

The Leading Manufacturer of Interface Field

- Delta I/O -

DMS3000 - SERIES

TERMINAL BLOCK TYPE
HIGH-GRADE SIGNAL
CONDITIONER



■ FEATURE

- Ultra-compact JIS-concord size
- Humid-Resistant Coating as standard specification
- International Safety Standard Compatible

DMS3000 - SERIES

Contents

| | ITEMS | MODEL | PAGE |
|----|-------------------------------|---------|---------|
| 1 | Thermocouple transmitter | DMS3001 | 309~310 |
| 2 | RTD transmitter | DMS3002 | 311~312 |
| 3 | Millivolt isolator | DMS3003 | 313~314 |
| 4 | High-level signal conditioner | DMS3004 | 315~316 |
| 5 | Isolated distributor | DMS3007 | 317~318 |
| 6 | Frequency/analog converter | DMS3008 | 319~320 |
| 7 | Potentiometer transmitter | DMS3010 | 321~322 |
| 8 | CT transmitter | DMS3020 | 323~324 |
| 9 | PT transmitter | DMS3021 | 325~326 |
| 10 | Loop-powered isolator | DMS3064 | 327~328 |

General Specifications

Thermocouple transmitter

AREX-30

熱電對 溫度變換器

PERFORMANCE

| | |
|----------------------------|--|
| Accuracy Rating | ± (0.1%F.S. + 0.5 °C (Cold-Junction Compensation Error) + Linearization Error [※]) max. ※Linearization Error varies with specified input range. (0.1%F.S. typ.) |
| Temperature Effect | ±0.2% of span @10°C variation |
| Response Time | 160msec max. (0→90% @100% step input) |
| CMRR | 100dB min. (500V AC, 50/60Hz) |
| Isolation | Across Input, Output and Power input mutually |
| Insulation Resistance | 100MΩ min. (@500V DC) |
| Dielectric Strength | Across Input, Output and Power input mutually 1500V AC for 1 minute |
| Surge Withstand Capability | Tested for ANSI/IEEE C37.90.1-1989 |
| Operating Environment | Ambient temperature: -5~55°C Humidity: 5~90%RH (No condensation) |
| Storage Temperature | -10~60°C |

Linearization Error

| Input range | Linearization Error (%) | Input range | Linearization Error (%) |
|----------------|-------------------------|----------------|-------------------------|
| JIS K 0~300°C | 0.1 | JIS K 0~600°C | 0.15 |
| JIS J 0~200°C | 0.1 | JIS E 0~200°C | 0.15 |
| JIS E 0~600°C | 0.1 | JIS R 0~1600°C | 0.15 |
| JIS S 0~1000°C | 0.15 | JIS T 0~300°C | 0.15 |

PHYSICAL

| | |
|---------------------|--|
| Installation | DIN Rail-mounting |
| External Connection | With M3.5 screw terminals (With drop protection) |
| Outer Dimension | W25×H94×D40mm |
| Weight | Approx. 70g |

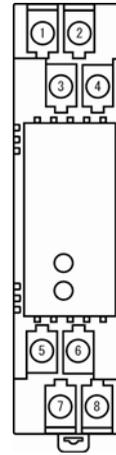
MATERIAL

| | |
|-----------------------|--|
| Housing | ABS (UL94V-0) |
| Screw Terminal | Steel/nickel plating |
| PC Board | Glass Fabric Epoxy Resin (FR-4, UL94V-0) |
| Anti-humidity Coating | HumiSeal 1A27NS (Polyurethane) |

ADDITIONAL

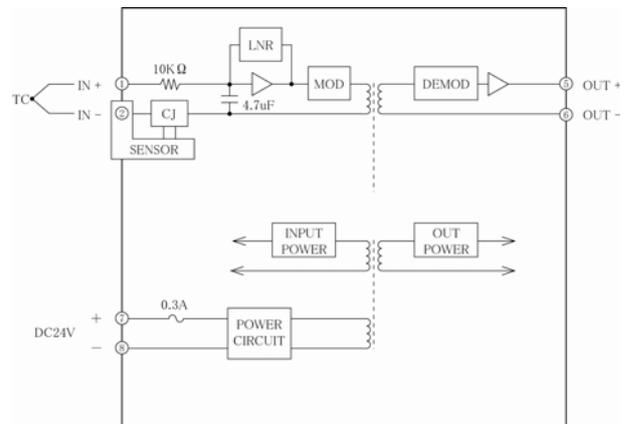
| | |
|---------------|---|
| Other Options | Please consult our sales representatives for the availability of the following options before ordering: (Items) (How to specify) ■ Change response frequency Fc = □□□ Hz ■ Change response time Tc = □□□ sec ■ Change burnout drive time Bt = □□□ sec |
|---------------|---|

TERMINAL ASSIGNMENT



| Terminal | Signal |
|----------|----------|
| ① | + INPUT |
| ② | - INPUT |
| ③ | N. C. |
| ④ | N. C. |
| ⑤ | + OUTPUT |
| ⑥ | - OUTPUT |
| ⑦ | + DC24V |
| ⑧ | - POWER |

BLOCK DIAGRAM



General Specifications

RTD transmitter

AREX-30

測溫抵抗體 溫度變換器

OVERVIEW



This is JIS concord size, terminal block type RTD transmitter that detects the variation of resistance with RTD and converts it into any desired standard process signal.

- ▽ Integrated with RTD linearization and burnout protection function.
- ▽ Anti-humid coatings on PCB are standard for improved environmental protection.
- ▽ Drop-proof screw terminals for ease of installation.
- ▽ No special spacing is required between the units.

ORDERING INFORMATION

| Ordering Code | Standard Price |
|--|----------------|
| DMS3002—□ (□~□) — 6 □ □ ① ② ③ | OPEN |

SPECIFICATIONS

POWER SECTION

| | |
|-------------------|--|
| Power Requirement | 24V DC ±10% |
| Power Sensitivity | ±0.1% of span maximum for each power input range |
| Power Line Fuse | 300mA fuse is installed. |
| Power Consumption | 20mA max. (Current output : 50mA max.) |

INPUT SECTION

| | |
|--|---|
| Input Signal (Specify at ① when ordering) | JIS or other standard resistance bulb ■ Pt100 Pt100 ■ JPt100 JPt100 ■ Pt50 Pt50 ■ Ni508.4 Ω Ni508 ■ Other resistance bulb X Specify separately the type of input resistance bulb as X=□□□ * In case the RTD is specified by JIS symbol, the resistance-temperature table used will be that of latest revision of JIS unless otherwise specified by the customer. * Submission of resistance-temperature table may be required for ordering for special RTD. |
| Measurement Temperature Range (Specify at ② when ordering) | Please specify in centigrade within the range of resistance-temperature table. |
| RTD Excitation Current | Approx. 1mA @Pt0~100°C |
| Input Lead-wire Resistance | 200 Ω /wire max. |

OUTPUT SECTION

| | |
|--|---|
| Output Signal (Specify at ③ when ordering) | ■ 1~5V DC V1 ■ 0~10mV DC V2 ■ 0~100mV DC V3 ■ 0~1V DC V4 ■ 0~5V DC V5 ■ 0~10V DC V6 ■ Other DC voltage signal ranging up to 10V VX (□~□) Specify output signal in parentheses. ■ ±10mV DC W2 ■ ±100mV DC W3 ■ ±1V DC W4 ■ ±5V DC W5 ■ ±10V DC W6 ■ Other DC voltage signal ranging within ±10V WX (□~□) Specify output signal in parentheses. ■ 4~20mA DC C1 ■ Other DC current signal ranging up to 20mA CX (□~□) Specify output signal in parentheses. |
| Maximum Output Load | Voltage output: 1V span min. 2mA max. 100mV 200K Ω min. |
| Zero Adjustment | Approx. ±2.5% of span (Adjustable by front-accessible trimmer) |
| Span Adjustment | Approx. ±2.5% of span (Adjustable by front-accessible trimmer) |
| Burnout Protection | Upward (Whichever A, B or B' gets open.) |

General Specifications

RTD transmitter

AREX-30

測溫抵抗體 溫度變換器

PERFORMANCE

| | |
|----------------------------|---|
| Accuracy Rating | $\pm (0.15\%F.S. + 0.1^{\circ}C)$ max. |
| Temperature Effect | $\pm 0.2\%$ of span @10°C variation |
| Response Time | 170msec max. (0→90% @100% step input) |
| CMRR | 100dB min. (500V AC, 50/60Hz) |
| Isolation | Across Input, Output and Power input mutually |
| Insulation Resistance | 100M Ω min. (@500V DC) |
| Dielectric Strength | Across Input, Output and Power input mutually 1500V AC for 1 minute |
| Surge Withstand Capability | Tested for ANSI/IEEE C37.90.1-1989 |
| Operating Environment | Ambient temperature: $-5\sim 55^{\circ}C$ Humidity: $5\sim 90\%RH$ (No condensation) |
| Storage Temperature | $-10\sim 60^{\circ}C$ |

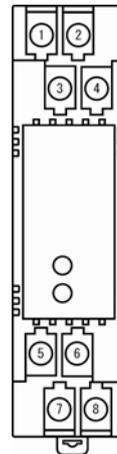
PHYSICAL

| | |
|---------------------|--|
| Installation | DIN Rail-mounting |
| External Connection | With M3.5 screw terminals (With drop protection) |
| Outer Dimension | W25×H94×D40mm |
| Weight | Approx. 70g |

MATERIAL

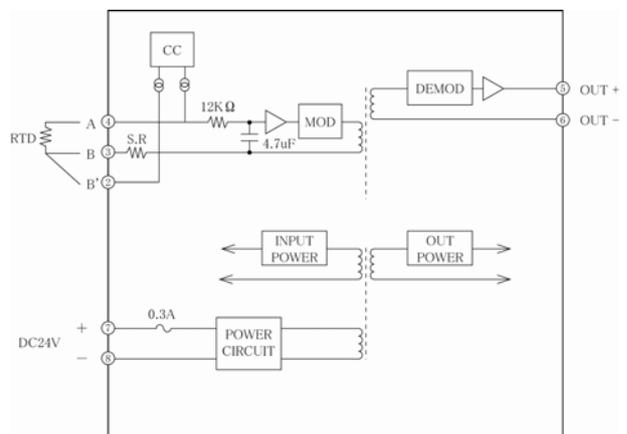
| | |
|-----------------------|--|
| Housing | ABS(UL94V-0) |
| Screw Terminal | Steel/nickel plating |
| PC Board | Glass Fabric Epoxy Resin (FR-4, UL94V-0) |
| Anti-humidity Coating | HumiSeal 1A27NS (Polyurethane) |

TERMINAL ASSIGNMENT



| Terminal | Signal |
|----------|----------|
| ① | N. C. |
| ② | B' |
| ③ | B |
| ④ | A |
| ⑤ | + OUTPUT |
| ⑥ | - OUTPUT |
| ⑦ | + DC24V |
| ⑧ | - POWER |

BLOCK DIAGRAM



General Specifications

Millivolt isolator
mV 信號變換器

AREX-30

PHYSICAL

| | |
|---------------------|--|
| Installation | DIN Rail-mounting |
| External Connection | With M3.5 screw terminals (With drop protection) |
| Outer Dimension | W25 × H94 × D40mm |
| Weight | Approx. 70g |

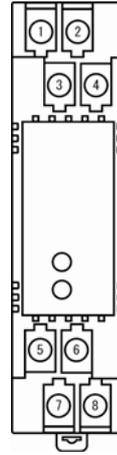
MATERIAL

| | |
|-----------------------|--|
| Housing | ABS (UL94V-0) |
| Screw Terminal | Steel/nickel plating |
| PC Board | Glass Fabric Epoxy Resin (FR-4, UL94V-0) |
| Anti-humidity Coating | HumiSeal 1A27NS (Polyurethane) |

ADDITIONAL

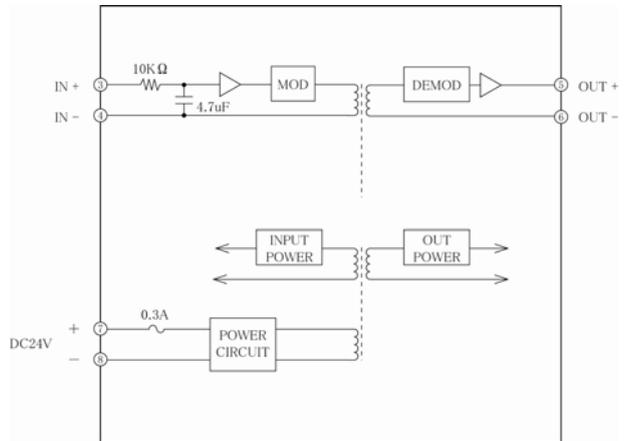
| | |
|---------------|---|
| Other Options | Please consult our sales representatives for the availability of the following options before ordering: (Items) (How to specify) <ul style="list-style-type: none"> ■ Change response frequency Fc = □□□ Hz ■ Change response time Tc = □□□ sec ■ Change burnout drive time Bt = □□□ sec |
|---------------|---|

TERMINAL ASSIGNMENT



| Terminal | Signal |
|----------|----------|
| ① | N. C. |
| ② | N. C. |
| ③ | + INPUT |
| ④ | - INPUT |
| ⑤ | + OUTPUT |
| ⑥ | - OUTPUT |
| ⑦ | + DC24V |
| ⑧ | - POWER |

BLOCK DIAGRAM



General Specifications

High-level signal conditioner

AREX-30

High-level 信號變換器

PERFORMANCE

| | |
|----------------------------|--|
| Accuracy Rating | ±0.1%F.S. max. |
| Temperature Effect | ±0.2% of span @10°C variation |
| Response Time | 85msec max. (0→90% @100% step input) |
| CMRR | 100dB min. (500V AC, 50/60Hz) |
| Isolation | Across Input, Output and Power input mutually |
| Insulation Resistance | 100MΩ min. (@500V DC) |
| Dielectric Strength | Across Input, Output and Power input mutually 1500V AC for 1 minute |
| Surge Withstand Capability | Tested for ANSI/IEEE C37.90.1-1989 |
| Operating Environment | Ambient temperature: -5~55°C Humidity: 5~90%RH (No condensation) |
| Storage Temperature | -10~60°C |

PHYSICAL

| | |
|---------------------|--|
| Installation | DIN Rail-mounting |
| External Connection | With M3.5 screw terminals (With drop protection) |
| Outer Dimension | W25×H94×D40mm |
| Weight | Approx. 70g |

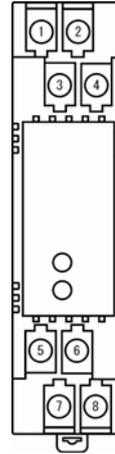
MATERIAL

| | |
|-----------------------|--|
| Housing | ABS (UL94V-0) |
| Screw Terminal | Steel/nickel plating |
| PC Board | Glass Fabric Epoxy Resin (FR-4, UL94V-0) |
| Anti-humidity Coating | HumiSeal 1A27NS (Polyurethane) |

ADDITIONAL

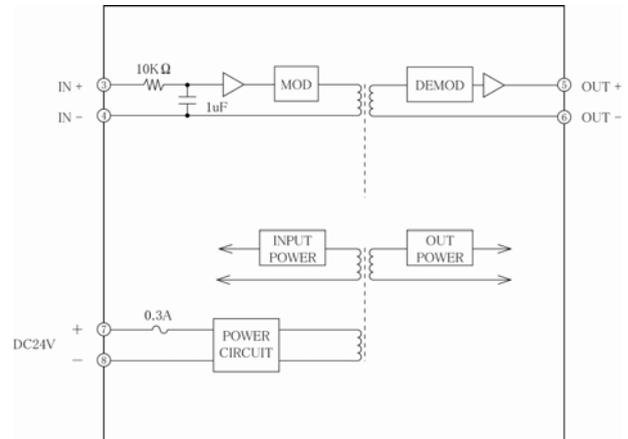
| | |
|---------------|---|
| Other Options | Please consult our sales representatives for the availability of the following options before ordering: (Items) (How to specify) ■ Change response frequency Fc = □□□ Hz ■ Change response time Tc = □□□ sec ■ Change burnout drive time Bt = □□□ sec |
|---------------|---|

TERMINAL ASSIGNMENT



| Terminal | Signal |
|----------|---------------|
| ① | N. C. |
| ② | N. C. |
| ③ | + INPUT |
| ④ | - INPUT |
| ⑤ | + OUTPUT |
| ⑥ | - OUTPUT |
| ⑦ | + DC24V POWER |
| ⑧ | - POWER |

BLOCK DIAGRAM



General Specifications

Isolated distributor
 傳送器用 電源(絶縁付)

AREX-30

OVERVIEW



This is JIS concord size, terminal block type isolated distributor that supplies DC power to two-wire transmitter and converts its 4 to 20mA current loop into any desired standard process signal.

- ▽ Equipped with power output switch.
- ▽ Integrated with burnout protection function.
- ▽ Anti-humid coatings on PCB are standard for improved environmental protection.
- ▽ Drop-proof screw terminals for ease of installation.
- ▽ No special spacing is required between the units.

ORDERING INFORMATION

| Ordering Code | Standard Price |
|--------------------|----------------|
| DMS3007—6 □ □ ① | OPEN |

SPECIFICATIONS

POWER SECTION

| | |
|-------------------|--|
| Power Requirement | 24V DC ±10% |
| Power Sensitivity | ±0.1% of span maximum for each power input range |
| Power Line Fuse | 300mA fuse is installed |
| Power Consumption | 45mA max. (Current output: 75mA max.) |

INPUT SECTION

| | |
|---|---|
| Input Signal | 4~20mA from 2-wire transmitter |
| Input Resistance | 250 Ω |
| Transmitter Power Supply | Output voltage: 25V (TYP) / Without load down to 18V with 100% input Maximum current: 25mA (TYP) |
| Transmitter Load Resistance | 550 Ω max. |
| Short-Circuit Protection Limiting Current | 26mA (TYP) *Includes short-circuit detection circuit. |
| Allowable Short-Circuit Time Span | Infinite |

OUTPUT SECTION

| | |
|--|---|
| Output Signal (Specify at ① when ordering) | <ul style="list-style-type: none"> ■ 1~5V DC.....V1 ■ 0~10mV DC.....V2 ■ 0~100mV DC.....V3 ■ 0~1V DC.....V4 ■ 0~5V DC.....V5 ■ 0~10V DC.....V6 ■ Other DC voltage signal ranging up to 10VVX (□~□) Specify output signal in parentheses. ■ 4~20mA DC.....C1 ■ Other DC current signal ranging up to 20mACX (□~□) Specify output signal in parentheses. |
| Maximum Output Load | Voltage output: 1V span min. 2mA max. 100mV 200K Ω min. Current output: 550 Ω max. |
| Zero Adjustment | Approx. ±2.5% of span (Adjustable by front-accessible trimmer) |
| Span Adjustment | Approx. ±2.5% of span (Adjustable by front-accessible trimmer) |
| Burnout Protection | Downward |

PERFORMANCE

| | |
|----------------------------|--|
| Accuracy Rating | ±0.1%F.S. max. |
| Temperature Effect | ±0.2% of span @10°C variation |
| Response Time | 85msec max. (0→90% @100% step input) |
| CMRR | 100dB min. (500V AC, 50/60Hz) |
| Isolation | Across Input, Output and Power input mutually |
| Insulation Resistance | 100M Ω min. (@500V DC) |
| Dielectric Strength | Across Input, Output and Power input mutually 1500V AC for 1 minute |
| Surge Withstand Capability | Tested for ANSI/IEEE C37.90.1-1989 |
| Operating Environment | Ambient temperature: -5~55°C Humidity: 5~90%RH (No condensation) |
| Storage Temperature | -10~60°C |

General Specifications

Isolated distributor
 傳送器用 電源(絶縁付)

AREX-30

PHYSICAL

| | |
|---------------------|--|
| Installation | DIN Rail-mounting |
| External Connection | With M3.5 screw terminals (With drop protection) |
| Outer Dimension | W25×H94×D40mm |
| Weight | Approx. 70g |

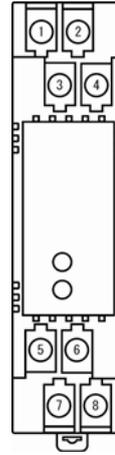
MATERIAL

| | |
|-----------------------|--|
| Housing | ABS (UL94V-0) |
| Screw Terminal | Steel/nickel plating |
| PC Board | Glass Fabric Epoxy Resin (FR-4, UL94V-0) |
| Anti-humidity Coating | HumiSeal 1A27NS (Polyurethane) |

ADDITIONAL

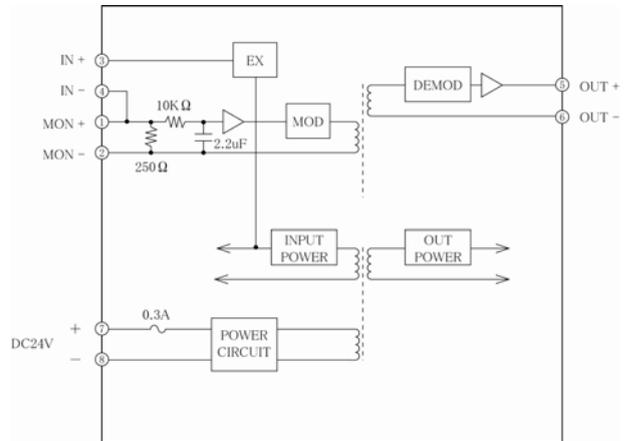
| | |
|---------------|---|
| Other Options | Please consult our sales representatives for the availability of the following options before ordering: (Items) (How to specify) ■ Change response frequency Fc = □□□ Hz ■ Change response time Tc = □□□ sec |
|---------------|---|

TERMINAL ASSIGNMENT



| Terminal | Signal |
|----------|-----------|
| ① | + MONITOR |
| ② | - MONITOR |
| ③ | + INPUT |
| ④ | - INPUT |
| ⑤ | + OUTPUT |
| ⑥ | - OUTPUT |
| ⑦ | + DC24V |
| ⑧ | - POWER |

BLOCK DIAGRAM



General Specifications

Frequency/analog converter

AREX-30

Pulse/直流 變換器

OVERVIEW



This is JIS concord size, terminal block type frequency/analog converter that converts pulse train signal into any desired standard process signal proportional to input frequency.

- ▽ Integrated with burnout protection function.
- ▽ Anti-humid coatings on PCB are standard for improved environmental protection.
- ▽ Drop-proof screw terminals for ease of installation.
- ▽ No special spacing is required between the units.

ORDERING INFORMATION

| Ordering Code | Standard Price |
|--|----------------|
| DMS3008—1□□ (□~□) — 6□□ ① ② ③ | OPEN |

SPECIFICATIONS

POWER SECTION

| | |
|-------------------|--|
| Power Requirement | 24V DC ±10% |
| Power Sensitivity | ±0.1% of span maximum for each power input range |
| Power Line Fuse | 300mA fuse is installed |
| Power Consumption | 25mA max. (Current output: 50mA max.) |

INPUT SECTION

| | |
|--|---|
| Input Signal (Specify at ① when ordering) | <ul style="list-style-type: none"> ■ Dry contact or Open collector.....OP (Excitation Approx. 13V, 3.3KΩ) ■ AC voltage pulse (0.1~100Vp-p) ...AP(□□□) (Sleshold voltage: Approx. 0.06Vp-p) Specify Peak-peak input voltage in parentheses. ■ DC voltage pulse.....DP(□~□/SH□ SL□) (Sleshold voltage: SH Approx. 2V) Specify input voltage in parentheses. Specify non-standard sleshold voltage after / in parentheses if applicable. ■ DC4~20mA pulse.....IP (Sleshold voltage: SH Approx. 8mA) ■ DC current pulse.....IP(□~□/SH□ SL□) other than 4~20mA Please specify in parentheses between 0~100 μA to 0~100mA. Specify non-standard sleshold voltage after “/” in parentheses if applicable. |
| Measurement Frequency Range (Specify at ② when ordering) | Any range from 0~20Hz to 0~20kHz. |
| Input Resistance | Voltage input: 1MΩ min. (30KΩ minimum without power) Current input: 250Ω |
| Allowable Input Voltage | DC voltage input: 30V DC max. continuous DC current input: 40mA DC max. continuous AC voltage input: 200Vp-p AC (±100V with reference to 0V) max. continuous |
| Input Pulse Width | 20 μ sec min. |
| Duty Ratio | 40~60% |

OUTPUT SECTION

| | |
|--|---|
| Output Signal (Specify at ③ when ordering) | <ul style="list-style-type: none"> ■ 1~5V DC.....V1 ■ 0~10mV DC.....V2 ■ 0~100mV DC.....V3 ■ 0~1V DC.....V4 ■ 0~5V DC.....V5 ■ 0~10V DC.....V6 ■ Other DC voltage signal ranging up to 10VVX (□~□) Specify output signal in parentheses. ■ ±10mV DC.....W2 ■ ±100mV DC.....W3 ■ ±1V DC.....W4 ■ ±5V DC.....W5 ■ ±10V DC.....W6 ■ Other DC voltage signal ranging within ±10VWX (□~□) Specify output signal in parentheses. ■ 4~20mA DC.....C1 ■ Other DC current signal ranging up to 20mACX (□~□) Specify output signal in parentheses. |
| Maximum Output Load | Voltage output: 1V span min. 2mA max. 100mV 200KΩ min. Current output: 550Ω max. |
| Zero Adjustment | Approx. ±2.5% of span (Adjustable by front-accessible trimmer) |
| Span Adjustment | Approx. ±2.5% of span (Adjustable by front-accessible trimmer) |
| Burnout Protection | Downward |

General Specifications

Frequency/analog converter

AREX-30

Pulse/直流 變換器

PERFORMANCE

| | | |
|----------------------------|---|--------------------------|
| Accuracy Rating | $\pm 0.3\%$ F.S. max. | |
| | Ripple inclusion ratio: 0.2% p-p max. (Applicable only when the input is bigger than 10% of span.) | |
| Temperature Effect | $\pm 0.2\%$ of span @ 10°C variation | |
| Response Time | Input frequency | (0→90% @100% step input) |
| | 20Hz | 8sec max. |
| | 200Hz | 1sec max. |
| | 2KHz | 500msec max. |
| | 20KHz | 500msec max. |
| CMRR | 100dB min. (500V AC, 50/60Hz) | |
| Isolation | Across Input, Output and Power input mutually | |
| Insulation Resistance | 100M Ω min. (@500V DC) | |
| Dielectric Strength | Across Input, Output and Power input mutually 1500V AC for 1 minute | |
| Surge Withstand Capability | Tested for ANSI/IEEE C37.90.1-1989 | |
| Operating Environment | Ambient temperature: $-5\sim 55^\circ\text{C}$ | |
| | Humidity: $5\sim 90\%$ RH (No condensation) | |
| Storage Temperature | $-10\sim 60^\circ\text{C}$ | |

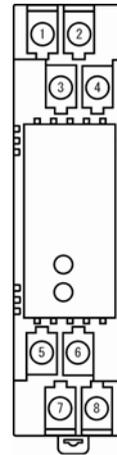
PHYSICAL

| | |
|---------------------|--|
| Installation | DIN Rail-mounting |
| External Connection | With M3.5 screw terminals (With drop protection) |
| Outer Dimension | W25×H94×D40mm |
| Weight | Approx. 70g |

MATERIAL

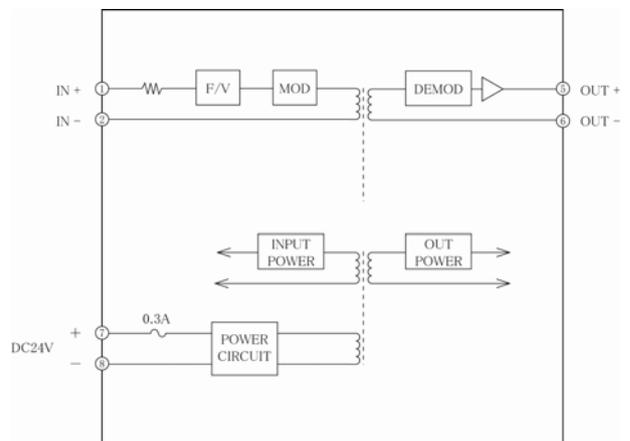
| | |
|-----------------------|--|
| Housing | ABS (UL94V-0) |
| Screw Terminal | Steel/nickel plating |
| PC Board | Glass Fabric Epoxy Resin (FR-4, UL94V-0) |
| Anti-humidity Coating | HumiSeal 1A27NS (Polyurethane) |

TERMINAL ASSIGNMENT



| Terminal | Signal |
|----------|----------|
| ① | N. C. |
| ② | N. C. |
| ③ | + INPUT |
| ④ | - INPUT |
| ⑤ | + OUTPUT |
| ⑥ | - OUTPUT |
| ⑦ | + DC24V |
| ⑧ | - POWER |

BLOCK DIAGRAM



General Specifications

Potentiometer transmitter

AREX-30

可變抵抗 信號變換器

PHYSICAL

| | |
|---------------------|--|
| Installation | DIN Rail-mounting |
| External Connection | With M3.5 screw terminals (With drop protection) |
| Outer Dimension | W25×H94×D40mm |
| Weight | Approx. 70g |

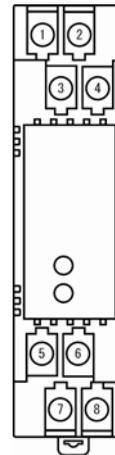
MATERIAL

| | |
|-----------------------|--|
| Housing | ABS (UL94V-0) |
| Screw Terminal | Steel/nickel plating |
| PC Board | Glass Fabric Epoxy Resin (FR-4, UL94V-0) |
| Anti-humidity Coating | HumiSeal 1A27NS (Polyurethane) |

ADDITIONAL

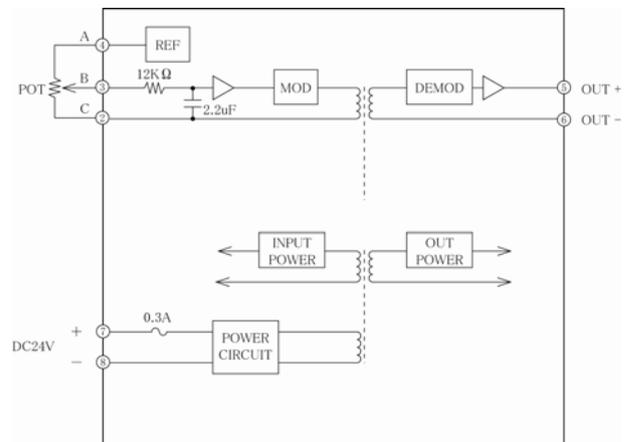
| | |
|---------------|--|
| Other Options | Please consult our sales representatives for the availability of the following options before ordering: (Items) (How to specify) <ul style="list-style-type: none"> ■ Change response frequency Fc = □□□Hz ■ Change response time Tc = □□□sec ■ Change burnout drive time Bt = □□□sec |
|---------------|--|

TERMINAL ASSIGNMENT



| Terminal | Signal |
|----------|----------|
| ① | N. C. |
| ② | C |
| ③ | B |
| ④ | A |
| ⑤ | + OUTPUT |
| ⑥ | - OUTPUT |
| ⑦ | + DC24V |
| ⑧ | - POWER |

BLOCK DIAGRAM



General Specifications

CT transmitter
交流電流 變換器

AREX-30

OVERVIEW



This is JIS concord size, terminal block type CT transmitter that converts AC current signal from CT into any desired standard process signal.

- ▽ RMS operation for measuring distorted waveform.
- ▽ Integrated with burnout protection function.
- ▽ Anti-humid coatings on PCB are standard for improved environmental protection.
- ▽ Drop-proof screw terminals for ease of installation.
- ▽ No special spacing is required between the units.

ORDERING INFORMATION

| Ordering Code | Standard Price |
|---|----------------|
| DMS3020—1□□—6□□ ① ② | OPEN |

SPECIFICATIONS

POWER SECTION

| | |
|-------------------|--|
| Power Requirement | 24V DC $\pm 10\%$ |
| Power Sensitivity | $\pm 0.1\%$ of span maximum for each power input range |
| Power Line Fuse | 300mA fuse is installed. |
| Power Consumption | 20mA max. (Current output: 50mA max.) |

INPUT SECTION

| | |
|---|---|
| Input Signal (Specify at ① when ordering) | <ul style="list-style-type: none"> ■ 0~1A AC 50/60Hz.....M1 ■ 0~5A AC 50/60Hz.....M2 ■ Other AC current signal up to 5A (50/60Hz).....MX (□~□) Specify input range in parentheses. |
| Input Resistance | AC5A input: 2m Ω (Shunt resistor) AC1A input: 10m Ω (Shunt resistor) |
| Allowable Over Voltage Crest Factor | Continuous: 120% rated input Instantaneous: 10 \times rated input (3sec) 3 max. |

OUTPUT SECTION

| | |
|--|--|
| Output Signal (Specify at ② when ordering) | <ul style="list-style-type: none"> ■ 1~5V DC.....V1 ■ 0~10mV DC.....V2 ■ 0~100mV DC.....V3 ■ 0~1V DC.....V4 ■ 0~5V DC.....V5 ■ 0~10V DC.....V6 ■ Other DC voltage signal ranging up to 10V.....VX (□~□) Specify output signal in parentheses. ■ ± 10mV DC.....W2 ■ ± 100mV DC.....W3 ■ ± 1V DC.....W4 ■ ± 5V DC.....W5 ■ ± 10V DC.....W6 ■ Other DC voltage signal ranging within ± 10V.....WX (□~□) Specify output signal in parentheses. ■ 4~20mA DC.....C1 ■ Other DC current signal ranging up to 20mA.....CX (□~□) Specify output signal in parentheses. |
| Maximum Output Load | Voltage output: 1V span min. 2mA max. 100mV 200K Ω min. Current output: 550 Ω max. |
| Zero Adjustment | Approx. $\pm 2.5\%$ of span (Adjustable by front-accessible trimmer) |
| Span Adjustment | Approx. $\pm 2.5\%$ of span (Adjustable by front-accessible trimmer) |
| Burnout Protection | Downward |

PERFORMANCE

| | |
|----------------------------|--|
| Accuracy Rating | $\pm 0.25\%$ F.S. max. (10% of span min.) |
| Temperature Effect | $\pm 0.2\%$ of span @10 $^{\circ}$ C variation |
| Response Time | 0.4sec max. (0 \rightarrow 90% @100% step input) |
| CMRR | 100dB min. (500V AC, 50/60Hz) |
| Isolation | Across Input, Output and Power input mutually |
| Insulation Resistance | 100M Ω min. (@500V DC) |
| Dielectric Strength | Across Input, Output and Power input mutually 1500V AC for 1 minute |
| Surge Withstand Capability | Tested for ANSI/IEEE C37.90.1-1989 |
| Operating Environment | Ambient temperature: -5~55 $^{\circ}$ C Humidity: 5~90%RH (No condensation) |
| Storage Temperature | -10~60 $^{\circ}$ C |

General Specifications

CT transmitter
交流電流 變換器

AREX-30

PHYSICAL

| | |
|---------------------|--|
| Installation | DIN Rail-mounting |
| External Connection | With M3.5 screw terminals (With drop protection) |
| Outer Dimension | W25×H94×D40mm |
| Weight | Approx. 70g |

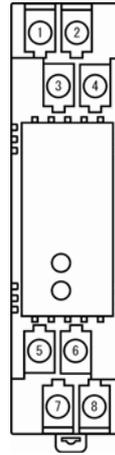
MATERIAL

| | |
|-----------------------|--|
| Housing | ABS (UL94V-0) |
| Screw Terminal | Steel/nickel plating |
| PC Board | Glass Fabric Epoxy Resin (FR-4, UL94V-0) |
| Anti-humidity Coating | HumiSeal 1A27NS (Polyurethane) |

ADDITIONAL

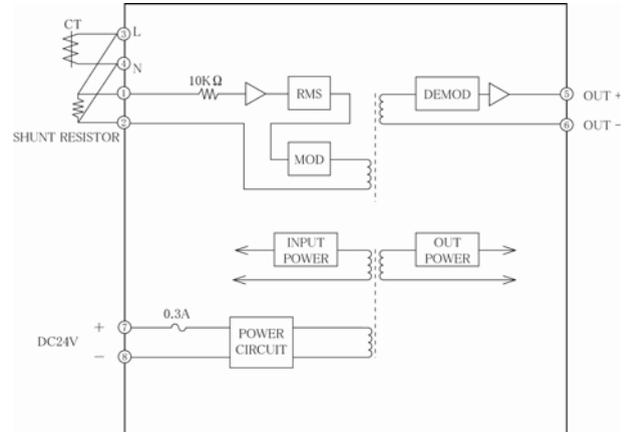
| | |
|---------------|---|
| Other Options | Please consult our sales representatives for the availability of the following options before ordering: (Items) (How to specify) <input type="checkbox"/> Change response frequency Fc = □□□ Hz <input type="checkbox"/> Change response time Tc = □□□ sec |
|---------------|---|

TERMINAL ASSIGNMENT



| Terminal | Signal |
|----------|---------------|
| ① | (L) INPUT |
| ② | (N) INPUT |
| ③ | L INPUT |
| ④ | N INPUT |
| ⑤ | + OUTPUT |
| ⑥ | - OUTPUT |
| ⑦ | + DC24V |
| ⑧ | - DC24V POWER |

BLOCK DIAGRAM



General Specifications

PT transmitter
交流電流 變換器

AREX-30

PHYSICAL

| | |
|---------------------|--|
| Installation | DIN Rail-mounting |
| External Connection | With M3.5 screw terminals (With drop protection) |
| Outer Dimension | W25 × H94 × D40mm |
| Weight | Approx. 70g |

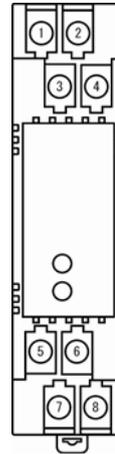
MATERIAL

| | |
|-----------------------|--|
| Housing | ABS (UL94V-0) |
| Screw Terminal | Steel/nickel plating |
| PC Board | Glass Fabric Epoxy Resin (FR-4, UL94V-0) |
| Anti-humidity Coating | HumiSeal 1A27NS (Polyurethane) |

ADDITIONAL

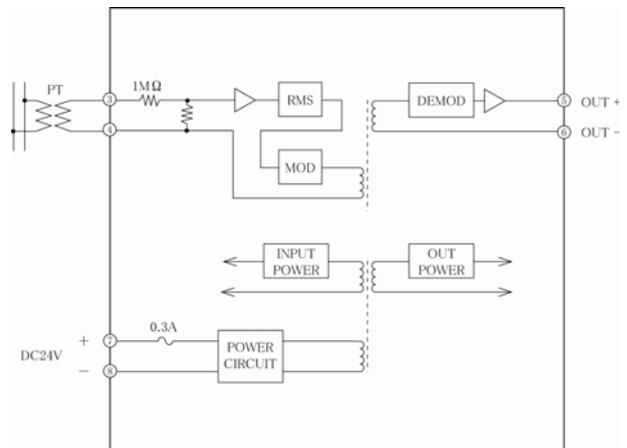
| | |
|---------------|---|
| Other Options | Please consult our sales representatives for the availability of the following options before ordering: (Items) (How to specify) <ul style="list-style-type: none"> ■ Change response frequency Fc = □□□ Hz ■ Change response time Tc = □□□ sec |
|---------------|---|

TERMINAL ASSIGNMENT



| Terminal | Signal |
|----------|----------|
| ① | N. C. |
| ② | N. C. |
| ③ | L INPUT |
| ④ | N INPUT |
| ⑤ | + OUTPUT |
| ⑥ | - OUTPUT |
| ⑦ | + DC24V |
| ⑧ | - POWER |

BLOCK DIAGRAM



General Specifications

Loop-powered isolator

AREX-30

OVERVIEW



This is JIS concord size, terminal block type loop-powered isolator that accepts 4~20mA input, draws power from it and outputs isolated 1~5V or 4~20mA signal.

- ▽ Anti-humid coatings on PCB are standard for improved environmental protection.
- ▽ Drop-proof screw terminals for ease of installation.
- ▽ No special spacing is required between the units.

ORDERING INFORMATION

| Ordering Code | Standard Price |
|--------------------|----------------|
| DMS3064—6 □ □ ② | OPEN |

SPECIFICATIONS

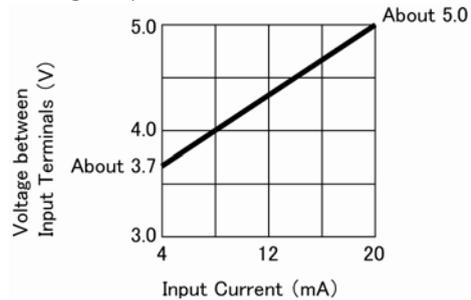
INPUT SECTION

| | |
|-------------------------|--|
| Input Signal | 4~20mA DC |
| Input Resistance | Voltage output: Approx. 250 Ω (with 20mA DC input) Current output: Approx. 230 Ω + load resistance (with 20mA DC input) |
| Allowable Input Voltage | 30mA DC max. |

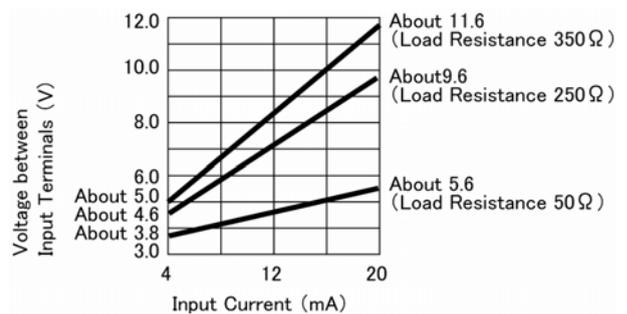
OUTPUT SECTION

| | |
|--|--|
| Output Signal (Specify at ① when ordering) | <input type="checkbox"/> 1~5V DC V1 <input type="checkbox"/> 4~20mA DC C1 |
| Maximum Output Load | Voltage output: 50K Ω min. Current output: 350 Ω min. (Allowable load resistance: 50~350 Ω) |
| Zero Adjustment | Voltage output: Approx. ±2% of span Current output: Approx. ±0.5% of span (Adjustable by front-accessible trimmer) |
| Span Adjustment | Voltage output: Approx. ±2% of span Current output: Approx. ±1.5% of span (Adjustable by front-accessible trimmer) |

• Voltage Output



• Current Output



General Specifications

Loop-powered isolator

AREX-30

PERFORMANCE

| | |
|---|---|
| Accuracy Rating | $\pm 0.1\%/F.S.$ |
| Temperature Effect | $\pm 0.15\%$ of span @10°C variation |
| Response Time | 15msec max. (0→90%) @100% step input |
| Effect of Load Variation Against Output | 0.01%/Ω (50~150Ω) 0.005%/Ω (150~350Ω) *Adjusted for 250Ω when shipping. |
| Isolation | Across Input and Output |
| Insulation Resistance | 100MΩ min. (@500V DC) |
| Dielectric Strength | Across Input and Output : 1500V AC for 1 minute |
| Surge Withstand Capability | Tested for ANSI/IEEE C37.90.1-1989 |
| Operating Environment | Ambient temperature: -5~55°C Humidity: 5~90%RH (Non-condensation) |
| Storage Temperature | -10~60°C |

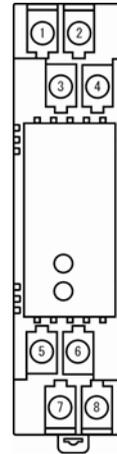
PHYSICAL

| | |
|---------------------|--|
| Installation | DIN Rail-mounting |
| External Connection | With M3.5 screw terminals (With drop protection) |
| Outer Dimension | W25 × H94 × D40mm |
| Weight | Approx. 65g |

MATERIAL

| | |
|-----------------------|--|
| Housing | ABS (UL94V-0) |
| Screw Terminal | Steel/nickel plating |
| PC Board | Glass Fabric Epoxy Resin (FR-4, UL94V-0) |
| Anti-humidity Coating | HumiSeal 1A27NS (Polyurethane) |

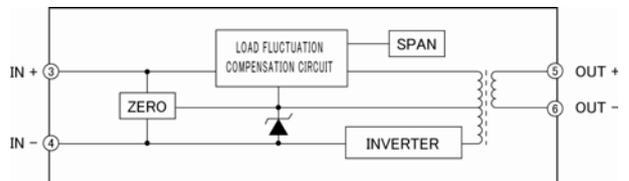
TERMINAL ASSIGNMENT



| Terminal | Signal |
|----------|----------|
| ① | N. C. |
| ② | N. C. |
| ③ | + INPUT |
| ④ | - INPUT |
| ⑤ | + OUTPUT |
| ⑥ | - OUTPUT |
| ⑦ | N. C. |
| ⑧ | N. C. |

BLOCK DIAGRAM

■ Current Input/Current Output type



■ Current Input/Voltage Output type

