Telemetering System

CONTACT TELEMETERING MODULE

MODEL **TMR/TMT**

MODEL & SUFFIX CODE SELECTION

TM❑–❑

MODEL
INPUT
Dry contact
OUTPUT
R : Relay contact
T : Open collector
POWER INPUT

AC Power		DC Power
B : 100V AC	**G** : 200V AC	**S** : 12V DC*
C : 110V AC	**H** : 220V AC	**R** : 24V DC*
D : 115V AC	**J** : 240V AC	
F : 120V AC		

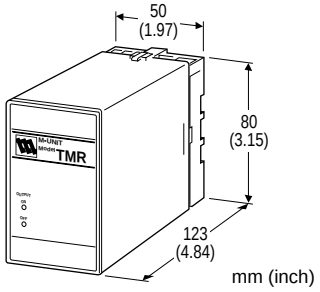
*24V DC (Code R) and 12V DC (Code S) are not approved by Japan Approvals Institute for Telecommunications Equipment.
Therefore an individual application will be necessary for using the TMA on NTT telecom. line.

ORDERING INFORMATION

Specify code number. (e.g. TMR-B)

GENERAL SPECIFICATIONS

Construction: plug-in
Connection: M3.5 screw terminals
Housing material: flame-resistant resin (black)
Isolation: input to output to power



Functions & Features

• Transmitting 1-point contact signal through NTT (Nippon Telephone & Telegraph) personal telecommunication line of 50 b/s • Approved of Technical Requirements Compliance Approval by Japan Approval Institute for Telecommunications Equipment • Approval No. M90-N227-0 • Applicable to various cables types • No interference by induction noise • Lightning protection applicable • No field adjustment required • Compact plug-in construction easy to install and maintain

INPUT & OUTPUT

■**INPUT**: dry contact
Sensing: approx. 18V DC @5mA
ON/OFF level: ≤3kΩ for ON; ≥30kΩ for OFF
Maximum leadwire resistance: 3kΩ including return

■**OUTPUT**

•**Relay Contact**: 100V AC @5A (cosø=1)
24V DC @5A (resistive load)
electrical life 10×10^4 cycles (rate 30/min.)
Maximum switching voltage: 380V AC or 125V DC
Maximum switching power: 500VA or 120W
Minimum load: 5V DC @10mA (18V DC @5mA)
Mechanical life: 5×10^7 cycles
Maximum frequency: 1 Hz

•**Open Collector**: 24V DC @100mA
Maximum frequency: 20 Hz
Saturation voltage: 1.8V DC

Remark: The output pulse width is adjusted to 25 millisec. even when the input pulse width is narrower than 25 millisec.

INSTALLATION

Power input

AC: rating ±10%, 50/60 ±2 Hz, approx. 2VA
DC: rating ±10% (ripple 10% p-p max.)
approx. 80mA at 24V
approx. 160mA at 12V

Operating temperature: -5 to +60°C (23 to 140°F)
Operating humidity: 30 to 90% RH (non-condensing)
Mounting: surface or DIN rail
Dimensions: W50×H80×D123 mm (1.97"×3.15"×4.84")
Weight: 350 g (0.77 lbs)

PERFORMANCE

Response time: ≤10 millisec.
Line voltage effect: ±0.1% over voltage range
Insulation resistance: ≥100MΩ with 500V DC
Dielectric strength: 1000V AC @1 minute
(input to output or power)
2000V AC @1 minute (output to ground)

EXPLANATIONS

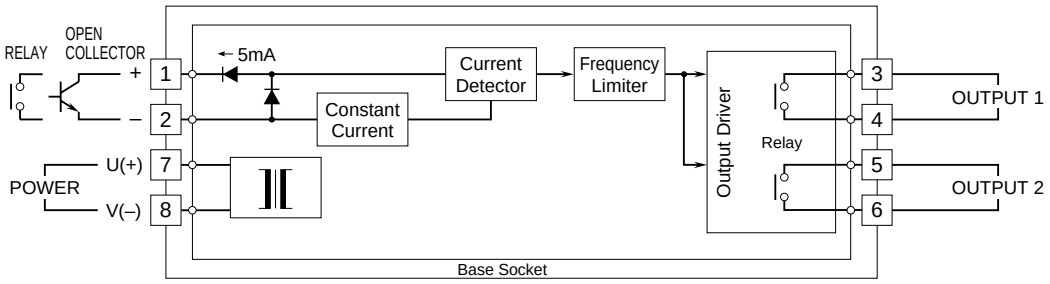
■AVAILABLE NTT LINE

Among the several circuit lines opened by NTT (Nippon Telephone & Telegraph), the TMR/TMT utilizes the “special DC line” of 50 b/s.
The following shows the conditions to use this line.

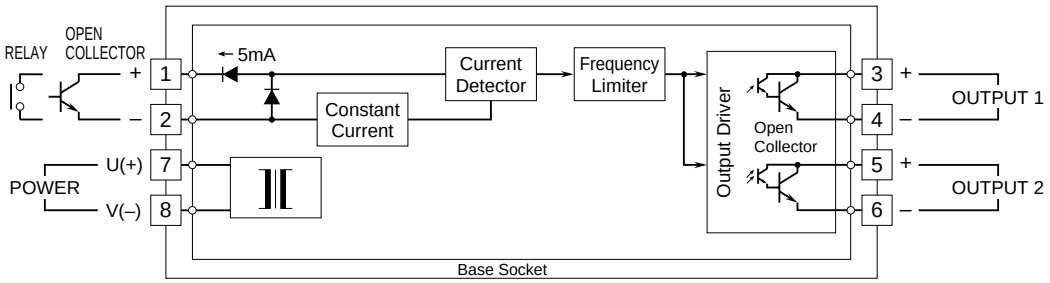
ITEM	DATA
Transmission speed	50 b/s max.
Technical configuration	2-wire (metalic return) 4-wire (metalic return
Communication	Uni-directional, full-duplex
Intersection	Not allowed
Circuit protection	Required
Electrical characteristics	Current 45mA max. Voltage between lines 100V max. Voltage to ground 50V max.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

■TMR (relay)

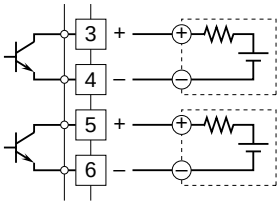


■TMT (open collector)



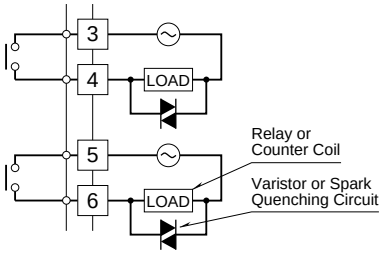
Output Connection Examples

■Open Collector

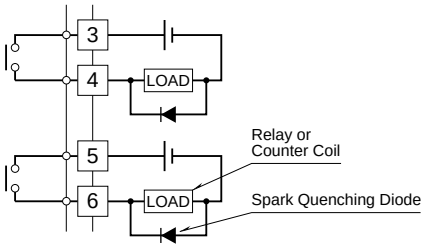


■Relay

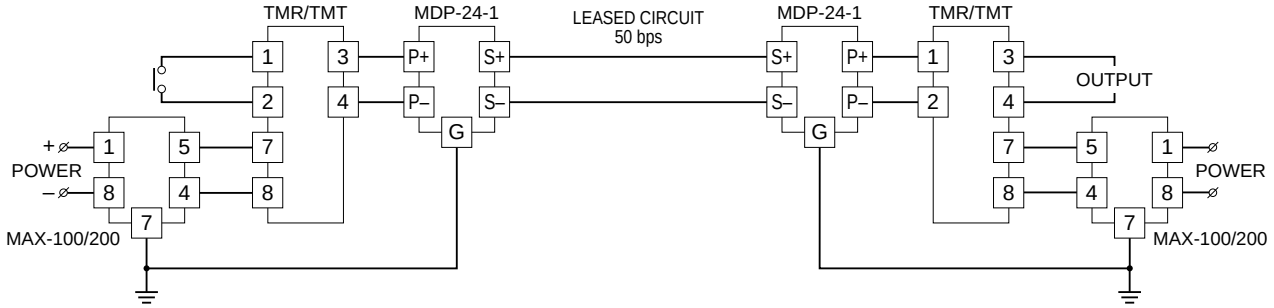
•AC Powered



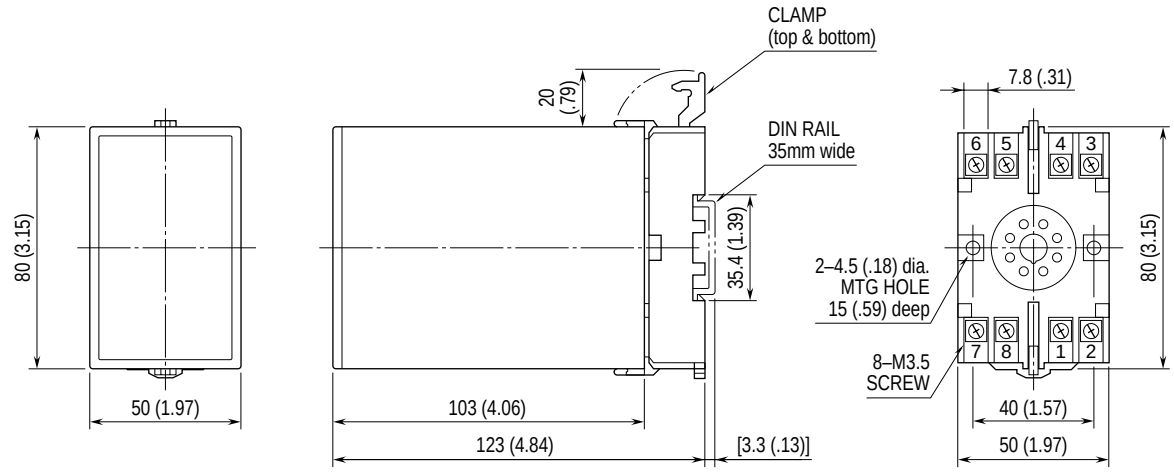
•DC Powered



TERMINAL CONNECTIONS



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENT mm (inch)



•When mounting, no extra space is needed between units.

Specifications subject to change without notice.