminals (GND, RING, TIP) can be used to connect the COM220 with a phone line via a surge protector.

## Features

- Supports communication rates up to 115.2 kbps between modem and datalogger (in practice, data transmission through phone lines is generally limited to 33.6 kbps)
- Offers both Modem Enable (ME) and Synchronous Device Communications (SDC) modes
- Allows customers to set the number of rings before answering a call (requires an SC532A Interface)
- Includes a speaker

## Hardware Requirements




*At Computer Base Station*

(1) User-supplied PC running PC400 or LoggerNet Datalogger Support Software

(2) 7026 serial cable or equivalent

(3) Customer-supplied, Hayes-compatible modem

(4) Switched telephone network that connects the computer base station with each datalogger field site

*At Field Site*

(5) Telephone surge protector if the telephone company has not installed surge protection

(6) COM220 modem

(7) SC12 cable (included with COM220); the SC12R-6 may be purchased if a longer cable is required.

(8) Datalogger

(9) Typically an ENC12/14, ENC14/16, or ENC16/18 environmental enclosure

(10) Power supply, usually the datalogger's sealed rechargeable battery recharged with ac power or solar panel

# Ordering Information

## Telephone Modem

| | |
|---|---|
| **COM220** | 56 K Phone Modem |

### Temperature Range Options (choose one)

| | |
|---|---|
| **-ST** | Tested for -25° to +50°C range. |
| **-XT** | Tested for -40° to +85°C range. |

### Country of Usage Options (choose one)

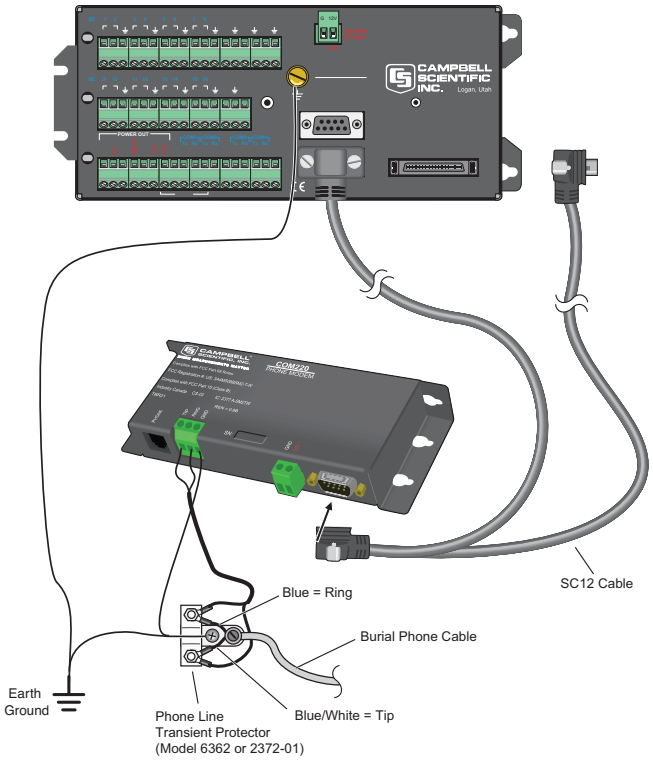
| | |
|---|---|
| **-US** | Set for use in US or Canada |
| **-UK** | Set for use in the UK. |
| **-AU** | Set for use in Australia. |

## Accessories

| | |
|---|---|
| **4330** | Surge Protector 2-Wire, JOSLYN 2374-01 |
| **6362** | Surge Protector Kit for 2-Wire Modem with Mounting for Enclosure Use. |
| **SC532A** | Peripheral to RS-232 Interface that is required to set the number of rings before answering a call. |
| **CABLE2CBL-L** | 2-conductor, 22-awg cable with user-specified length; enter length, in feet, after the -L. Typically, this cable is used when the COM220 is housed in a prewired enclosure. For this application, order the -PW option (see below). |

### Cable Termination Options for CABLE2CBL (choose one)

| | |
|---|---|
| **-PT** | Cable terminates in stripped and tinned leads for direct connection to a datalogger's terminals. |
| **-PW** | Cable terminates in a connector for attachment to a prewired enclosure. |




A COM220 is connected with a CR1000 and a surge protector.

# Specifications

**Standards:** V.92, K56Flex, V.90, V.34, V.32bis, V32, V23, V22bis, V22, V.21, B212, B103

**Registration:** FCC US: 3A4M508BSM2-T-W
IC 2377 A-SM2TW
TBR21

**Compatible Dataloggers:** CR800, CR850, CR1000, CR3000, CR5000, CR7, CR500, CR510, CR10(X), 21X, CR23X

**Operating Voltage:** 12 Vdc

**Current Drain**
**Quiescent:** ~120 µA
**Active:** ~30 mA

**Communication Rate Between Datalogger and COM220 (selected by user):** 9600, 38400, 57600, 115200 bps

**Operation:** Full-duplex over standard analog phone lines

**Operating Temperature Range**
**Standard:** -25° to +50°C
**Optional Extended:** -40° to +85°C

**Dimensions:** 6.5-in. x 1.0-in. x 2.6-in. (16.5-cm x 2.5-cm x 6.6-cm)

**Weight:** 0.35 lbs (0.16 kg)

**Ships with:** SC12 cable, ground cable, telephone patch cord, screws, grommets

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