



# STATUS SIGNAL TELECOM TRANSMISSION

Tone Transmitter (switch/level change input) Type COM-60  
Tone Receiver (switch output) Type COM-61

- \* **Signals on/off status over telecom lines**
- \* **Narrow profile - high packing density**
- \* **Field programmable input types**
- \* **24V or 48V DC powered**
- \* **Simple installation**
- \* **DIN Rail or optional screw mounting**



## FUNCTION

The COM-60 and COM-61 provide a way of signalling a switched state over telecom circuits where a copper wire connection is not available.

## TYPICAL APPLICATION

Long-distance transmission of alarm conditions e.g. high or low conditions from a trip amplifier or other alarm contacts, over telecom lines including optical fibre or multiplexed circuits.

## PRINCIPLE of OPERATION

On/off states are converted into 400Hz/2000Hz tones for transmission. As these units do not rely on the passage of dc current or voltage levels, they enable status information to be transmitted along speech channels in telemetry or multiplexed systems.

## Ordering Information

- Quote 'Type COM-60' or 'Type COM-61'
- Input type i.e. contact, open collector or dc level
- Power supply i.e. 24V DC or 48V DC

The Tone Transmitter accepts either open-collector, volt-free contact or voltage change type inputs.

The Tone Receiver converts the transmitted tones into a relay output (SPCO). A 'loss of signal' warning output (open collector) is provided.

## SPECIFICATION

### POWER SUPPLY (must be stated at time of order)

Either 24V DC -10% +20% 1W maximum or  
48V DC -10% +20% 1W maximum

Protected by a thermal self-resetting fuse -100mA.

### ISOLATION

Input, output and power supply are all isolated from each other to withstand 1000V DC.

### TEMPERATURE RANGE

Operating and storage: -10°C to +50°C

### COM-60 TRANSMITTER

#### INPUTS (Selectable by internal link)

Volt-free contact

Open collector

Voltage change: 24V DC max., 1V DC min.

NB signal must remain static for 80ms min. to be valid

#### INPUT IMPEDANCE

Contact mode: 10k ohms

Voltage mode: 100k ohms

#### INPUT FREQUENCY

0 to 4Hz

#### OUTPUT IMPEDANCE

Transformer coupled: 600 ohms

### OUTPUT SIGNAL LEVEL

+5.5dB (1.5V rms) @ 400Hz  
(input open or high signal)  
to +6.5dB (1.6V rms) @ 2kHz  
(input closed or low signal)

### LED INDICATOR

Green: power on

Red: input signal active

### COM-61 RECEIVER

#### INPUT IMPEDANCE

Transformer coupled: 600 ohms

#### INPUT SIGNAL RANGE

-7.5dB (0.325V rms) to +6.5dB (1.6V rms)

#### OUTPUT RELAY

Rated at 8 Amps, 250V 50Hz / 30V DC resistive load

#### LOSS OF SIGNAL ALARM

Open collector rated 60V @ 50mA; 'ON' when receiving over 350 Hz.

#### LED INDICATOR

No illumination: power off or <350Hz being received

Green: power on and receiving 400Hz

Red: receiving 2kHz

## MECHANICAL DETAILS

### WEIGHT

Approximately 120g

### ENCLOSURE

Protection: Enclosure - IP40 DIN 40050  
Terminals - IP20 DIN 40050/ VBG 4

Material: Enclosure body - ABS  
Colour - light grey  
Terminal Housing Polycarbonate  
Colour - light grey

Terminals: Maximum conductor size; 2 x 1.5mm<sup>2</sup>  
solid or max. 2 x 1mm<sup>2</sup> stranded with end sleeves DIN 46228

### INSTALLATION

These units may be snap mounted on a top-hat section rail ( BS5584:1978, DIN46277-3, EN50 022 ).

A removable mounting clip is also available for screw fixing (2 x M4 x 80mm PCD).

Front accessible screw terminals with self-adjusting connection washers are provided. These enable secure clamping of two connection wires with differing cross sections.

The unit may be removed from the rail by inserting a small flat-blade screwdriver into the slot at the bottom rear edge of the enclosure. Moving the handle of the screwdriver towards the body of the enclosure will release the locking tongue and enable the unit to be swung up and away from the mounting rail.

### FIELD PROGRAMMABLE OPTIONS (COM-60 only)

The input options are selected by an internal programming link. To access the link, squeeze in the sides of the terminal housing in the recesses to release the locking tongues and withdraw the PCB/terminal assembly from the enclosure. The three link positions are shown in fig 2.

Fig 1 DIMENSIONS

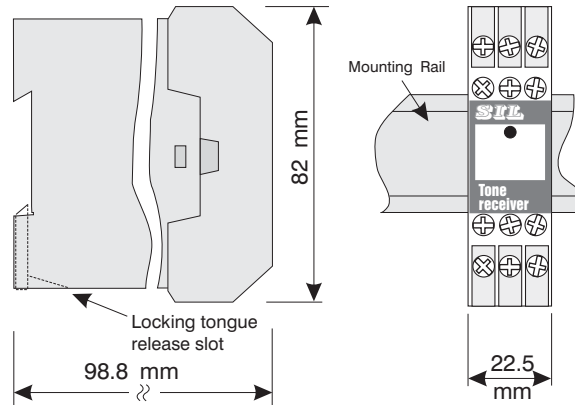


Fig 2 TRANSMITTER CONNECTIONS

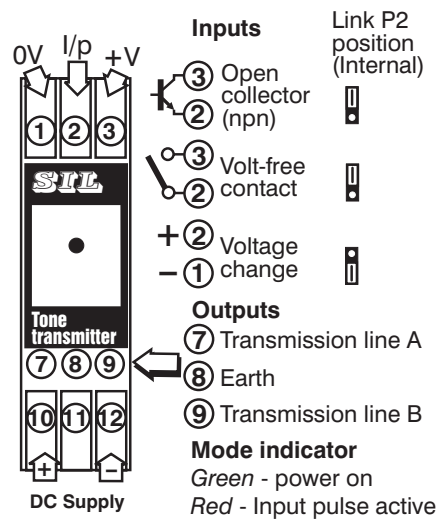
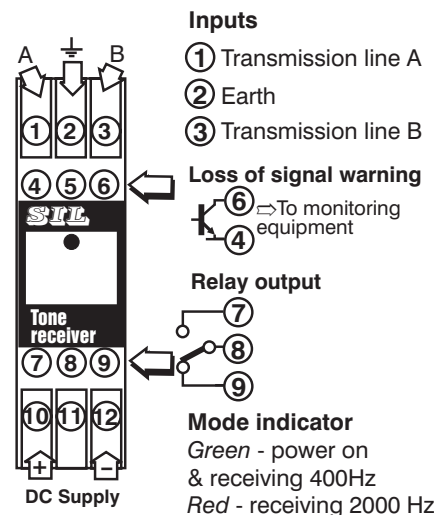


Fig 3 RECEIVER CONNECTIONS



Continuous development may necessitate changes to these details without notice.

# SIL

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