



# Model 400 Series Standalone Modems



- 1200 to 19,200 bps
- Bell 202T Type (400 only)
- Temperature Hardened
- 2 & 4 Wire Switchable
- Rugged Metal Enclosure
- Intergal Power Supply
- KOD (Key-on Data) Option
- RS232 Interface
- Optional RS422 Interface
- Anti-Streaming Option
- Switch Selectable Timings
- Optional DC power operation

## Description

The GDI Series 400 Modems are the most versatile models for private wire and Telco 3002 interconnect. There are 17 versions of standalones for different applications. Begin with the industry standard Model 400SA at 1200 bps and for 2400 bps the Model 404SA. Then raise the speed to 9600 or 19,200 bps for Models 496SA and 419SA respectively. They are temperature tested rugged modems designed for the transportation industry. Directly connected to traffic controllers or variable message signs, they communicate at 1200 bps over leased telephone lines or higher speeds via private wire interconnect. Both point-to-point and multi-drop, the GDI Series 400 modems offer data rates of 1200 to 19,200 bps. The internal fused power supply on the standalone model eliminates the common "Brick" external transformer.

Adding the KOD function allows signals based on data received from the hardware to generate an RTS handshake. This unique Key-On-Data capability is essential for communicating with a communications device that requires active RTS/CTS handshaking .

## Updated Standalone 400 Series Modem Full Backward Capability New Features

### Specifications — General

#### Environmental Operating Ranges

Temperature Range	-37 to + 74°C
Humidity	95% non-condensing

#### Modem

Modulation	Frequency Shift Keying
Data Interface	Primary: RS-232C compatible via DB9M Auxillary: RS-232C compatible via RJ45 Optional RS422 operation

Mechanical	Standalone case 1.54"H X 5.750"W x 8.4"D
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**GDI Communications LLC**  
**PO Box 1330, Verdi, NV 89439**  
**Ph: 775-345-8000 Fax: 775-345-8010 E-mail: sales@sgdi.net**



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## Models, Frequencies & Data Rates

Model	Mark Hz	Space Hz	Soft Carrier Hz	Data Rate
400SA	1200	2200	900	0-1200
404SA	2400	4400	1800	0-2400
496SA	11200	17600	7800	0-9600
419SA	19200	38400	13800	0-19200

## Power Requirements

### Standalone:

Voltage	90 to 130 VAC (Standard) 180 to 260 VAC (Optional)
Frequency	47 Hz to 63 Hz
Power	4 watts maximum
Optional DC operation	12 VDC

## Indicators

TXD	Transmit Data
RXD	Receive Data
RTS	Request To Send
CTS	Clear To Send
Carrier Detect	Carrier Detect
Power	Modem Ready
KOD	KOD option enabled
RS422	RS422 option Enabled

## Timing (Switch Selectable)

Function	Model 400	All other Models
RTS—CTS	12mS + 2mS	6 or 12 mS + 2mS
CAR Delay	8mS + 2mS	4 or 8 mS + 2mS
Soft Carrier Off	10mS + 2mS	5 or 10 mS + 2mS
Rcvr Squelch	6.5mS + 2mS	3 or 6 mS + 1mS
Anti-Streaming	None	Switchable on/off

## Receiver Characteristics

Dynamic Range	+3dBm to -48dBm
Carrier Detect Threshold	-42 ≥ 3 dBm
Carrier Detect Hysteresis	3dB
Demodulator Distortion	<10% peak

## Transmit, Level & Duplex

-8 dBm to 0 dBm potentiometer adjustable  
2 wire half duplex, 4 wire full duplex switch selectable  
Transmit Frequency Tolerance +1%

## Multidrop Capability

Recommend a maximum of 8 units per line. More can be used if the line is short, low noise or controller software configuration allows.

All Model 400 modems above are enhanced replacements designed to take advantage of newer traffic controllers and other products capable of higher speeds. System communications with our Series 400 modems can be improved due to the selectable timing, anti-streaming and transmitter options.

Specifications subject to change without notice

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