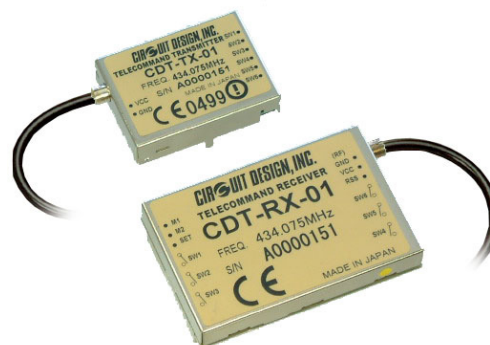


Long range low power radio transmitter and receiver with high reliability for industrial use < 434MHz FM narrow band telecommand radio transmitter and receiver >

CDT-TX-01 (transmitter)/CDT-RX-01 (receiver) are CE certified radio modules operating in the 434 MHz ISM band. In addition to the high performance narrow band radio unit, the modules include switch signal input/output processing circuits allowing switch signals to be transmitted and received without the addition of external circuits. (Refer to the block diagram and basic circuit.)



With MSK modulation (FM), they are very resistant to noise, and since the receiver has high receive sensitivity of -120 dBm, the modules communicate reliably even in weak electric fields.

Each unit has a unique 32-bit ID and the receiver works only with signals from transmitters with a registered ID. This prevents errors caused by receiving signals from other transmitters operating on the same frequency.

The safety of this system is amply demonstrated by Circuit Design's remote control units where this system is being used in more than 1 million units.

A total of up to 100 transmitter IDs can be registered in the receiver, and control of the receiver from multiple transmitters, or control of multiple receivers from one transmitter can be performed without any concern about malfunction.

The interface for the output port of the receiver uses photo MOSFET, enabling direct drive with loading of up to DC48 V/100 mA. In addition, you can select from 4 operation modes (continuous, toggle, switching, and one shot) depending on the requirements. In the continuous mode the output port is active while the unit is receiving a signal from the transmitter. In the other modes, the status of the output port being controlled can be changed according to the mode setting when the unit receives momentary signals from the transmitter. When output from the transmitter is of short duration, the impact on other equipment using the same frequency can be minimized while the radio waves are used more efficiently, thus achieving reduced power consumption at the transmitter.

The technical features and applications of CDT-TX/RX-01 are as follows.

= Technical features =

Stable operation with 25 kHz span, FM (MSK) narrow band radio transmissions

Long distance communication (1 km line of sight) thanks to high receiver sensitivity of -120 dBm and MSK modulation

Transmitter output 10 mW, standby current less than 1 uA

6 switch inputs and outputs

Direct drive is possible with relay loading etc. (Max. DC48 V/100 mA)

Select from 4 operation modes (continuous, toggle, switching, and one shot) depending on the requirements

The receiver is equipped with a SAW filter with sharp filtering characteristics to prevent radio interference

All units have a unique 32-bit ID

= Applications =

Transmission of a variety of switch signals

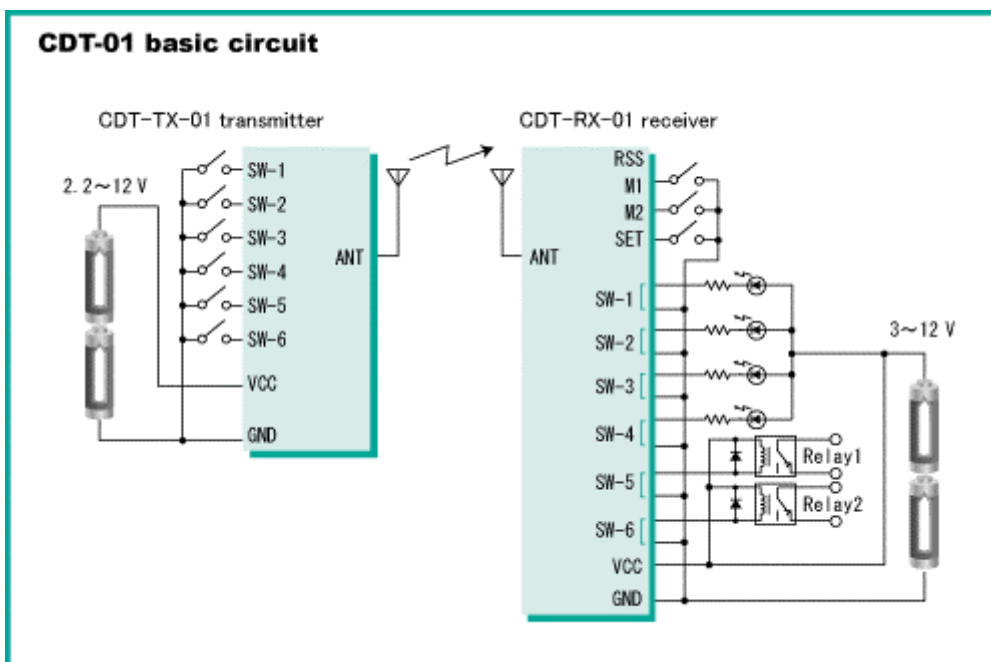
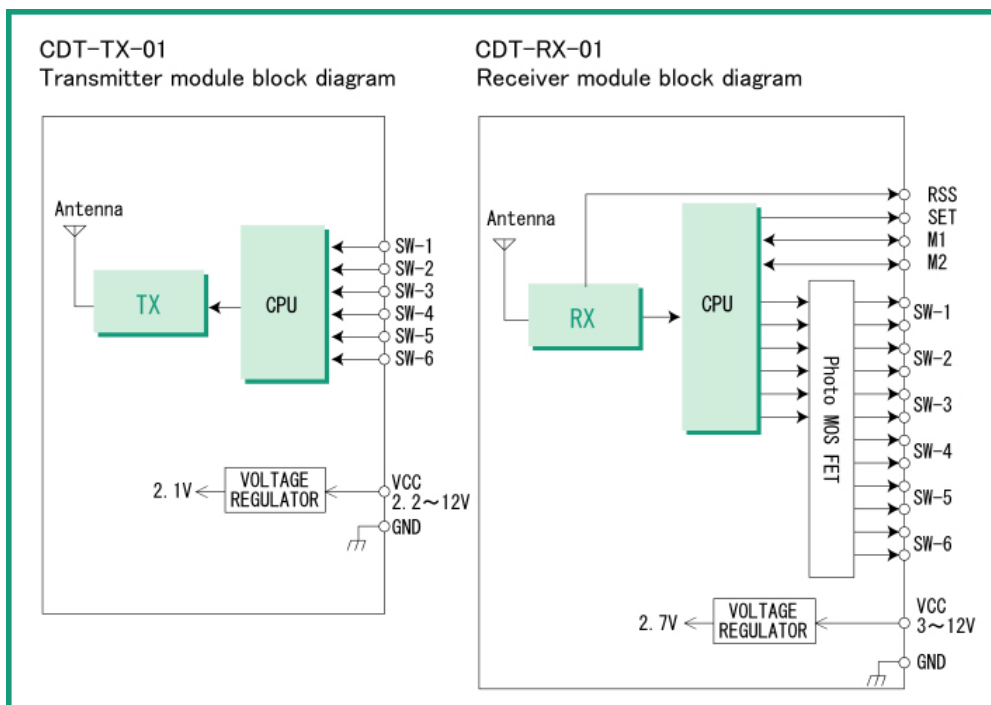
Telecontrol for industrial use

Remote control of electric shutters, garage doors etc.

Control of traffic signals at building sites and factories

Emergency stopping devices, revolving lights, and various kinds of warning devices

Summoning devices for home centres, restaurants etc.



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