

ANP1F

Comparator (for Analog output sensors)



- Input level readily viewable
- Basic model for analog control
 - 12-level indicator for checking light reception level at a glance
 - 4-turn adjustment volume for fine-tuning
 - Relay output for 3-stage switching between HIGH, MID and LOW and 2 NPN open collector outputs for HIGH and LOW, covering a wide range of applications
 - Remote controlled-setting available with external volume
 - Hysteresis adjustable for fine differentiation
 - Sensor power supply (12 VDC 80 mA) integrated to allow connection of 2 ordinary analog sensors

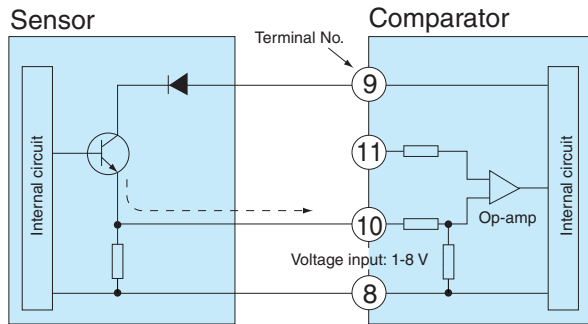
Rating/Performance/Specification

| Model | | ANP1F | | |
|--------------------|--------------------------------------|---|---|--|
| Power supply | 100,110 V / 200, 220VAC ±10% 50/60Hz | | | |
| Power consumption | 5VA max. | | | |
| Rating/performance | Output mode | (1) Relay output (with timer): Rating: 5 A (250 VAC) resistance load 1c (2) 2 NPN open collector outputs: Rating: 50 mA (30 VDC) max. | | |
| | Input mode | Voltage input: 1-8 V | Input impedance 47 KΩ Input resolution: 0.1 V min. | |
| | Power supply to sensor | 12V DC ±5% 80mA max. | | |
| | External gating | Contact or NPN transistor input for output mode (1) only | L : 1V max. H : 6V max. | |
| | Response time | Sensor input: relay contact output | 25 ms max. | |
| | | : NPN open collector output | 0.1 ms max. | |
| | | : External gating input: 25 ms max. | | |
| Specification | Indicator | P.L(G): power indicator (green LED; turns red at activation of relay). OP.L: operation indicator (2 red LEDs for HIGH and LOW outputs) LEVEL: light reception level indicator (12 red LEDs) | | |
| | Volume | POSI.: Position volume: 4-turn, 1 each for HIGH and LOW HYS.: Hysteresis volume (variable between 0 and 1 V), 1 each for HIGH and LOW TIME: Timer volume (selectable between 0.1-1 and 1-10 s), relay output only | | |
| | Switch | | : EXT.POSI switch (pushbutton) | |
| | | MODE | : Output mode/level selector switch | |
| | | | : Operation mode and timer selector switch | |
| | Case material | Resin | | |
| | Connection | Plug-in terminal block | | |
| | Mass | 450g max. | | |
| Applicable sensor | Analog voltage output sensor | | | |

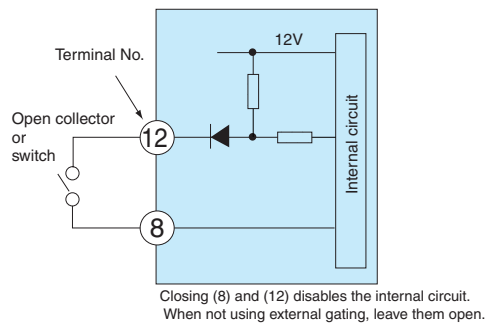
Environmental Specification

| | | |
|-------------|-------------------------|---|
| Environment | Ambient temperature | -10 - +55 °C (non-freezing) |
| | Ambient humidity | 35-85%RH (non-condensing) |
| | Protective structure | IP40 |
| | Vibration | 10-55 Hz / 1.5 mm amplitude / 2 hour each in 3 directions |
| | Shock | 1000m/s ² 2 times each in 3 directions |
| | Dielectric withstanding | 1500 VAC for 1 minute |
| | Insulation resistance | 500 VDC, 20 MΩ or higher. |

Input Circuit

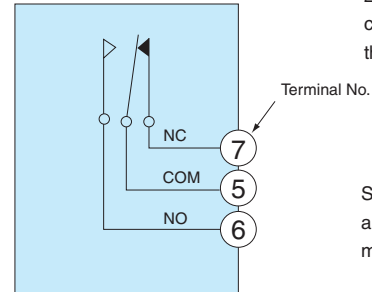


External Gating



Output Circuit

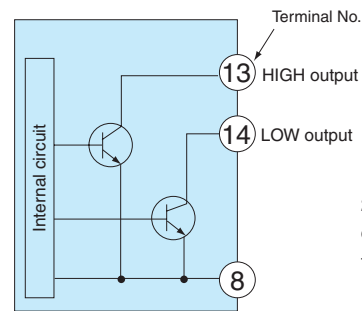
- Relay output



3 outputs (relay output and 2 open collector outputs) can be made available at the same time.

Select between HIGH, MID and LOW with the output mode selector switch.

- Open collector output



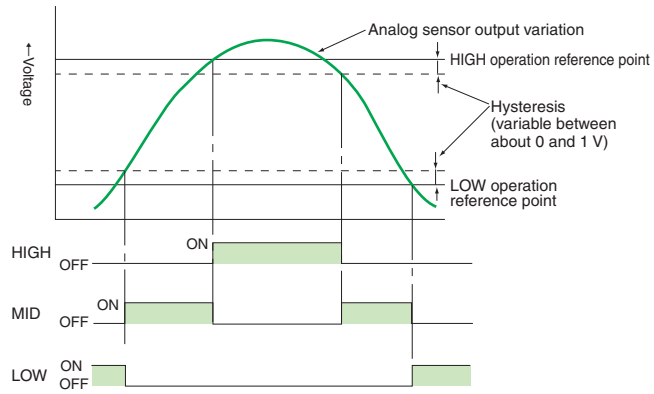
2 outputs (HIGH and LOW) can be made available at the same time.

Connection Examples for Different Applications

| Differential output with 2 sensors | Use of 1 sensor only | Setting of point of operation with external volume |
|--|--|--|
| <p>(Panel switch) Set the EXT.POSI switch at NORMAL and level selector switch at DIF.L.</p> <p>(Connection)</p> <ul style="list-style-type: none"> - Connect Ch 1 sensor output to Terminal 10. - Connect Ch 2 sensor output to Terminal 11. <p>The output will be 0 if the input levels for Ch 1 and Ch 2 are the same (output approximately 0 when 6 level indicators are illuminated) Ch 1 represents positive and Ch 2 negative direction.</p> | <p>(Panel switch) Set the EXT.POSI switch at NORMAL and level selector switch at Ch1L.</p> <p>(Connection)</p> <ul style="list-style-type: none"> - Connect sensor output to Terminal 10. - Connect Terminals 11 and 9 (with +12 V). | <p>(Panel switch) Set the EXT.POSI switch at EXT.POSI and level selector switch at DIF.L.</p> <p>(Connection)</p> <ul style="list-style-type: none"> - Connect sensor output to Terminal 10. - Connect Terminal 11 to external volume. |

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HIGH/MID/LOW Operation



Dimensions (in mm)

