



Sequence Of Events Log for the Tx/Rx provides a record for 40 events for each of the following points

Point Number	9785
1	Start
2	Stop
3	Reserve Key
4	Remote Initiate
5	Transmitter Fail
6	Checkback Fail
7	Block Output
8	Power Up
9	Power supply # 1 fail
10	Power supply # 2 fail

Table 1. Signals Monitored

Specifications

General

The 9785 is a programmable 10 W On/Off carrier system which fully complies with ANSI C93.5. The system is packaged in a single 3U high chassis and includes full-feature transmitter and receiver sections. The unit can be optionally equipped with voice capability and checkback functions. External amplifiers can be used to boost the output power if required.

Dimensions: 19" x 5.25" x 15.25"

Supply voltage: 48/125 Vdc (38 to 150 Vdc 85 W)
250 Vdc (200 to 300 Vdc 85 W)

Approximate Weight: 17.5 lbs.

Operating Temperature: -20°C to 60°C

Humidity: 0 to 95% non-condensing

ESD protection (per IEEE PC 37.90.3, 2001), Dielectric and surge withstand: Per ANSI C93.5

Transmitter

The transmitter is a fully programmable Direct Digital Synthesis (DDS) generator followed by a 10 W power amplifier and filter. If the voice option is installed the audio signal is AM modulated onto the carrier.

Frequency step size: 10 Hz

Frequency setting method: Direct reading rotary switches

Rated output power: 10 Watts

Output impedance: 50 Ohms (with load-matching adjustment)

Carrier Level Indicator:

Display: Front panel 3-1/2 digit direct reading (in dB)

Range: ±10 dB

External Meter Output:

0 to 100 μ Amp ±1 Volt or 0-5 Volt, jumper selectable.

Receiver

The receive circuit consists of an input normalizer, programmable frequency detector, and carrier level indicator.

Receiver sensitivity: 5 mVrms

Maximum receive level: >25 Vrms

Nominal Bandwidth	Delay *	Channel Spacing w/Voice	Channel Spacing w/o Voice
500 Hz	5 ms	4 kHz	1 kHz
1000 Hz	3 ms	4 kHz	2 kHz
1500 Hz	1.5 ms	4 kHz	3 kHz

Table 2. Minimum permissible channel spacings and delay times.

* The delay times specified have been established per ANSI C93.5, section 5.7.3, and 6.3.21. The electromechanical block output contacts will add an additional 7 ms delay.

Optional Sequence of Events

System status points are checked every millisecond; changes in system status (events) are recorded in the log with time and date stamps. The events are stored in non-volatile memory and are recalled most recent event first. The forty most recent events are retained. The local clock is automatically synchronized to an externally supplied IRIG-B signal if available.

IRIG-B input: 1000 Hz modulated or direct TTL

Signals monitored: See Table 1.

Output Ratings

Solid State Outputs

Maximum continuous current: 1 Amp

Maximum 1 minute current: 2 Amps

Maximum 100 mSec current: 10 Amps

Maximum open circuit voltage: 280 Volts

Trip Relay Outputs

Maximum continuous current: 5 Amps

Maximum 200 mSec current: 30 Amps

Maximum open circuit voltage: 280 Volts

Alarm Relay Outputs

Maximum continuous current: 1 Amp

Maximum breaking current (125 Vdc): 1 Amp, non-inductive

Maximum breaking current (280 Vdc): 0.25 Amp, non-inductive

Maximum open circuit voltage: 280 Volts

Note: Logic level (5 volt nominal) outputs are available.



Input Ratings

48 Volt Inputs

Will not operate at or below: 28 Volts
Will operate at or above: 35 Volts
Minimum pulse duration: 100 μ Sec
Input current: <10mA, 5mA typical

125 Volt Inputs

Will not operate at or below: 70 Volts
Will operate at or above: 90 Volts
Minimum pulse duration: 100 μ Sec
Input current: <10mA, 5mA typical

250 Volt Inputs

Will not operate at or below: 140 Volts
Will operate at or above: 175 Volts
Minimum pulse duration: 100 μ Sec
Input current: <10mA, 5mA typical

Note: Logic level (5 volt nominal) outputs are available.

Two Wire Operation

The RF transmitter output and receiver input are jumpered together with two UHF connectors, J5 and J7. Either connector can be connected to the line tuning equipment. This provides a maximum continuous output power of 10 Watts with a nominal input/output impedance of 50 Ohms.

Four Wire Operation

The RF transmitter output and receiver input are isolated utilizing separate UHF connectors. The transmitter output, J5, provides a maximum continuous output power of 10 Watts with a nominal output impedance of 50 Ohms.

In four wire operation the receiver input signal is connected to J7. The receiver input impedance is jumper selectable between a 50 Ohm termination mode and a high impedance (>30 K Ω) non-terminated mode. The 50 Ohm termination mode has a maximum continuous power dissipation of 1 Watt.

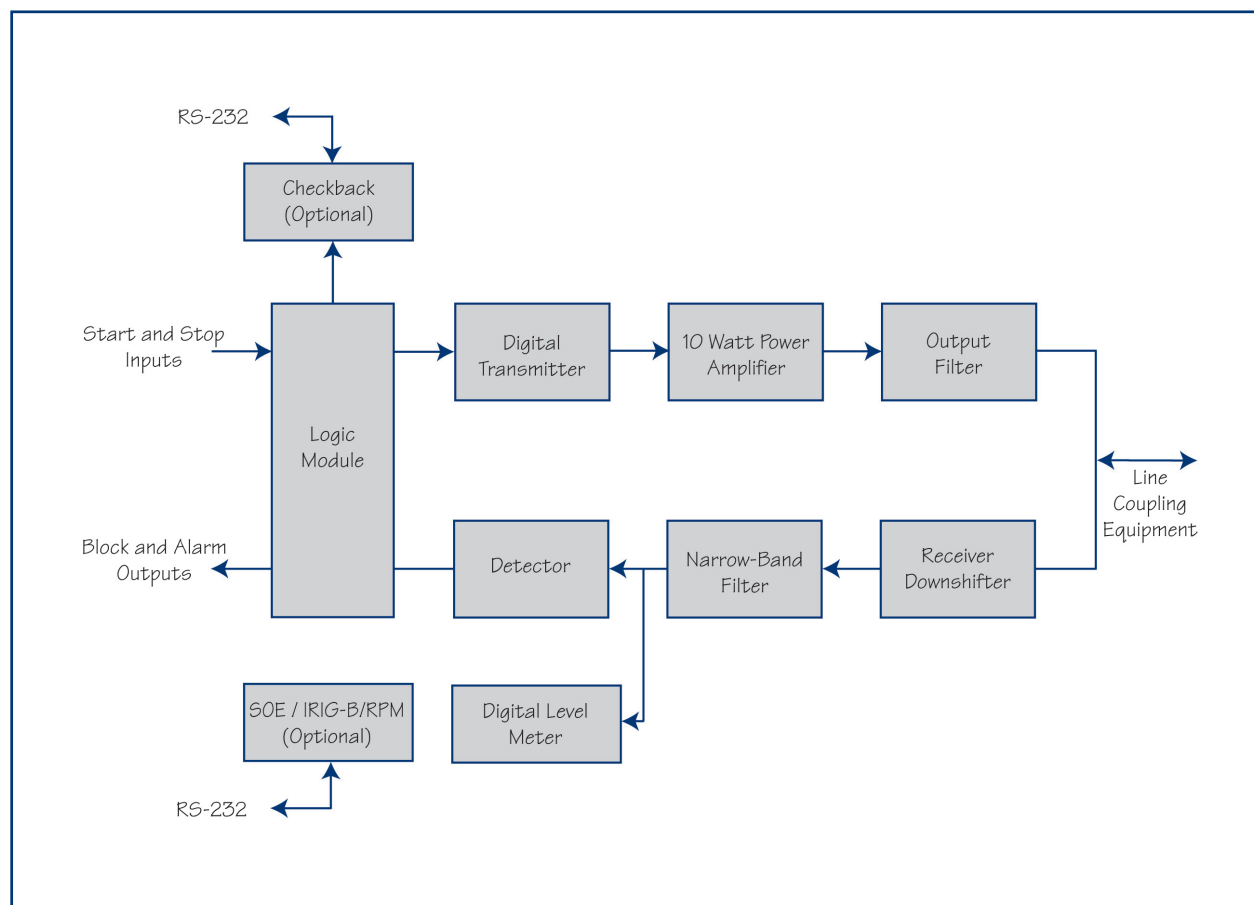


Figure 1. Typical RFL® 9785 Programmable ON/OFF Powerline Carrier System Block Diagram.

Specifications subject to change without notice.