

ANALOG TELEMETERING MODULE	model TMA
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Thank you for choosing us. Before use, check specifications on the product label.
 If you have any problems or questions with the product, please contact our sales office or representatives.

General Description

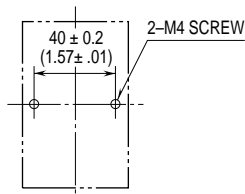
The Model TMA transmits 1-point analog signal (water level, pressure, flow or ingredients analysis) through leased circuit of 50 b/s. Both transmitter (TMA-S) and receiver (TMA-R) modules are approved of Technical Requirements Compliance Approval by Japan Approvals Institute for Telecommunications Equipment.

- Approval No. M90-N239-0 (TMA-S), M90-N240-0 (TMA-R)
- No interference by inductive noise on telecommunication line

Installation [Scale: mm(inch)]

- Operating temperature: -5 to +60°C (23 to 140°F)
- Operating humidity: 30 to 90% RH (non-condensing)

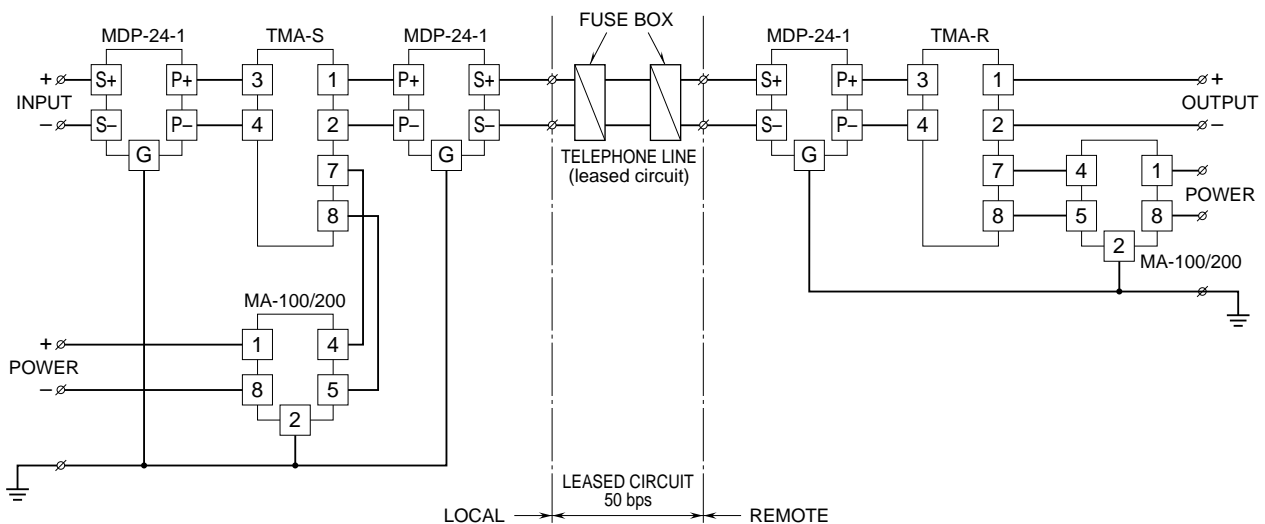
Keep away from water, corrosive gas, dust and vibration. Wall or DIN rail mounting available. Use DIN rail of 35 mm width.



When mounting, no extra space is needed between units.

Connection Diagram

Maintenance personnel must be qualified. Only qualified person or non-qualified person under the supervision of such person can execute connection to the leased circuit.



Adjustments

This module is factory calibrated within ±0.1% of reference input level. ZERO and SPAN are adjustable to ±5%. Calibration procedure is as follows:

- ZERO: With minimum (0%) input, adjust output to 0%.
- SPAN: With full-scale (100%) input, adjust output to 100%.
- Check ZERO adjustment again with the minimum input.
- When ZERO value is changed, repeat the procedure A) to C).

Troubleshooting

When output is irregular, check the following points:

- Terminal wiring
- Power wiring and polarity
- Input to TMA-S: Check voltage across the terminal 3 (+) – 4 (-) to show a proper value within 1 to 5V DC.
- Output of TMA-R: This module requires at the minimum of 750Ω load. Check that total connected load exceeds the value.
- Cable resistance: This module allows at the maximum of 3kΩ resistance. Check that connected leased circuit does not exceed the value including return.

Lightning Protection

In order to prevent lightning surges entering through power supply line and signal line, proper lightning protection will be recommended.