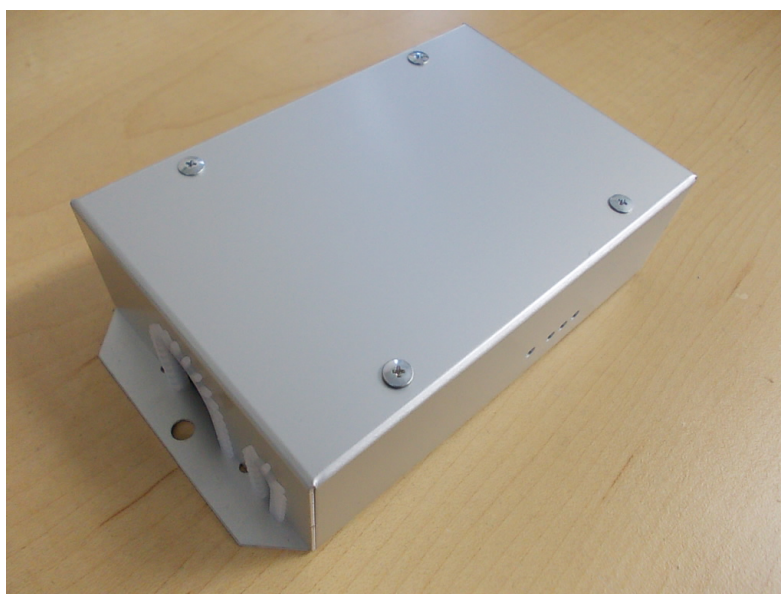


315 MHz band Specified low power radio reception box

TS03GRX-4SW-NALM

315 MHz band specified low power radio
Aluminum case receiver



Nomura Engineering Co., Ltd.
Since 1997

Never use such a way that product malfunction or malfunction directly relates to human life.

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1. Overview

- 4 contact output receiver incorporating 315 MHz band specific low power ASK reception module TS 03 GRx.
- The case uses aluminum (t = 1.0 mm / alumite treated material). It is lightweight and excellent for corrosion resistance.
- Combined with transmitter TS03DTX / TS03NKHA, wireless remote control can be easily configured.
- Power supply can be selected from AC100-200V and DC 5V / 12V / 24V.
- Receive signal output can be selected from relay output / power output (AC100-200, DC 5/12 / 24V).
(If low power consumption is desired, open drain output is also possible)
- Can be combined with various antennas.
- Up to 10 ID can be registered / deleted by case side switch.
- Power supply and reception indication LED on the case side.

Name of product: TS03-GRX-NALM _ *** _ ### _ \$\$\$

*** (Power supply): AC or DC 5 V or DC 12 V or Dc 24 V

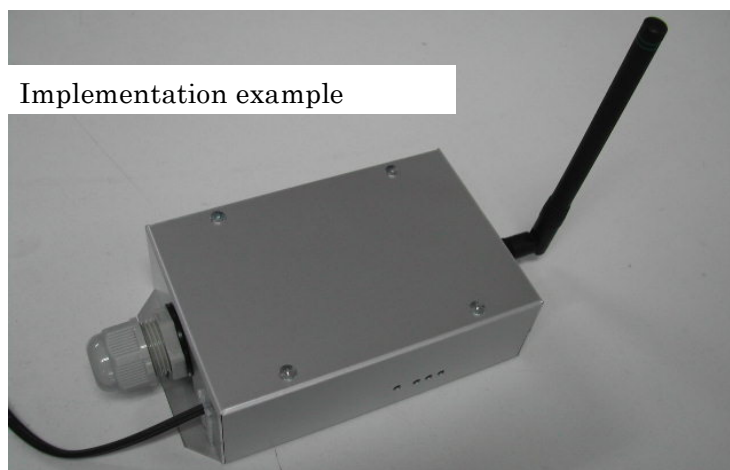
(output): RL ... Relay output

OD ... Open drain

PO ... Power supply output

\$\$\$ (antenna): Not specified ... Case mounting type

When designating our antenna, please describe the antenna product name



(Note) Cable gland is not included.

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2. Electrical characteristics

No.	Item	Specification	Remarks
1	Frequency	315MHz band	
2	Number	4switch	ON / OFF control
3	Control output	<ul style="list-style-type: none"> ■ Relay Output: Active Close Relay withstand voltage : DC 30 V / 3 A, AC 250V / 3A ■ Open drain: active Close 60 V / 1A ■ Power output: DC 30V / 3A, AC 250V / 3A 	Send ON: Active Omuron: G5Q-1 Drive with power supply
4	External dimensions	140 x 80 x 40 mm	Detail in outline drawing
5	Power supply	<ul style="list-style-type: none"> • AC90~264V @0.18Arms(max) • DC5/12/24V @350/170/100mA(max) Open drain is 60 mA or less	47~63Hz External load not included
6	Operating temperature	-10 °C~+60 °C No condensation	20~85% R h

• I / O interface

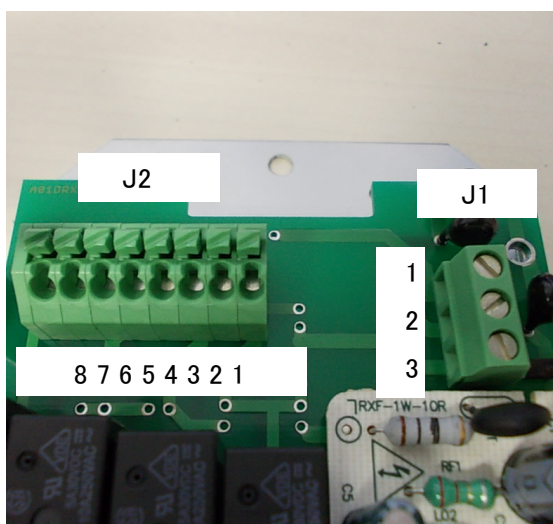
J1 : Power supply input

■ AC100-200V

1、 2 . . . Line 3 . . . N,C

■ DC5/12/24V

1 . . . +DC 2 . . . N,C 3 . . . GND



Note: In the case of **1 button remote control**, the receiver output controls the position of button **2**.

J2	button	Relay output Open drain	Power output
#1	Button1	NO/Open-D	AC/DC GND
#2		NO/GND	AC/DC Vcc
#3	Button2	NO/Open-D	AC/DC GND
#4		NO/GND	AC/DC Vcc
#5	Button3	NO/Open-D	AC/DC GND
#6		NO/GND	AC/DC Vcc
#7	Button4	NO/Open-D	AC/DC GND
#8		NO/GND	AC/DC Vcc

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3. Function operation

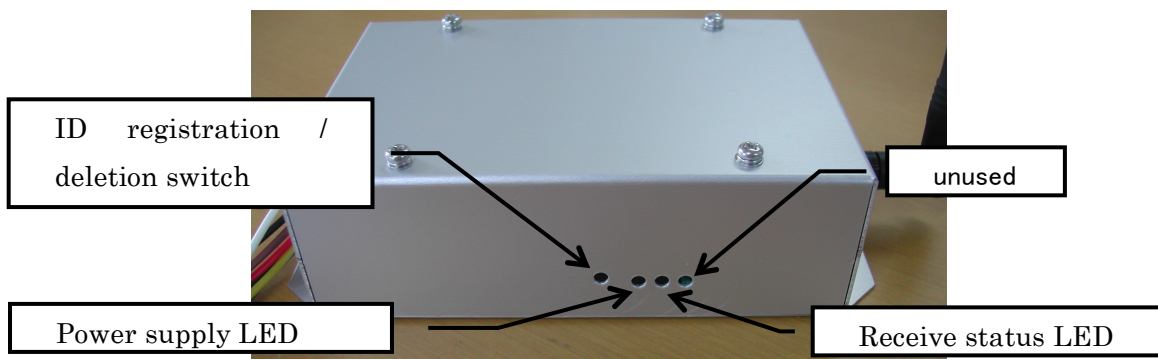
(1) ID registration

- ① Turn on the power while pressing the register / delete switch of the receiver.
- ② The reception status LED flashes twice.
- ③ When the receiver registration / deletion switch is released, the reception status LED is lit and the ID registration mode is entered.
- ④ Send the transmission module you want to register.
- ⑤ When the reception status LED blinks twice, it indicates that the ID has been registered.
- ⑥ If another transmission module is subsequently transmitted, it will be registered consecutively. (Up to 10 units can be registered.)
- ⑦ After registering the ID, turn off the power.

(2) ID deletion

- ① Like the ID registration, press the registration / deletion switch and turn on the power.
- ② When the reception status LED flashes twice and the switch is released, the reception status LED is lit and the ID registration mode is entered.
- ③ In this state, press the registration / deletion switch again.
- ④ After the reception status LED blinks 10 times, it flashes three more times and ID deletion is completed.
- ⑤ Turn off the power.

(Note) Because the SW1 output also turns ON / OFF by ID registration / deletion operation, do not connect the load circuit to the output when registering / deleting. Delete ID operation will Delete all registered IDs.



Never use such a way that product malfunction or malfunction directly relates to human life.

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4. Notes

- Reception sensitivity suppression may occur due to high-frequency noise radiated from high-speed logic circuits, motors, etc., and the communication distance may become extremely short. In that case please devise such as keeping the receiver away from the noise source.
- In the radio wave propagation, the strength of radio waves occurs in multipaths, and a dead point (null point) occurs, and it may become impossible to receive by merely tilting the transmission module.
- Never use such a way that product is malfunction or malfunction directly relates to human life. It is not designed to require such high reliability as directly related to human lives, and since the wireless system is inferior in reliability to the wired system, please use after considering this point.
- Please never reverse the power supply, Doing that will cause the equipment to malfunction.
- Do not give a strong shock or immerse it in water or other solution as it may cause a malfunction.
- Do not disassemble and remodel it.
- Do not pull the antenna strongly.
- In applications using multiple transmitters, even if the transmitter is provided with an ID, it is basically impossible for the receiver to receive radio waves sent simultaneously from the two transmitters. In this case, it is necessary to devise a mechanism that does not transmit at the same time on the transmitter side, or devise such as shifting the timing of sending out.

Never use such a way that product malfunction or malfunction directly relates to human life.

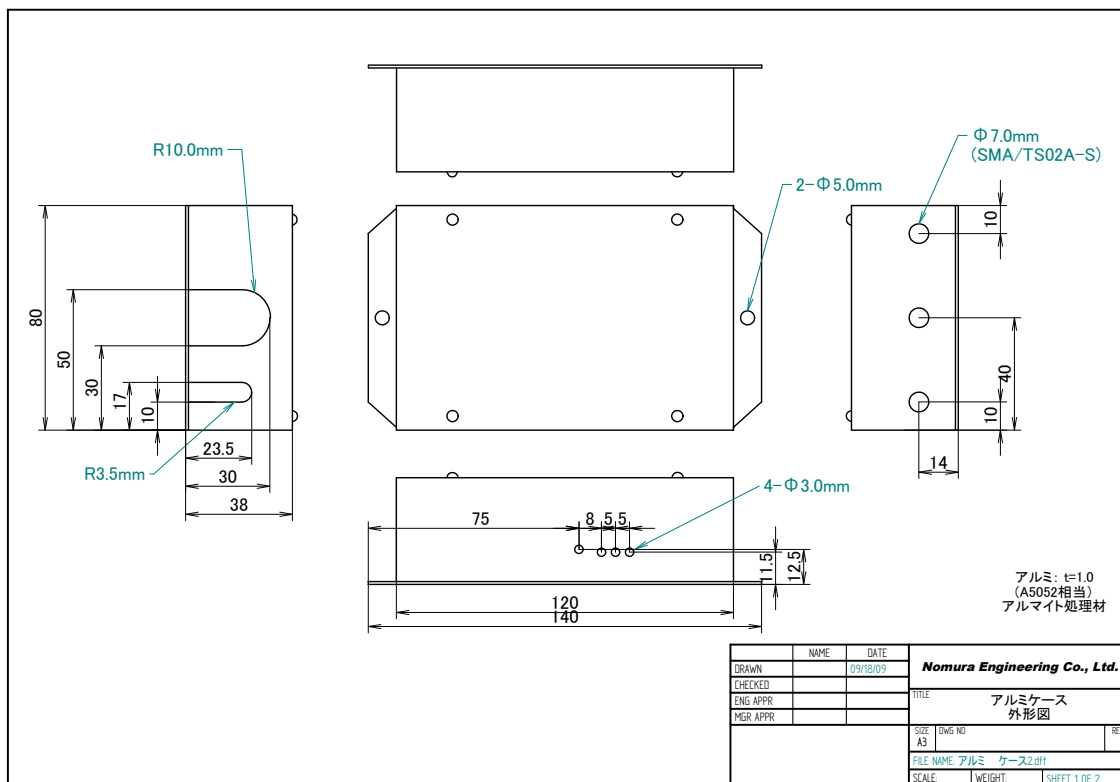
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5. Dimensional drawing



6. Change history

2017/03/23: Outline dimension drawing of aluminum case is added