

# General Specifications

Thermocouple transmitter with isolated dual-output **AREX-37**

熱電對 溫度 變換器

## OVERVIEW



This is narrow-width plug-in thermocouple transmitter with dual-output that converts thermocouple input signal into any desired standard process signal.

- ▽ Integrated with cold junction compensation, thermocouple linearization and burnout protection function.
- ▽ Cold junction temperature sensor is integrated into the transmitter itself that eliminates the need for reserving extra space above and below transmitter. This feature helps to save space in control panel.
- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL DMS3701-□□□□(□~□)-6□□-7N-□/□/□ ① ② ③ ④ ⑤ ⑥	OPEN
DUAL-OUTPUT MODEL DMS3701-□□□□(□~□)-6□□-7□□-□/□/□ ① ② ③ ④ ⑤ ⑥	OPEN

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz)	AU	
	■ 24V DC ±10%	D1	
	■ 110V DC ±10%	D4	
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	2V A max.	40mA max.
	Dual Voltage Output	2V A max.	50mA max.
	Single Current Output	2.5V A max.	60mA max.
	Dual Current Output	2.5V A max.	70mA max.
	Current and Voltage Output	3V A max.	75mA max.

### INPUT SECTION

Input Signal (Specify at ② when ordering)	JIS or other standard thermocouples ■ K _____ K ■ E _____ E ■ J _____ J ■ T _____ T ■ B _____ B ■ R _____ R ■ S _____ S ■ N _____ N ■ Other standard thermocouple _____ X Specify the standard (A) and code (B) as: X=A/B * In case the thermocouple is specified by JIS symbol, the EMF chart used will be that of latest revision of JIS unless otherwise specified by the customer. * Submission of EMF chart may be required for ordering for special thermocouple.
Signal Span (Specify at ③ when ordering)	* Please specify measurement temperature range in centigrade. Such temperature range shall be within the range appearing in the EMF chart and be greater than 3mV when converted to voltage span.
Input Resistance	1MΩ min. (1MΩ minimum without power) 1kΩ max.
Allowable Lead-wire Resistance	
Allowable Input Voltage	30V DC max. continuous
Cold-Junction Compensation Method	By means of built-in temperature measurement element. (No cold-junction compensation for type B thermocouple.)
Cold-Junction Compensation Error	±0.5°C max. (25°C ±15°C)
Linearizer	Built-in (6 segments maximum)

### OUTPUT SECTION

Output Signal (Specify at ④⑤ 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 (750Ω load)	C1	
Applicable only to out-1. Out-2 must be voltage signal.		
■ 4~20mA DC (350Ω load)	C9	
Applicable only when 4~20mA output is required for both outputs.		
■ Other DC current signal	CX(□~□)	
Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.		
Maximum Output Load	Voltage output: 1V span min. 2mA max. 10mV 10KΩ min. 100mV 100KΩ min. Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each	
Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)	
Span Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)	
Burnout Protection	Upward (Standard) ("Downward" available on request)	

# General Specifications

Thermocouple transmitter with isolated dual-output **AREX-37**  
熱電對 溫度 變換器

## PERFORMANCE

Accuracy Rating	± (0.1%/F.S + 0.5°C (Cold Junction Compensation Error) + Linearization Error) (25°C ± 5°C) ※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, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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

## 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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket Block: Approx. 80g

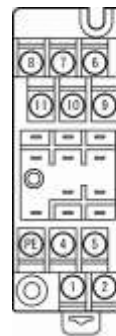
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

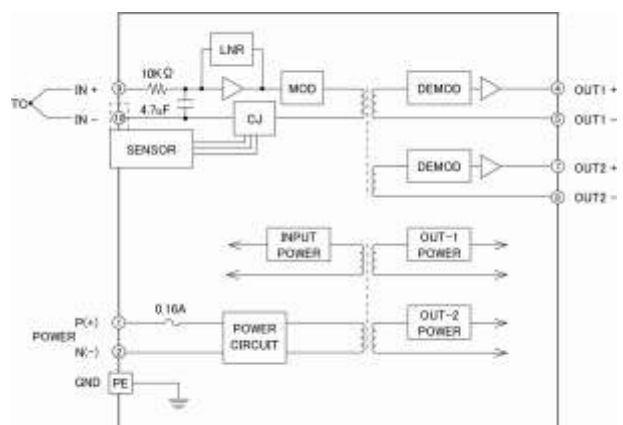
Optional Items (Specify at ⑥ when ordering)	<ul style="list-style-type: none"> <li>■ Standard..... no letter</li> <li>■ Without Linearization..... P</li> <li>■ Without Cold Junction Compensation..... Q</li> </ul>
Other Options	<p>Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify)</p> <ul style="list-style-type: none"> <li>■ Change response frequency..... Fc = □□□ Hz (Up to 200Hz)</li> <li>■ Change response time..... Tc = □□□ sec (Up to 2msec @90%)</li> <li>■ Change burnout drive time..... Bt = □□□ sec</li> </ul>

## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	T. C. +
⑩	T. C. -
⑪	N. C.

## BLOCK DIAGRAM



# General Specifications

RTD transmitter with isolated dual-output

**AREX-37**

測溫抵抗體 溫度變換器

## OVERVIEW



This is narrow-width plug-in RTD transmitter with dual-output that detects the variation of resistance with RTD and converts into any desired standard process signal.

- ▽ Integrated with RTD linearization and burnout protection function.
- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL <span style="float: right;">OPEN</span>	
DMS3702-□□-□ (□~□) - 6 □□ - 7 N - □ / □ / □	
①    ②    ③                    ④                    ⑥	
DUAL-OUTPUT MODEL <span style="float: right;">OPEN</span>	
DMS3702-□□-□ (□~□) - 6 □□ - 7 □□ - □ / □ / □	
①    ②    ③                    ④                    ⑤                    ⑥	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	2VA max.	40mA max.
	Dual Voltage Output	2VA max.	50mA max.
	Single Current Output	2.5VA max.	65mA max.
	Dual Current Output	2.5VA max.	70mA max.
Current and Voltage Output	3VA max.	75mA max.	

### INPUT SECTION

Input Signal (Specify at ② when ordering)	JIS or other standard resistance bulb
	<ul style="list-style-type: none"> <li>■ Pt100.....Pt100</li> <li>■ JPt100.....JPt100</li> <li>■ Pt50.....Pt50</li> <li>■ Ni508.4Ω.....Ni508</li> <li>■ Other resistance bulb.....X</li> </ul> Specify separately the type of input resistance bulb as X=□□□
Measurement Temperature Range (Specify at ③ when ordering)	* 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.
RTD Excitation Current	* Please specify in centigrade within the range of the resistance-temperature table.
	Approx. 1mA @Pt0~100°C
Input Lead-wire Resistance	200Ω/wire max.

### OUTPUT SECTION

Output Signal (Specify at ④ ⑤ 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
Maximum Output Load	■ ±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 (750Ω load).....C1
	Applicable only to out-1.
	Out-2 must be voltage signal.
	■ 4~20mA DC (350Ω load).....C9
	Applicable only when 4~20mA output is required for both outputs.
Zero Adjustment	■ Other DC current signal.....CX (□~□)
	Please specify between 4~8mA to 4~20mA.
Span Adjustment	Specify output signal in parentheses.
	Voltage output: 1V span min.    2mA max. 10mV    10KΩ min. 100mV    100KΩ min.
Burnout Protection	Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Burnout Protection	Approx. ±5% of span (Adjustable by front-accessible trimmer)
	Upward (Whichever A, B or B' gets open.)

# General Specifications

RTD transmitter with isolated dual-output

**AREX-37**

測溫抵抗體 溫度變換器

## PERFORMANCE

Accuracy Rating	±0.15%/F.S (25°C ±5°C)
Temperature Effect	±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, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket Block: Approx. 80g

## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw	Steel/nickel plating
Terminal	
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

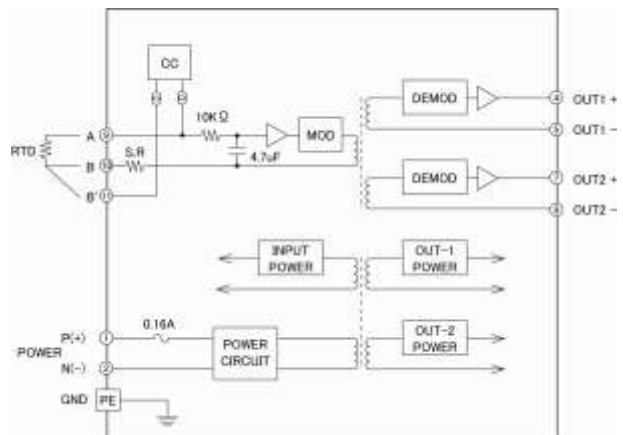
Optional Items (Specify at ⑥ when ordering)	<ul style="list-style-type: none"> <li>■ Standard .....no letter</li> <li>■ Without Linearization .....P</li> </ul>
Other Options	<p>Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify)</p> <ul style="list-style-type: none"> <li>■ Change response frequency.....Fc = □□□Hz (Up to 200Hz)</li> <li>■ Change response time.....Tc = □□□sec (Up to 2msec @90%)</li> </ul>

## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N.C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	A RTD
⑩	B RTD
⑪	B' RTD

## BLOCK DIAGRAM





# General Specifications

Millivolt isolator with isolated dual-output  
mV 信號變換器

**AREX-37**

## PERFORMANCE

Accuracy Rating	±0.1%/F.S (25°C±5°C)
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, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC) Across Input, Out-1, Out-2, Power input and Ground mutually
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket Block: Approx. 80g

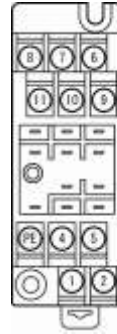
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

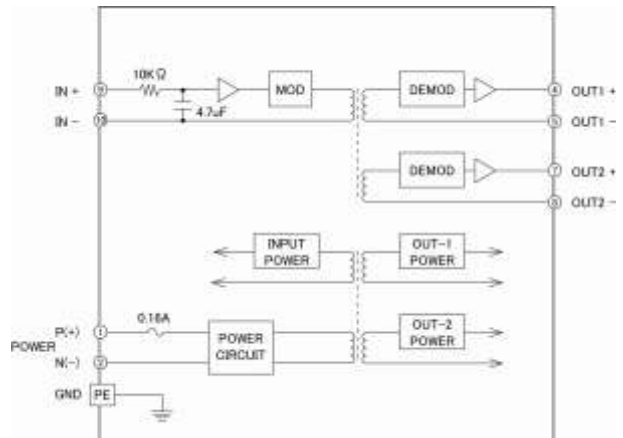
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) <ul style="list-style-type: none"> <li>■ Change response frequency.....Fc = □□□Hz (Up to 200Hz)</li> <li>■ Change response time.....Tc = □□□sec (Up to 2msec @90%)</li> </ul>
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	N. C.

## BLOCK DIAGRAM





# General Specifications

High-level signal conditioner with isolated dual-output **AREX-37**

High-level 信號變換器(絶縁 2 出力)

## PERFORMANCE

Accuracy Rating	±0.1%/F.S (25°C±5°C)
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, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket Block: Approx. 80g

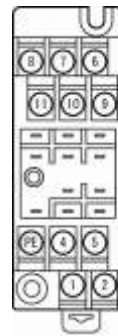
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

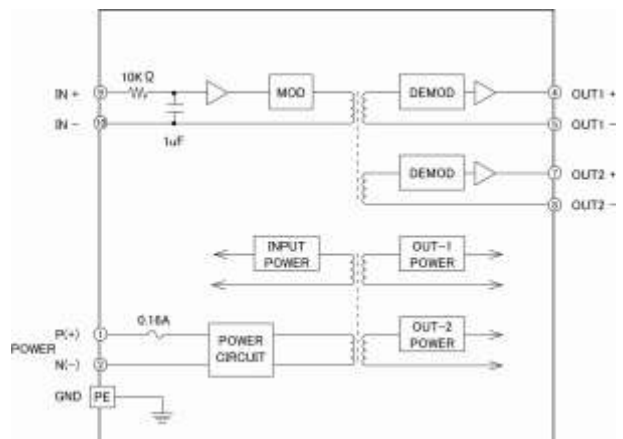
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) ■ Change response frequency..... Fc = □□□ Hz (Up to 200Hz) ■ Change response time..... Tc = □□□ sec (Up to 2msec @90%)
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	N. C.

## BLOCK DIAGRAM





# General Specifications

Two-point alarm setter

上下限 警報器

AREX-37

## OVERVIEW



This is narrow-width plug-in two-point alarm setter that generates two independent relay contact closure outputs by comparing high-level input signal with two pre-set trip points.

- ▽ Each trip point is set separately with rotary switches at the front panel. Setting range is 0~99% of input.
- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
DMS3705-□□-1□□-R Y1(□/□□)-R Y2(□/□□)	OPEN
①      ②      ③ ④      ⑤ ⑥	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	<ul style="list-style-type: none"> <li>■ 85~264V AC (47~63Hz).....AU</li> <li>■ 24V DC ±10%.....D1</li> <li>■ 110V DC ±10%.....D4</li> </ul>
Power Sensitivity	±0.1% of span maximum for each power input range
Power Line Fuse	160mA fuse is installed. (Standard)
Maximum Power Consumption	3.5VA max. (100V AC powered) 80mA max. (24V DC powered)

### INPUT SECTION

Input Signal (Specify at ② when ordering)	<ul style="list-style-type: none"> <li>■ 1~5V DC ..... V1</li> <li>■ 0~1V DC ..... V4</li> <li>■ 0~5V DC ..... V5</li> <li>■ 0~10V DC ..... V6</li> <li>■ 4~20mA DC ..... C1</li> </ul>
Input Resistance	Voltage input: 1MΩ min. (10kΩ minimum without power) Current input: 250Ω
Allowable Input Voltage	Voltage input: 30V DC max. continuous Current input: 40mA DC max. continuous

### OUTPUT SECTION

Output Signal	Two independent type C relay contact closure signals.									
Trip Point	Setting: Use front rotary switch Range: 0~99% of input with 1% step Stability: ±0.5%F.S. Hysteresis: 1.0%±0.3%									
Output Mode (Specify at ③ when ordering)	Each output can be configured for the following operation mode. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Code</th> <th>Input &lt; Trip Point</th> <th>Input &gt; Trip Point</th> </tr> </thead> <tbody> <tr> <td>H</td> <td>Relay is NOT excited</td> <td>Relay is excited</td> </tr> <tr> <td>L</td> <td>Relay is excited</td> <td>Relay is NOT excited</td> </tr> </tbody> </table>	Code	Input < Trip Point	Input > Trip Point	H	Relay is NOT excited	Relay is excited	L	Relay is excited	Relay is NOT excited
Code	Input < Trip Point	Input > Trip Point								
H	Relay is NOT excited	Relay is excited								
L	Relay is excited	Relay is NOT excited								
Trip Point Value (Specify at ④ when ordering)	Please specify the value from 0 to 99% of input signal. * Both trip points will be set at 50% of input signal if they were not specified by customer.									
Monitor Lamp	Red LED turns on when the relay is excited.									
Output Mode for Power Loss	Close between COM and NC.									
Limitation of Relay Operation	Relays cannot be operated about two seconds after turning on the power.									

### PERFORMANCE

Temperature Effect	±0.15% of span @10°C variation
Response Time	150msec max. with trip points set at 90% @100% step input
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output, Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA)
Relay Performance	Rated Load: 5A 125V AC, 5A 30V DC Maximum Voltage: 250V AC, 30V DC Maximum Current: 5A(N.O.)/3A(N.C.) Electrical Life Span: 5A 250V AC(N.O.) - 50,000 times with frequency of 1800 times/h 5A 30V DC(N.O.) - 100,000 times with frequency of 1800 times/h Physical Life Span: 5,000,000 times with frequency of 1800 times/h
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

# General Specifications

Two-point alarm setter

AREX-37

上下限 警報器

## PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 130g Socket Block: Approx. 80g

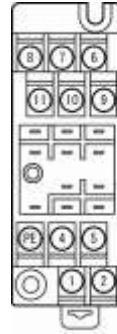
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

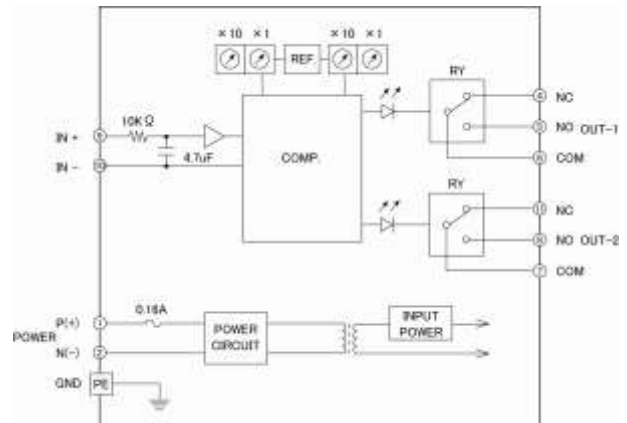
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) <ul style="list-style-type: none"> <li>■ Change response time ..... Tc = □□□sec (Up to 20msec@90%)</li> </ul>
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	NC OUTPUT 1
⑤	NO OUTPUT 1
⑥	COM OUTPUT 1
⑦	COM OUTPUT 2
⑧	NO OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	NC OUTPUT 2

## BLOCK DIAGRAM



# General Specifications

Two-point high precision alarm setter

AREX-37

上下限 警報器(Digital setting)

## OVERVIEW



This is narrow-width plug-in high precision alarm setter that generates two independent relay contact closure outputs by comparing high-level input signal with two pre-set trip points.

- ▽ Each trip point is set separately with rotary switches at the front panel. Setting range is 0~99% of input.
- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
DMS3705HA—□□—1□□—R Y 1(□)—R Y 2(□)	OPEN
①      ②      ③      ④	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	<ul style="list-style-type: none"> <li>■ 85~264V AC (47~63Hz).....AU</li> <li>■ 24V DC ±10%.....D1</li> <li>■ 110V DC ±10%.....D4</li> </ul>
Power Sensitivity	±0.1% of span maximum for each power input range
Power Line Fuse	160mA fuse is installed. (Standard)
Maximum Power Consumption	3.5VA max. (100V AC powered) 90mA max. (24V DC powered)

### INPUT SECTION

Input Signal (Specify at ② when ordering)	<ul style="list-style-type: none"> <li>■ 1~5V DC ..... V1</li> <li>■ 0~1V DC ..... V4</li> <li>■ 0~5V DC ..... V5</li> <li>■ 0~10V DC ..... V6</li> <li>■ ±5V DC ..... W5</li> <li>■ ±10V DC ..... W6</li> <li>■ Other DC voltage signal..... X2(□~□) Please specify between 200mV to 300V or ±200mV to ±300V. Specify input signal in parentheses.</li> <li>■ 4~20mA DC ..... C1</li> <li>■ 2~10mA DC ..... C3</li> <li>■ 1~5mA DC ..... C4</li> <li>■ 10~50mA DC ..... C5</li> <li>■ Other DC current signal..... CY(□~□) Please specify between 0~100 μA to 0~100mA or ±100 μA to ±100mA. Specify input signal in parentheses.</li> </ul>
Input Resistance	Voltage input: 1MΩ min. (1MΩ minimum without power) Current input: 250Ω (Standard for 4~20mA)
Allowable Input Voltage	Voltage input: 30V DC max. continuous (Standard for span up to 10V) Current input: 40mA DC max. continuous (Standard for 4~20mA)

### OUTPUT SECTION

Output Signal	Two independent type C relay contact closure signals.									
Trip Point	Setting: Use front rotary switch Range: 0~105% (in steps of 0.1%, in steps of 1% for range over 100%) Stability: ±0.1%F.S. Hysteresis: Adjustable by front switch for 0.5~50%±0.1% ※Note that the range must be within -10~110% of F. S.									
Output Mode (Specify at ③ ④ when ordering)	Each output can be configured for the following operation mode. Also, it is user-configurable by front switch. <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Code</th> <th>Input &lt; Trip Point</th> <th>Input &gt; Trip Point</th> </tr> </thead> <tbody> <tr> <td>H</td> <td>Relay is NOT excited</td> <td>Relay is excited</td> </tr> <tr> <td>L</td> <td>Relay is excited</td> <td>Relay is NOT excited</td> </tr> </tbody> </table>	Code	Input < Trip Point	Input > Trip Point	H	Relay is NOT excited	Relay is excited	L	Relay is excited	Relay is NOT excited
Code	Input < Trip Point	Input > Trip Point								
H	Relay is NOT excited	Relay is excited								
L	Relay is excited	Relay is NOT excited								
Monitor Lamp	Red LED turns on when the relay is excited.									
Output Mode for Power Loss	Close between COM and NC.									
Delay of Relay Operation	Standard: Relays cannot be operated about two seconds after turning on the power. ※If specified when ordering, other time span can be made. Available range is 1~60 seconds.									

# General Specifications

Two-point high precision alarm setter

AREX-37

上下限 警報器(Digital setting)

## PERFORMANCE

Temperature Effect	±0.15% of span @10°C variation (25°C±5°C)
Response Time	150msec max. with trip points set at 90% @100% step input
Trip Point Indicator	Red LED, 8.0mm height, 3 digits
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output, Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA)
Relay Performance	Rated Load: 5A 125V AC, 5A 30V DC Maximum Voltage: 250V AC, 30V DC Maximum Current: 5A (N.O.) / 3A (N.C.) Electrical Life Span: 5A 250V AC (N.O.) - 50,000 times with frequency of 1800 times/h 5A 30V DC (N.O.) - 100,000 times with frequency of 1800 times/h Physical Life Span: 5,000,000 times with frequency of 1800 times/h
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

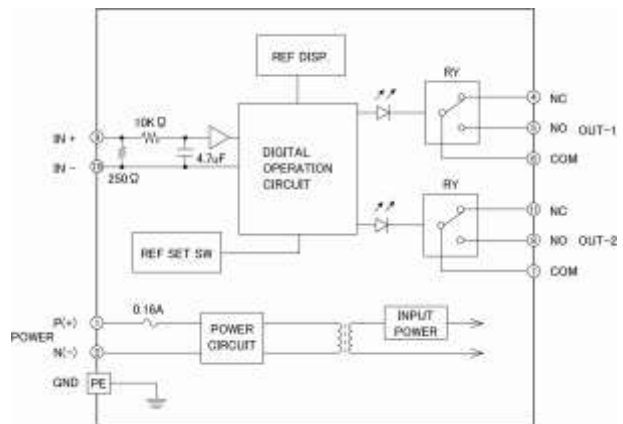
Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 130g Socket Block: Approx. 80g

## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## TERMINAL ASSIGNMENT

## BLOCK DIAGRAM



# General Specifications

Pressure transmitter with isolated dual-output

**AREX-37**

Strain gauge 變換器

## OVERVIEW



This is narrow-width plug-in pressure transmitter that supplies excitation power to bridge sensor (pressure sensors or load-cells) and converts its output into any desired standard process signal.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL <span style="float: right;">OPEN</span>	
DMS3706-□□-□□-□□Ω-1□□-6□□-7 N	
①      ②      ③      ④      ⑤	
DUAL-OUTPUT MODEL <span style="float: right;">OPEN</span>	
DMS3706-□□-□□-□□Ω-1□□-6□□-7□□	
①      ②      ③      ④      ⑤      ⑥	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC±10%.....D1		
	■ 110V DC±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	2.5VA max.	65mA max.
	Dual Voltage Output	2.5VA max.	75mA max.
	Single Current Output	3VA max.	85mA max.
	Dual Current Output	3VA max.	90mA max.
Current and Voltage Output	3.5VA max.	100mA max.	

### INPUT SECTION

Input Signal (Specify at ④ when ordering)	■ 0~10mV DC.....V2
	■ 0~100mV DC.....V3
	■ ±10mV DC.....W3
	■ ±100mV DC.....W3
	■ Other DC voltage signal.....X1(□~□) Please specify between 5mV to 200mV or ±5mV to ±200mV. Specify input signal in parentheses.
Input Resistance	1MΩ min. (10KΩ minimum without power)
Allowable Input Voltage	30V DC max. continuous
Excitation Power Source (Specify at ② when ordering)	5V DC @ Bridge resistance 120Ω
	10V DC @ Bridge resistance 350Ω
	Other
	■ 5V DC.....E2
■ 10V DC.....E3	
■ Other excitation power source between 3 to 10V.....EY(□~□) Specify excitation power source in parentheses.	
Bridge Resistance (Specify at ③ when ordering)	* Please specify resistance.

### OUTPUT SECTION

Output Signal (Specify at ⑤ ⑥ 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.
Maximum Output Load	Voltage output: 1V span min.      2mA max. 10mV      10KΩ min. 100mV      100KΩ min.
	Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)

# General Specifications

Pressure transmitter with isolated dual-output

**AREX-37**

Strain gauge 變換器

## PERFORMANCE

Accuracy Rating	±0.1%/F.S (25°C±5°C)
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, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket Block: Approx. 80g

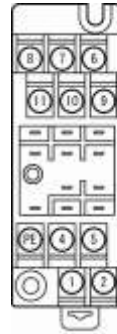
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

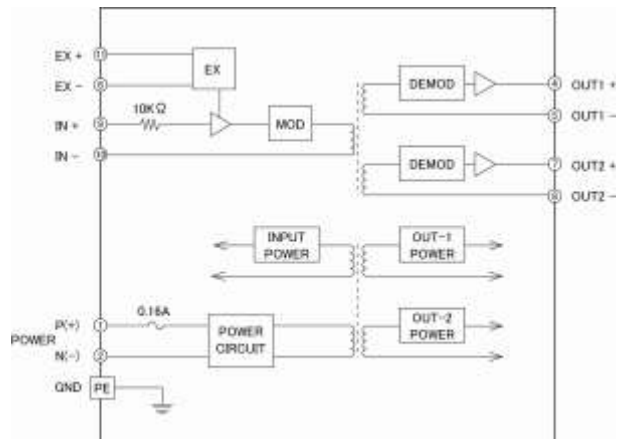
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) <ul style="list-style-type: none"> <li>■ Change response frequency..... Fc = □□□Hz (Up to 200Hz)</li> <li>■ Change response time..... Tc = □□□sec (Up to 2msec @90%)</li> </ul>
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	- EX
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	+ EX

## BLOCK DIAGRAM



# General Specifications

Distributor with isolated dual-output  
 傳送器用 電源(絶縁付)

**AREX-37**

## OVERVIEW



This is narrow-width Plug-in distributor with dual-output 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
- ▽ Anti-humid coatings on PCB and gold-plate on contacts are standards 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
SINGLE-OUTPUT MODEL DMS3707—□□—6 □□—7 N ① ②	OPEN
DUAL-OUTPUT MODEL DMS3707—□□—6 □□—7 □□ ① ② ③	OPEN

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	2.5VA max.	65mA max.
	Dual Voltage Output	2.5VA max.	75mA max.
	Single Current Output	3VA max.	85mA max.
	Dual Current Output	3VA max.	90mA max.
Current and Voltage Output	3.5VA max.	100mA max.	

### INPUT SECTION

Input Signal	4~20mA DC from 2-wire transmitters
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)
Allowable Short-Circuit Time Span	Infinite

### OUTPUT SECTION

Output Signal (Specify at ② 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 (750 Ω load).....C1 Applicable only to out-1. Out-2 must be voltage signal.
	■ 4~20mA DC (350 Ω load).....C9 Applicable only when 4~20mA output is required for both outputs.
■ Other DC current signal.....CX (□~□) Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.	
Maximum Output Load	Voltage output: 1V span min. 2mA max. 10mV 10K Ω min. 100mV 100K Ω min. Current output: When out-1 alone is current:750 Ω When both outputs are current:350 Ω each
Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)

# General Specifications

Distributor with isolated dual-output  
 傳送器用 電源(絶縁付)

AREX-37

## PERFORMANCE

Accuracy Rating	±0.1%/F.S (25°C±5°C)
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, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket Block: Approx. 80g

## MATERIAL

Housing	ABS(UL94V-0)
Socket Block	ABS(UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin (FR-4, UL94V-0)
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

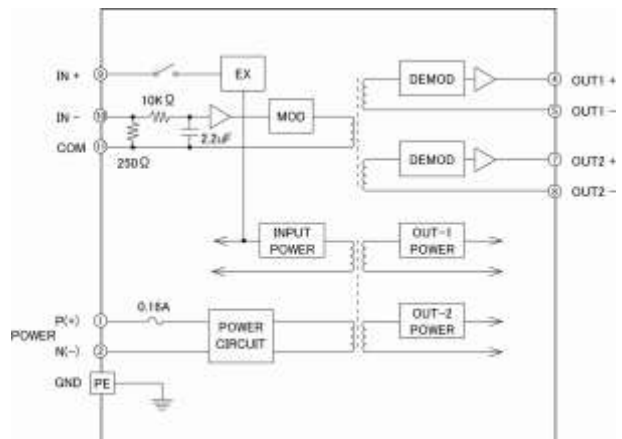
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) ■ Change response frequency.....Fc=□□□Hz (Up to 200Hz) ■ Change response time.....Tc=□□□sec (Up to 2msec @90%)
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N.C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	COM

## BLOCK DIAGRAM





# General Specifications

## Frequency/analog converter with isolated dual-output **AREX-37** Pulse/直流 變換器

### OVERVIEW



This is narrow-width plug-in frequency/analog converter with dual-output that converts pulse train signal into any desired standard process signal proportional to input frequency.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
<b>SINGLE-OUTPUT MODEL</b>	
DMS3708—□□—1□□ (□~□) — 6□□—7 N	OPEN
①      ②      ③      ④	
<b>DUAL-OUTPUT MODEL</b>	
DMS3708—□□—1□□ (□~□) — 6□□—7□□	OPEN
①      ②      ③      ④      ⑤	

### SPECIFICATIONS

#### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	1.5VA max.	35mA max.
	Dual Voltage Output	2VA max.	50mA max.
	Single Current Output	2VA max.	60mA max.
	Dual Current Output	2.5VA max.	65mA max.
	Current and Voltage Output	2.5VA max.	70mA max.

Input Signal (Specify at ② when ordering)	<ul style="list-style-type: none"> <li>■ Dry contact or Open collector.....OP (Excitation Approx. 13V, 3.3KΩ)</li> <li>■ AC voltage pulse (0.1~100Vp-p).....AP(□□□) (Sleshold voltage: Approx. 0.06Vp-p) Specify Peak-peak input voltage in parentheses.</li> <li>■ 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.</li> <li>■ DC4~20mA pulse.....IP (Sleshold current: SH Approx. 8mA)</li> <li>■ DC current pulse other than 4~20mA.....IP(□~□/SH□ SL□) Please specify in parentheses between 0~100μA to 0~100mA. Specify non-standard sleshold voltage after / in parentheses if applicable.</li> </ul>
Measurement Frequency Range (Specify at ③ when ordering)	Any range from 0~20Hz to 0~20kHz.
Input Resistance	Voltage input: 1MΩ min. (30KΩ minimum without power) Current input: 250Ω (Standard for 4~20mA)
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	20μ sec min.
Duty Ratio	40~60%

#### OUTPUT SECTION

Output Signal (Specify at ④ ⑤ 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.
Maximum Output Load	■ 4~20mA DC (750Ω load).....C1 Applicable only to out-1. Out-2 must be voltage signal.
	■ 0~20mA DC (750Ω load).....C2 Applicable only to out-1. Out-2 must be voltage signal.
	■ 4~20mA DC (350Ω load).....C9 Applicable only when 4~20mA output is required for both outputs.
	■ 0~20mA DC (350Ω load).....C10 Applicable only when 0~20mA output is required for both outputs.
	■ Other DC current signal.....CX (□~□) Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.
Maximum Output Load	Voltage output: 1V span min. 2mA max. 10mV 10KΩ min. 100mV 100KΩ min. Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)

# General Specifications

Frequency/analog converter with isolated dual-output **AREX-37**  
Pulse/直流 變換器

## PERFORMANCE

Accuracy Rating	$\pm 0.3\%/F.S$ ( $25^{\circ}C \pm 5^{\circ}C$ ) Ripple inclusion ratio: 0.2%p-p/F.S (Applicable only when the input is bigger than 10% of span.)	
Temperature Effect	$\pm 0.2\%$ of span @ $10^{\circ}C$ variation	
Response Time	Input Frequency	(0 $\rightarrow$ 90%) @100% step input
	20Hz	8sec max.
	200Hz	1sec max.
	2KHz	500msec max.
CMRR	20KHz	500msec max.
	100dB min. (@500V AC, 50/60Hz)	
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually	
Insulation Resistance	100M $\Omega$ min. (@500V DC)	
Resistance	Across Input, Out-1, Out-2, Power input and Ground mutually	
Dielectric Strength	Across Input, Output and Power input and Ground mutually:	
	2000V AC for 1 minute (cutoff current: 0.5mA)	
	Across Power input and Ground:	
	2000V AC for 1 minute (cutoff current: 5mA)	
Surge Withstand Capability	Across Out-1 and Out-2:	
	500V AC for 1 minute (cutoff current: 0.5mA)	
Surge Withstand Capability	Tested for ANSI/IEEE C37.90.1-1989	
Operating Environment	Ambient temperature: $-5 \sim 55^{\circ}C$	
	Humidity: $5 \sim 90\%RH$ (Non-condensation)	
Storage Temperature	$-10 \sim 60^{\circ}C$	

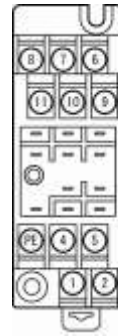
## PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29 $\times$ H86 $\times$ D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket Block: Approx. 80g

## MATERIAL

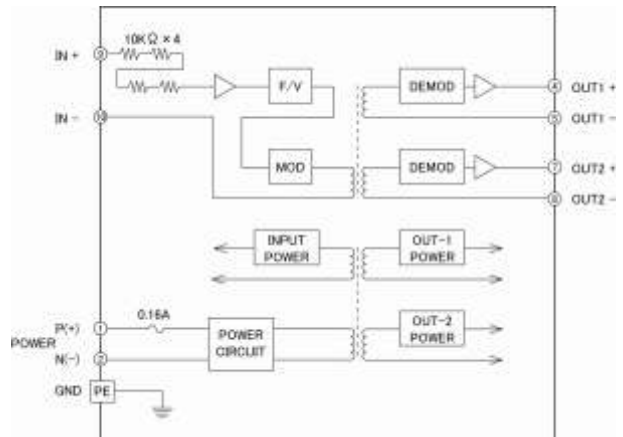
Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 $\mu$ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	N. C.

## BLOCK DIAGRAM



# General Specifications

Pulse shaper with isolated dual-output

**AREX-37**

Pulse 絶縁變換器

## OVERVIEW



This is narrow-width plug-in pulse shaper (repeater) with isolated dual-output that reshape the pulse train signal and converts it into pulse train signals with desired voltage or current level.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL <span style="float: right;">OPEN</span>	
DMS3709-□□-1□□-6□□-7 N-□□□□- T □□	
①            ②            ③            ④            ⑤            ⑥	
DUAL-OUTPUT MODEL <span style="float: right;">OPEN</span>	
DMS3709-□□-1□□-6□□-7□□-□□□□- T □□	
①            ②            ③            ④            ⑤            ⑥	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU	
	■ 24V DC ±10%.....D1	
	■ 110V DC ±10%.....D4	
Power Sensitivity	±0.1% of span maximum for each power input range	
Power Line Fuse	250mA fuse is installed. (Standard)	
Maximum Power Consumption	Without Excitation Power Output	
	Power	AC100V    DC24V
	Single OPEN.C Output	1.5VA max.    25mA max.
	Dual OPEN.C Output	1.5VA max.    25mA max.
	Single TTL Output	1.5VA max.    30mA max.
	Dual TTL Output	1.5VA max.    35mA max.
	Single Voltage pulse 12V Output	2VA max.    45mA max.
	Dual Voltage pulse 12V Output	2VA max.    50mA max.
	With 24V Excitation Power Output	
	Power	AC100V    DC24V
	Single OPEN.C Output	2.5VA max.    65mA max.
	Dual OPEN.C Output	2.5VA max.    65mA max.
	Single TTL Output	2.5VA max.    70mA max.
	Dual TTL Output	2.5VA max.    75mA max.
Single Voltage pulse 12V Output	3VA max.    85mA max.	
Dual Voltage pulse 12V Output	3VA max.    90mA max.	

### INPUT SECTION

Input Signal (Specify at ② when ordering)	<ul style="list-style-type: none"> <li>■ Dry contact or Open collector..... OP (Excitation Approx. 13V, 3.3K Ω)</li> <li>■ AC voltage pulse (0.1~100Vp-p)..... AP(□□□) (Sleshold voltage: Approx. 0.06Vp-p) Specify Peak-peak input voltage in parentheses.</li> <li>■ 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.</li> <li>■ DC4~20mA pulse..... IP (Sleshold voltage: SH Approx. 8mA)</li> <li>■ DC current pulse other than 4~20mA..... IP(□~□/SH□ SL□) Please specify in parentheses between 0~100 μA to 0~100mA. Specify non-standard sleshold voltage after / in parentheses if applicable.</li> </ul>
Input Resistance	Voltage input: 1MΩ min. (40KΩ minimum without power) Current input: 250Ω (Standard for 4~20mA)
Allowable Input voltage	DC voltage input: 30V DC max. continuous DC current input: 40mA DC max. continuous AC voltage input: 200V p-p AC (±100V with reference to 0V) max. continuous
Input Pulse Width	10 μ sec min. (ON/OFF)
External Power Output (Option) (Specify at ⑤ when ordering)	Maximum current: 30mA (2-wired or 3-wired) <ul style="list-style-type: none"> <li>■ 24V DC 2-Wired (Specify resistance of shunt resistor)..... 2E1</li> <li>■ 12V DC 2-Wired (Specify resistance of shunt resistor)..... 2E4</li> <li>■ 24V DC 3-Wired..... 3E1</li> <li>■ 12V DC 3-Wired..... 3E4</li> </ul>
Allowance of Output Pulse-width	±20% of specified width.

### OUTPUT SECTION

Output Signal (Specify at ③ ④ when ordering)	<ul style="list-style-type: none"> <li>■ TTL level..... TT</li> <li>■ Open collector..... OP</li> <li>■ Voltage pulse 10V ±10%..... V6</li> <li>■ Voltage pulse 12V ±10%..... V7</li> </ul> If TTL or voltage pulse is required for both out-1 and out-2, voltage level for both outputs shall be the same.
Maximum Output Load	TTL level (Maximum output 10mA @3.5V) Voltage pulse 10V (Maximum output 7mA @ ±10%) Voltage pulse 12V (Maximum output 7mA @ ±10%) Open collector (Maximum rating 30V, 100mA)
Maximum Rating	Open collector (Maximum rating 30V, 100mA)
Maximum Output Frequency without Pulse Hold Function	Voltage pulse output: 50kHz with 40~60% of duty ratio Open collector output: 20kHz with 40~60% of duty ratio (Input duty ratio is 50% for both cases.)
Output Pulse Hold Function (Optional) (Specify at ⑥ when ordering)	Please specify desired pulse width in a range of 200 μ sec~200msec. Output frequency when pulse hold function is selected: $Hz = 1 / (T + 10 \mu \text{ sec})$ ※10 μ sec is the time for either low level of output pulse @TTL/Voltage Pulse, or ON of output pulse @open-collector output.
Polarity Alternation Function	Please refer to output logic table placed below.

### Output Logic Table

Input Signal	Input Waveform	Polarity Inversion Switch	Waveform of Voltage Output	Waveform of Open Collector Output
Voltage Pulse		NORMAL		
		REVERSE		
Open Collector		NORMAL		
		REVERSE		

### PERFORMANCE

Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100M $\Omega$ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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

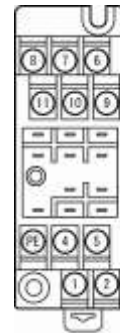
### PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket Block: Approx. 80g

### MATERIAL

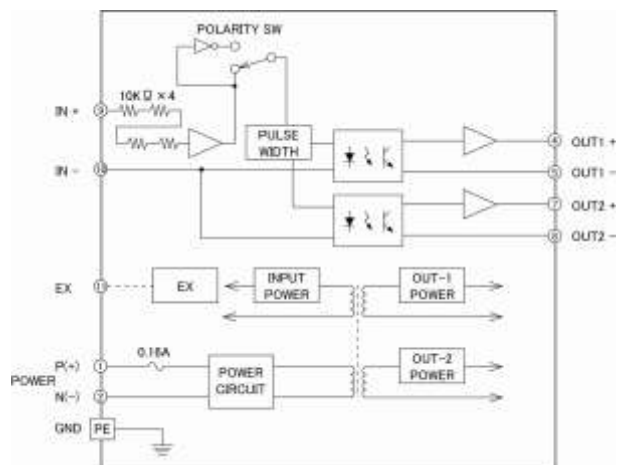
Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 $\mu$ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

### TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+)
②	N (-)
PE	POWER
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	EX

### BLOCK DIAGRAM



# General Specifications

Potentiometer transmitter with isolated dual-output **AREX-37**

可變抵抗 信號變換器

## OVERVIEW



This is narrow-width plug-in potentiometer transmitter with dual-output that detects the variation of resistance with potentiometer and converts it into any desired standard process signal.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts are standards 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
SINGLE-OUTPUT MODEL	OPEN
DMS3710—□□—6□□—7 N	
①      ②	
DUAL-OUTPUT MODEL	OPEN
DMS3710—□□—6□□—7□□	
①      ②      ③	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	1.5VA max.	30mA max.
	Dual Voltage Output	2VA max.	40mA max.
	Single Current Output	2VA max.	45mA max.
	Dual Current Output	2VA max.	50mA max.
	Current and Voltage Output	2.5VA max.	60mA max.

### INPUT SECTION

Input Range	Between 0~100Ω to 0~10KΩ.
Potentiometer Excitation Voltage	Approx. 0.5V
Allowable Input Lead-Wire Resistance	10%F.S. /wire max. (Resistance of each line shall be the same.)

### OUTPUT SECTION

Output Signal (Specify at ② 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 (750Ω load).....C1 Applicable only to out-1. Out-2 must be voltage signal.	
■ 4~20mA DC (350Ω load).....C9 Applicable only when 4~20mA output is required for both outputs.	
■ Other DC current signal.....CX (□~□) Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.	
Maximum Output Load	Voltage output: 1V span min. 2mA max. 10mV 10KΩ min. 100mV 100KΩ min. Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
Zero Adjustment	0~50% of full resistance (Adjustable by front-accessible trimmer)
Span Adjustment	50~100% of full resistance (Adjustable by front-accessible trimmer)

### PERFORMANCE

Accuracy Rating	±0.2%/F.S (25°C ±5°C)
Temperature Effect	±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, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA)
	Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA)
	Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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

# General Specifications

Potentiometer transmitter with isolated dual-output

AREX-37

可變抵抗 信號變換器

## PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket Block: Approx. 80g

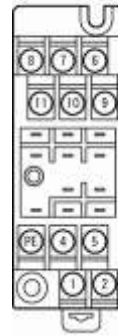
## MATERIAL

Housing	ABS(UL94V-0)
Socket	ABS(UL94V-0)
Screw	Steel/nickel plating
Terminal	
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

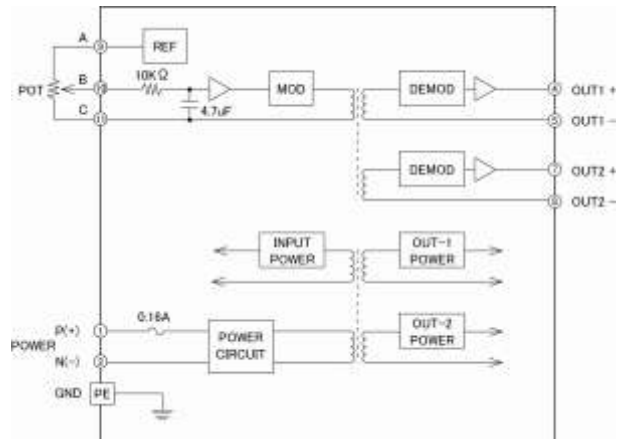
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) <ul style="list-style-type: none"> <li>■ Change response frequency.....<math>F_c = \square\square\square</math>Hz (Up to 200Hz)</li> <li>■ Change response time.....<math>T_c = \square\square\square</math>sec (Up to 2msec @90%)</li> </ul>
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N.C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	A POT
⑩	B POT
⑪	C POT

## BLOCK DIAGRAM



# General Specifications

Pulse divider with isolated dual-output

**AREX-37**

Pulse 分周器

## OVERVIEW



This is narrow-width plug-in pulse divider with isolated dual-output that reshape the pulse train signal, divides its frequency and converts it into pulse train signals with desired voltage or current level.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL	
DMS3711-□□-1□□-6□□-7N-□□□	OPEN
①      ②      ③      ⑤	
DUAL-OUTPUT MODEL	
DMS3709-□□-1□□-6□□-7□□-□□□	OPEN
①      ②      ③      ④      ⑤	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	<ul style="list-style-type: none"> <li>■ 85~264V AC (47~63Hz) .....AU</li> <li>■ 24V DC ±10% .....D1</li> <li>■ 110V DC ±10% .....D4</li> </ul>		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Without Excitation Power Output		
	Power	AC100V	DC24V
	Single OPEN.C Output	1.5VA max.	20mA max.
	Dual OPEN.C Output	1.5VA max.	25mA max.
	Single TTL Output	1.5VA max.	30mA max.
	Dual TTL Output	1.5VA max.	35mA max.
	Single Voltage pulse 12V Output	2VA max.	45mA max.
	Dual Voltage pulse 12V Output	2VA max.	50mA max.
	With 24V Excitation Power Output		
	Power	AC100V	DC24V
	Single OPEN.C Output	2.5VA max.	60mA max.
	Dual OPEN.C Output	2.5VA max.	65mA max.
	Single TTL Output	2.5VA max.	70mA max.
	Dual TTL Output	2.5VA max.	75mA max.
Single Voltage pulse 12V Output	3VA max.	85mA max.	
Dual Voltage pulse 12V Output	3VA max.	90mA max.	

Input Signal (Specify at ② when ordering)	<ul style="list-style-type: none"> <li>■ Dry contact or Open collector .....OP (Excitation Approx. 13V, 3.3KΩ)</li> <li>■ AC voltage pulse (0.1~100Vp-p) .....AP(□□□) (Sleshold voltage: Approx. 0.06Vp-p) Specify Peak-peak input voltage in parentheses.</li> <li>■ 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.</li> <li>■ DC4~20mA pulse .....IP (Sleshold voltage: SH Approx. 8mA)</li> <li>■ DC current pulse other than 4~20mAIP(□~□/SH□SL□) Please specify in parentheses between 0~100μA to 0~100mA. Specify non-standard sleshold voltage after / in parentheses if applicable.</li> </ul>
Input Resistance	Voltage input: 1MΩ min. (40KΩ minimum without power) Current input: 250Ω (Standard for 4~20mA)
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
Maximum Input Frequency	50KHz
Input Pulse Width	20μsec min.
Duty Ratio	40~60%
External Power Output (Option) (Specify at ⑤ when ordering)	<ul style="list-style-type: none"> <li>Maximum current: 30mA (2-wired or 3-wired)</li> <li>■ 24V DC 2-Wired (Specify resistance of shunt resistor) .....2E1</li> <li>■ 12V DC 2-Wired (Specify resistance of shunt resistor) .....2E4</li> <li>■ 24V DC 3-Wired .....3E1</li> <li>■ 12V DC 3-Wired .....3E4</li> </ul>

#### OUTPUT SECTION

Output Signal (Specify at ③ ④ when ordering)	■ TTL level.....TT																								
	■ Open collector.....OP																								
Maximum Output Load	■ Voltage pulse 10V±10%.....V6																								
	■ Voltage pulse 12V±10%.....V7																								
Maximum Rating	If TTL or voltage pulse is required for both out-1 and out-2, voltage level for both outputs shall be the same.																								
Maximum Output Frequency	TTL level (Maximum output 10mA @3.5V) Voltage pulse 10V (Maximum output 7mA @±10%) Voltage pulse 12V (Maximum output 7mA @±10%)																								
Frequency Division Ratio	Open collector (Maximum rating 30V, 50mA)																								
	Voltage pulse output : 50kHz with 40~60% of duty ratio Open collector output : 20kHz with 40~60% of duty ratio (Input duty ratio is 50% for both cases.)																								
	Any division ratio is selectable within a range of 1~1/3200 using three switches described below.																								
	Selection Method																								
	1. Either switch-A or switch-B shall be set to N.C. at any time.																								
	2. If switch-A is set to position 2 (TH), output frequency is equal to input regardless of settings of switch-B and -C.																								
	3. Division ratio is the product of settings of switch-C and -A or -B.																								
	<b>【Example】</b> If switch-A = 1 (N.C.), switch-B = 4 (1/64), switch-C = 2 (1/5), output frequency is 1/64 × 1/5 = 1/320.																								
	<table border="1"> <thead> <tr> <th>Position No.</th> <th>Settings for Switch-A</th> <th>Settings for Switch-B</th> <th>Settings for Switch-C</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N.C.</td> <td>N.C.</td> <td>1/1</td> </tr> <tr> <td>2</td> <td>TH</td> <td>1/16</td> <td>1/5</td> </tr> <tr> <td>3</td> <td>1/2</td> <td>1/32</td> <td>1/25</td> </tr> <tr> <td>4</td> <td>1/4</td> <td>1/64</td> <td></td> </tr> <tr> <td>5</td> <td>1/8</td> <td>1/128</td> <td></td> </tr> </tbody> </table>	Position No.	Settings for Switch-A	Settings for Switch-B	Settings for Switch-C	1	N.C.	N.C.	1/1	2	TH	1/16	1/5	3	1/2	1/32	1/25	4	1/4	1/64		5	1/8	1/128	
Position No.	Settings for Switch-A	Settings for Switch-B	Settings for Switch-C																						
1	N.C.	N.C.	1/1																						
2	TH	1/16	1/5																						
3	1/2	1/32	1/25																						
4	1/4	1/64																							
5	1/8	1/128																							
	Note: This instrument does not work properly in the following cases:																								
	1. Both switch-A and -B are set to position 1 (N.C.)																								
	2. Neither switch-A nor -B is set to position 1 (N.C.).																								

#### PERFORMANCE

Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation	100MΩ min. (@500V DC)
Resistance	Across Input, Out-1, Out-2, Power input and Ground mutually
Dielectric Strength	Across Input and other ports: 2000V AC for 1 minute
	Across Out-1, Out-2, Power input and Ground mutually: 500V 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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

#### MATERIAL

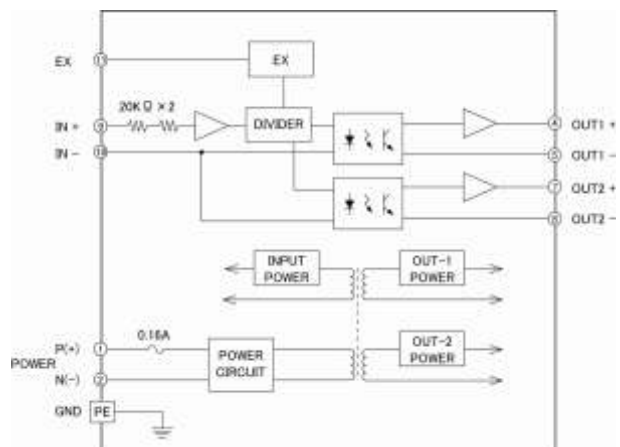
Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw	Steel/nickel plating
Terminal	
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

#### TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑬	N.C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	EX

#### BLOCK DIAGRAM





# General Specifications

Square-root extractor with isolated dual-output **AREX-37**  
開平演算器

## OVERVIEW



This is narrow-width plug-in square-root extractor with dual-output that accepts high-level voltage or electric current input signal, extracts its square-root and converts into any desired standard process signal.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts are standards 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
SINGLE-OUTPUT MODEL DMS3713-□□-1□□-6□□-7 N ①      ②      ③	OPEN
DUAL-OUTPUT MODEL DMS3713-□□-1□□-6□□-7□□ ①      ②      ③      ④	OPEN

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	2VA max.	50mA max.
	Dual Voltage Output	2.5VA max.	60mA max.
	Single Current Output	2.5VA max.	65mA max.
	Dual Current Output	2.5VA max.	70mA max.
	Current and Voltage Output	3VA max.	80mA max.

Input Signal (Specify at ② when ordering)	■ 1~5V DC.....V1
	■ 0~1V DC.....V4
	■ 0~5V DC.....V5
	■ 0~10V DC.....V6
	■ Other DC voltage signal.....X2(□~□) Please specify in parentheses between 200mV to 300V.
	■ 4~20mA DC.....C1
	■ 2~10mA DC.....C3
	■ 1~5mA DC.....C4
	■ 10~50mA DC.....C5
	■ Other DC current signal.....CY(□~□) Please specify in parentheses between 0~100 μA to 0~100mA.
Input Resistance	Voltage input: 1MΩ min. (1MΩ minimum without power)
	Current input: 250Ω (Standard for 4~20mA)
Allowable input Voltage	Voltage input: 30V DC max. continuous (Standard for span up to 10V)
	Current input: 40mA DC max. continuous (Standard for 4~20mA)

### OUTPUT SECTION

Output Signal (Specify at ③ ④ 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 (750Ω load).....C1 Applicable only to out-1. Out-2 must be voltage signal.
■ 0~20mA DC (750Ω load).....C2 Applicable only to out-1. Out-2 must be voltage signal.	
■ 4~20mA DC (350Ω load).....C9 Applicable only when 4~20mA output is required for both outputs.	
■ 0~20mA DC (350Ω load).....C10 Applicable only when 0~20mA output is required for both outputs.	
■ Other DC current signal.....CX (□~□) Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.	
Maximum Output Load	Voltage output: 1V span min.      2mA max. 10mV      10KΩ min. 100mV      100KΩ min.
	Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx. ±5% of spa (Adjustable by front-accessible trimmer)
Square-root Extraction Function	$X=10 \times \sqrt{Y}$ (X=Output signal 0~100%) (Y=Input signal 0~100%)
	Note: Output cut-off function forces the output to 0% if the input is less than $8\% \pm 1\%$

# General Specifications

Square-root extractor with isolated dual-output **AREX-37**  
開平演算器

## PERFORMANCE

Accuracy Rating	±0.2%/F.S (Input 1~100%, 25°C±5°C)
Temperature Effect	±0.2% of span @10°C variation
Response Time	120msec max. (0→90%)@100% step input
CMRR	100dB min. (500V AC, 50/60Hz)
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

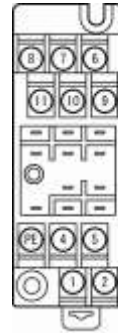
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

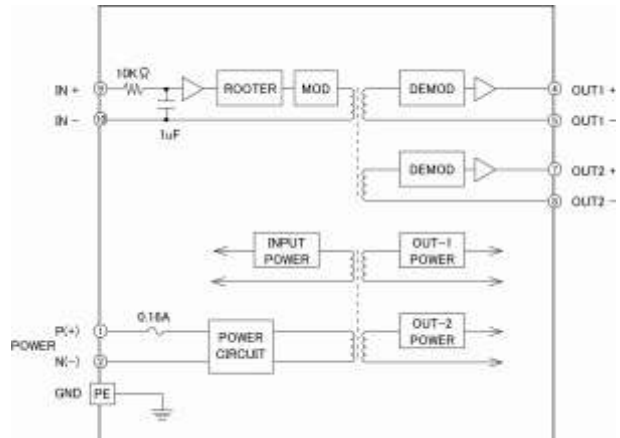
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) ■ Change response frequency..... Fc = □□□Hz (Up to 200Hz) ■ Change response time..... Tc = □□□sec (Up to 2msec @90%)
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N.C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	N.C.

## BLOCK DIAGRAM





# General Specifications

Limiter with isolated dual-output  
 信號制限器

AREX-37

## PERFORMANCE

Accuracy Rating	±0.2%/F.S (25°C±5°C)
Allowance of Margin Value	±0.2%/F.S (25°C±5°C)
Temperature Effect	±0.15% of span @10°C variation
Response Time	85msec max. (0→90%) @100% step input
Margin Value Indicator	Red LED, 6.4mm height, 3 digits
CMRR	100dB min. (@500V AC, 50/60Hz)
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

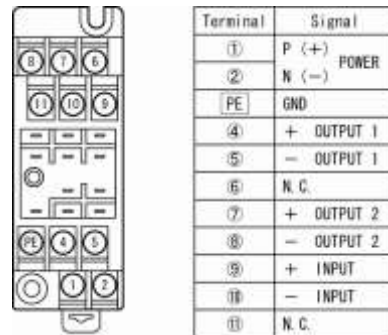
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

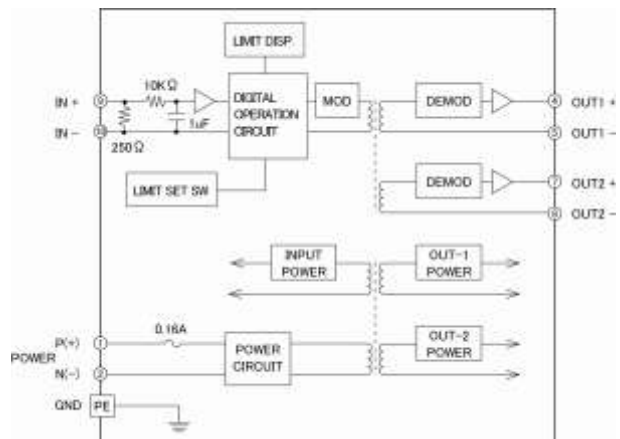
## ADDITIONAL

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"> <li>■ Change response frequency..... Fc = □□□ Hz (Up to 6Hz)</li> <li>■ Change response time..... Tc = □□□ sec (Up to 70msec @90%)</li> </ul>
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## TERMINAL ASSIGNMENT



## BLOCK DIAGRAM





# General Specifications

First-order delay with isolated dual-output

**AREX-37**

First-order delay 變換器

## PERFORMANCE

Accuracy Rating	$\pm 0.1\%/F.S$ ( $25^{\circ}C \pm 5^{\circ}C$ )
Temperature Effect	$\pm 0.2\%$ of span @ $10^{\circ}C$ variation
CMRR	100dB min. (@500V AC, 50/60Hz)
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100M $\Omega$ min. (@500V DC)
Resistance	Across Input, Out-1, Out-2, Power input and Ground mutually
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA)
	Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA)
	Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
Surge Withstand Capability	Tested for ANSI/IEEE C37.90.1-1989
Operating Environment	Ambient temperature: $-5 \sim 55^{\circ}C$
	Humidity: $5 \sim 90\%RH$ (Non-condensation)
Storage Temperature	$-10 \sim 60^{\circ}C$

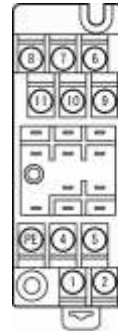
## PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29 $\times$ H86 $\times$ D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g
	Socket: Approx. 80g

## MATERIAL

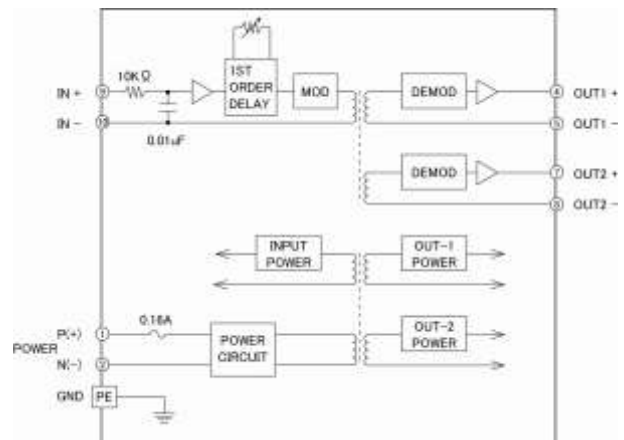
Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with $0.2\mu$ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N.C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	N.C.

## BLOCK DIAGRAM



## OVERVIEW



This is narrow-width plug-in distributor with square-root extraction function and dual-output that supplies DC power to two-wire transmitter, extracts square-root from its 4 to 20mA current loop and converts it into any desired standard process signal.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts are standards 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
SINGLE-OUTPUT MODEL DMS3717-□□-6□□-7 N ① ②	OPEN
DUAL-OUTPUT MODEL DMS3717-□□-6□□-7□□ ① ② ③	OPEN

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	2.5VA max.	65mA max.
	Dual Voltage Output	3.5VA max.	80mA max.
	Single Current Output	3VA max.	85mA max.
	Dual Current Output	4VA max.	90mA max.
	Current and Voltage Output	4.5VA max.	100mA max.

### INPUT SECTION

Input Signal	4~20mA DC from 2-wire transmitters
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)
Short-Circuit Time Span Allowable	Infinite

### OUTPUT SECTION

Output Signal-2 (Specify at ② 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 (750 Ω load).....C1 Applicable only to out-1. Out-2 must be voltage signal.	
■ 4~20mA DC (350 Ω load).....C9 Applicable only when 4~20mA output is required for both outputs.	
■ Other DC current signal.....CX (□~□) Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.	
Maximum Output Load	Voltage output: 1V span min. 2mA max. 10mV 10K Ω min. 100mV 100K Ω min. Current output: When out-1 alone is current: 750 Ω When both outputs are current: 350 Ω each
Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Square-root Extraction Function	X=10×√Y (X=Output signal 0~100%) (Y=Input signal 0~100%) Note:Output cut-off function forces the output to 0% if the input is less than 8%±1%

# General Specifications

Distributor with isolated dual-output

**AREX-37**

傳送器用 電源(開平演算器付)

## PERFORMANCE

Accuracy Rating	±0.2%/F.S (Input 1~100%, 25°C±5°C)
Temperature Effect	±0.2% of span @10°C variation
Response Time	85msec max. (0→90%) @100% step input
CMRR	100dB 以上 (500V AC、50/60Hz)
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Main Unit: Approx. 120g Socket Block: Approx. 80g

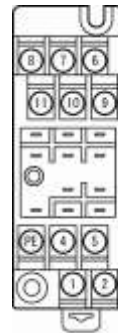
## MATERIAL

Housing	ABS (UL94V-0)
Socket Block	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin (FR-4, UL94V-0)
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

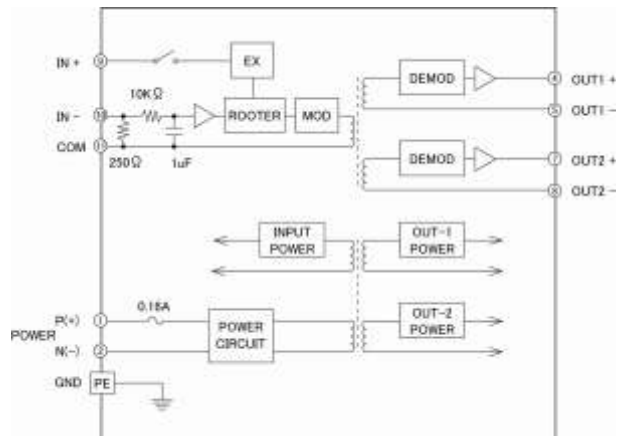
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) <ul style="list-style-type: none"> <li>■ Change response frequency..... Fc = □□□ Hz (Up to 200Hz)</li> <li>■ Change response time..... Tc = □□□ sec (Up to 2msec @90%)</li> </ul>
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N.C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	COM

## BLOCK DIAGRAM





# General Specifications

CT transmitter with isolated dual-output

**AREX-37**

交流電流 變換器

## OVERVIEW



This is narrow-width plug-in CT transmitter with dual-output that converts AC current signal from CT into any desired standard process signal.

- ▽ RMS operation for measuring distorted waveform.
- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL	OPEN
DMS3720—□□—1□□—6□□—7 N	
①      ②      ③	
DUAL-OUTPUT MODEL	OPEN
DMS3720—□□—1□□—6□□—7□□	
①      ②      ③      ④	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	1.5VA max.	30mA max.
	Dual Voltage Output	2VA max.	45mA max.
	Single Current Output	2VA max.	50mA max.
	Dual Current Output	2VA max.	55mA max.
Current and Voltage Output	2.5VA max.	65mA max.	

### INPUT SECTION

Input Signal (Specify at ② when ordering)	■ 0~1A AC 50/60Hz.....M1
	■ 0~5A AC 50/60Hz.....M2
Input Resistance	5A AC input: 2mΩ (Shunt resistor) 1A AC input: 10mΩ (Shunt resistor)
Allowable Over Voltage	Continuous: 120% rated input
	Instantaneous: 10×rated input (3sec max.)
Crest Factor	3 max.

### OUTPUT SECTION

Output Signal (Specify at ③ ④ 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 (750Ω load).....C1 Applicable only to out-1. Out-2 must be voltage signal.
	■ 0~20mA DC (750Ω load).....C2 Applicable only to out-1. Out-2 must be voltage signal.
■ 4~20mA DC (350Ω load).....C9 Applicable only when 4~20mA output is required for both outputs.	
■ 0~20mA DC (350Ω load).....C10 Applicable only when 0~20mA output is required for both outputs.	
■ Other DC current signal.....CX (□~□) Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.	
Maximum Output Load	Voltage output: 1V span min. 2mA max. 10mV 10KΩ min. 100mV 100KΩ min. Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)

# General Specifications

CT transmitter with isolated dual-output

**AREX-37**

交流電流 變換器

## PERFORMANCE

Accuracy Rating	±0.25%/F.S (on condition of 10% input as minimum) (25°C±5°C)
Temperature Effect	±0.2% of span @10°C variation
Response Time	0.4sec max. (0→90%) @100% step input
CMRR	100dB min. (@500V AC, 50/60Hz)
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current :0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current :5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current :0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

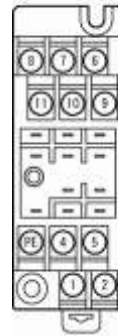
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

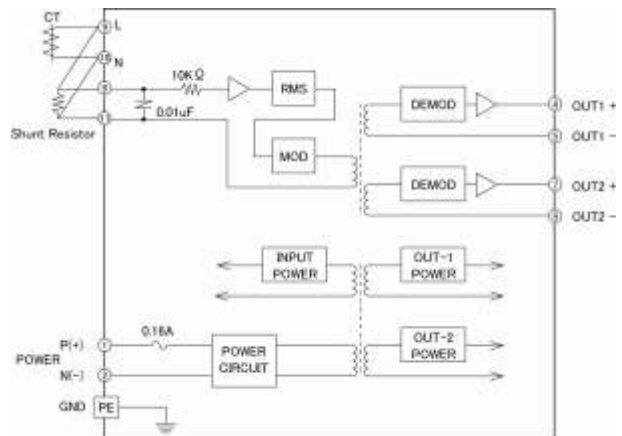
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Item) ..... (How to specify) ■ Change response time ..... Tc = □□□sec (Up to 50msec@90%)
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	(L) INPUT
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	L INPUT
⑩	N INPUT
⑪	(N) INPUT

## BLOCK DIAGRAM



# General Specifications

High-low selector with isolated dual-output

**AREX-37**

信號選擇器

## OVERVIEW



This is narrow-width plug-in high/low selector with dual-output that accepts two channels of high-level voltage or electric current input signal, selects either higher or lower one and converts it into any desired standard process signal. (Both input signals shall be in the same level.)

- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL	OPEN
DMS3725□—□□—1□□—6□□—7 N	
①    ②    ③    ④	
DUAL-OUTPUT MODEL	OPEN
DMS3725□—□□—1□□—6□□—7□□	
①    ②    ③    ④    ⑤	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ② when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	1.5VA max.	35mA max.
	Dual Voltage Output	2VA max.	45mA max.
	Single Current Output	2VA max.	55mA max.
	Dual Current Output	2.5VA max.	65mA max.
	Current and Voltage Output	2.5VA max.	70mA max.

### INPUT SECTION

Input Signal (Specify at ③ when ordering)	■ 1~5V DC.....V1
	■ 0~1V DC.....V4
	■ 0~5V DC.....V5
	■ 0~10V DC.....V6
	■ Other DC voltage signal.....X2(□~□) Please specify in parentheses between 200mV to 10V.
	■ 4~20mA DC.....C1
	■ 2~10mA DC.....C2
	■ 1~5mA DC.....C3
	■ 10~50mA DC.....C4
	■ Other DC current signal.....CY(□~□) Please specify in parentheses between 0~100 μA to 0~100mA.
Input Resistance	Voltage input: 1MΩ min. (1MΩ minimum without power) Current input: 250Ω (Standard for 4~20mA)
Allowable Input Voltage	Voltage input: 30V DC max. continuous (Standard for span up to 10V) Current input: 40mA DC max. continuous (Standard for 4~20mA)
Channel Selection (Specify at ① when ordering)	■ Select Higher.....H ■ Select Lower.....L

### OUTPUT SECTION

Output Signal (Specify at ④ ⑤ 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.
Maximum Output Load	■ 4~20mA DC (750Ω load).....C1 Applicable only to out-1. Out-2 must be voltage signal.
	■ 4~20mA DC (350Ω load).....C9 Applicable only when 4~20mA output is required for both outputs.
	■ Other DC current signal.....CX(□~□) Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.
Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)

# General Specifications

High-low selector with isolated dual-output

**AREX-37**

信號 選擇器

## PERFORMANCE

Accuracy Rating	±0.1%/F.S (25°C ±5°C)
Temperature Effect	±0.2% of span @10°C variation
Selection Sensitivity	0.5%/F.S max.
Response Time	85msec max. (0→90%) @100% step input
CMRR	100dB min. (@500V AC, 50/60Hz)
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

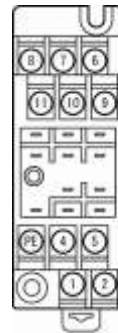
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

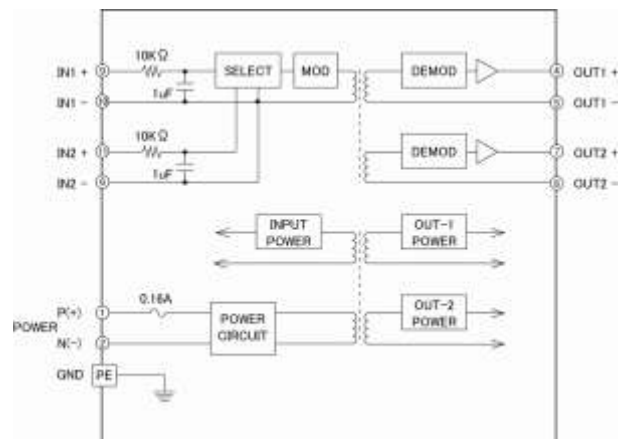
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) <ul style="list-style-type: none"> <li>■ Change response frequency..... Fc = □□□Hz (Up to 200Hz)</li> <li>■ Change response time..... Tc = □□□sec (Up to 2msec @90%)</li> </ul>
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	- INPUT 2
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT 1
⑩	- INPUT 1
⑪	+ INPUT 2

## BLOCK DIAGRAM



### OVERVIEW



This is narrow-width plug-in analog to pulse converter with dual-output that converts commonly used high-level voltage or electric current signal into pulse train signal.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL	
DMS3729-□□-1□□-2(□~□)-6□□-7N-T□□	OPEN
①      ②      ③      ④      ⑥	
DUAL-OUTPUT MODEL	
DMS3729-□□-1□□-2(□~□)-6□□-7□□-□□-□□	OPEN
①      ②      ③      ④      ⑤      ⑥	

### SPECIFICATIONS

#### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz)..... AU		
	■ 24V DC ±10%..... D1		
	■ 110V DC ±10%..... D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	1600mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single TTL Output	1.5VA max.	40mA max.
	Dual TTL Output	1.7VA max.	50mA max.
	Single OPEN.C Output	1.5VA max.	35mA max.
	Dual OPEN.C Output	1.6VA max.	45mA max.
	Single MOS Output	1.5VA max.	35mA max.
Dual MOS Output	1.6VA max.	45mA max.	

#### INPUT SECTION

Input Signal (Specify at ② when ordering)	■ 1~5V DC..... V1	
	■ 0~1V DC..... V4	
	■ 0~5V DC..... V5	
	■ 0~10V DC..... V6	
	■ ±5V DC..... W5	
	■ ±10V DC..... W6	
	■ Other DC voltage signal..... X2(□~□)	
	Please specify between 200mV to 300V or ±200mV to ±300V. Specify input signal in parentheses.	
	■ 4~20mA DC..... C1	
	■ 2~10mA DC..... C1	
■ 1~5mA DC..... C1		
■ 10~50mA DC..... C1		
■ Other DC current signal..... CY(□~□)		
Please specify between 0~100 μA to 0~100mA or ±100 μA to ±100mA. Specify input signal in parentheses.		
Measurement Frequency Range (Specify at ③ when ordering)	Any range from 0~0.001Hz to 0~5KHz. *Photo Mos relay: 30Hz max.	
Input Resistance	Voltage input: 1MΩ min. (1MΩ minimum without power) Current input: 250Ω (Standard for 4~20mA)	
Allowable Input voltage	Voltage input: 30V DC max. continuous (Standard for span up to 10V) Current input: 40mA DC max. continuous (Standard for 4~20mA)	

#### OUTPUT SECTION

Output Signal (Specify at ④ ⑤ when ordering)	■ TTL level..... TT
	■ Open collector..... OP
	■ Photo MOS 光レ..... MO
Maximum Output Load	TTL level (Maximum output 10mA @3.5V)
Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Maximum Output Ratings	Open collector Maximum rating: 30V, 100mA (with load resistance) Photo MOS Relay Maximum load Voltage: 400V (AC peak voltage) Maximum continuous load current: 0.15A (AC peak current) Peak load current: 0.5A@100ms (1 shot) DC load Maximum output loss: 360mW ON resistance: 16Ω max. Leak current when open: 1 μA max.
Output Duty Rate Without Pulse-Hold	40~60%
Pulse-Hold Time (Optional) (Specify at ⑥ when ordering)	Please specify desired pulse width in a range of 200 μsec~200msec. Output frequency when pulse hold function is selected: Hz = 1 / (T + 10 μsec) ※10 μsec is the time for either low level of output pulse @TTL/Voltage Pulse, or ON of output pulse @open-collector output.

# General Specifications

Pulse converter with isolated dual-output

**AREX-37**

Pulse 變換器

## PERFORMANCE

Accuracy Rating	$\pm 0.1\%/F.S (25^{\circ}C \pm 5^{\circ}C)$	
Temperature Effect	$\pm 0.2\%$ of span @10°C variation	
Response Time	Output frequency	(0→90%) @100% step input
	5Hz	8sec max.
	50Hz	1sec max.
	500Hz	500msec max.
	5KHz	500msec max.
CMRR	100dB min. (@500V AC, 50/60Hz)	
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually	
Insulation Resistance	100MΩ min. (@500V DC)	
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)	
Surge Withstand Capability	Tested for ANSI/IEEE C37.90.1-1989	
Operating Environment	Ambient temperature: $-5 \sim 55^{\circ}C$ Humidity: 5~90%RH (Non-condensation)	
Storage Temperature	$-10 \sim 60^{\circ}C$	

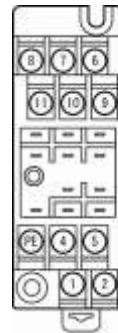
## PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

## MATERIAL

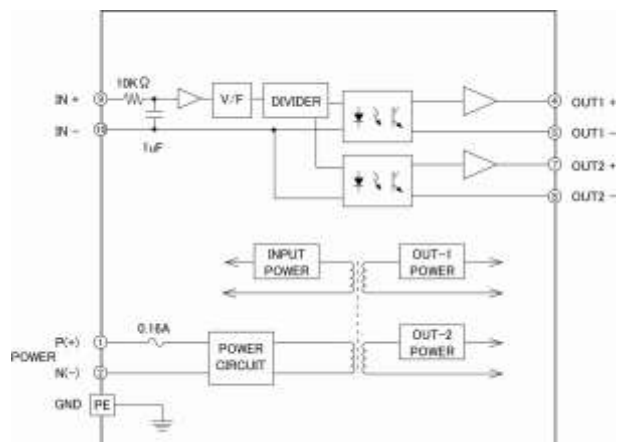
Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw	Steel/nickel plating
Terminal	
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	N. C.

## BLOCK DIAGRAM



# General Specifications

Distributor with non-isolated dual-output

**AREX-37**

傳送器用 電源(Low cost model)

## OVERVIEW



This is narrow-width plug-in distributor with non-isolated dual-output that supplies DC power to two-wire transmitter and converts its 4 to 20mA current loop into any desired standard process signal. This model omits power output switch and 24V DC power option from MS3737 for much lower cost solution.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts are standards 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
DMS3737LC—□□ ①	OPEN

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	<ul style="list-style-type: none"> <li>■ 85~264V AC (47~63Hz).....AU</li> <li>■ 110V DC ±10%.....D4</li> </ul>
Power Sensitivity	±0.1% of span maximum for each power input range
Power Line Fuse	160mA fuse is installed. (Standard)
Maximum Power Consumption	3VA max. @100V AC

### INPUT SECTION

Input Signal	4~20mA DC from 2-wire transmitters
Input Resistance	250 Ω
Transmitter Power Supply	Output voltage:25V (TYP) without load down to 18V with 100% input (This is the case of plus and minus terminals of output-2 are short connected.) Maximum current:25mA(TYP)
Transmitter Load Resistance	550 Ω max.
Short-Circuit Protection Limiting Current	26mA(TYP)
Allowable Short-Circuit Time Span	Infinite

### OUTPUT SECTION

Output Signal	Output-1:1~5V DC Output-2:4~20mA DC
Allowable Load Resistance	Output-1:250K Ω min. Output-2:10 Ω max. (Up to 260 Ω is achievable if plus and minus terminals of output-1 are short connected.)

### PERFORMANCE

Accuracy Rating	±0.1% (This is the accuracy of shunt resistor)
Temperature Effect	±0.03% of span @10°C variation (This is the temperature coefficient of shunt resistor.)
Isolation	Across [Input + Out-1 + Out-2], Power input and Ground mutually
Insulation Resistance	100M Ω min. (@500V DC) Across [Input + Out-1 + Out-2], Power input and Ground mutually
Dielectric Strength	Across [Input + Out-1 + Out-2] and [Power input + Ground]: 2000V AC for 1 minute (cutoff current:0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current:5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Main Unit:Approx. 120g Socket Block:Approx. 80g

# General Specifications

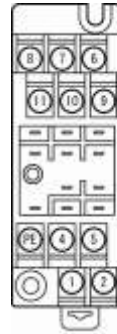
Distributor with non-isolated dual-output  
 傳送器用 電源(Low cost model)

**AREX-37**

## MATERIAL

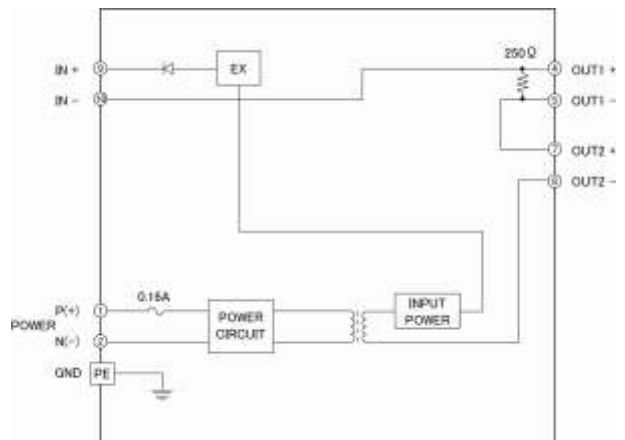
Main Unit Housing	ABS(UL94V-0)
Socket Block	ABS(UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 $\mu$ gold plating
PC Board	Glass Fabric Epoxy Resin (FR-4, UL94V-0)
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	N. C.

## BLOCK DIAGRAM





### OVERVIEW



This is narrow-width plug-in manual setter with dual-output that generates any desired standard process signal set by front switch.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL DMS3738—□□—6□□—7 N ① ②	OPEN
DUAL-OUTPUT MODEL DMS3738—□□—6□□—7□□ ① ② ③	OPEN

### SPECIFICATIONS

#### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	2VA max.	55mA max.
	Dual Voltage Output	2.5VA max.	65mA max.
	Single Current Output	2.5VA max.	70mA max.
	Dual Current Output	2.5VA max.	75mA max.
Current and Voltage Output	3VA max.	85mA max.	

#### OUTPUT SECTION

Output Signal (Specify at ② 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 (750Ω load).....C1 Applicable only to out-1.
■ 4~20mA DC (350Ω load).....C9 Applicable only when 4~20mA output is required for both outputs.	
■ Other DC current signal.....CX (□~□) Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.	
Maximum Output Load	Voltage output: 1V span min. 2mA max. 10mV 10KΩ min. 100mV 100KΩ min. Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
Output Setting Range	-10~+105% (in steps of 0.1%, in steps of 1% for range over 100%, adjustable by front switch)

#### PERFORMANCE

Accuracy Rating	±0.1%/F.S (25°C ±5°C)
Temperature Effect	±0.15% of span @10°C variation
Isolation	Across Out-1, Out-2, Power input and Ground mutually
Setting Value Indicator	Red LED, 8.0mm height, 3 digits
Insulation Resistance	100MΩ min. (@500V DC) Across Out-1, Out-2, Power input and Ground mutually
Dielectric Strength	Across Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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

# General Specifications

Manual setter with isolated dual-output

**AREX-37**

手動 設定器

## PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

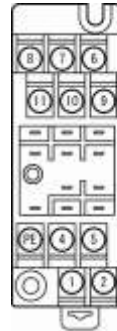
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw	Steel/nickel plating
Terminal	
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

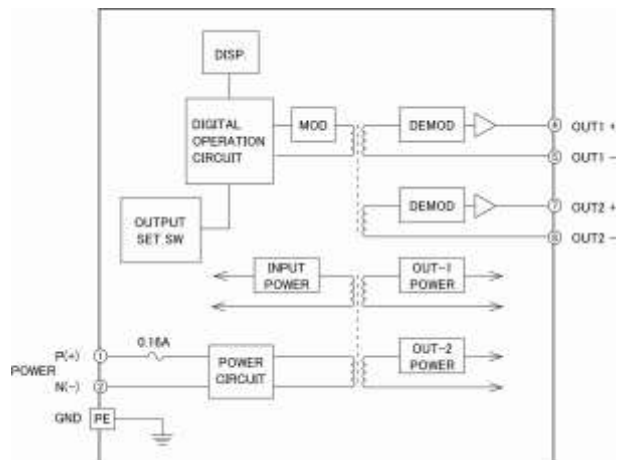
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) <ul style="list-style-type: none"> <li>■ Change response frequency.....Fc = □□□Hz (Up to 6Hz)</li> <li>■ Change response time.....Tc = □□□sec (Up to 70msec @90%)</li> </ul>
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	N. C.
⑩	N. C.
⑪	N. C.

## BLOCK DIAGRAM



# General Specifications

Ratio transmitter with isolated dual-output

**AREX-37**

比率 設定器(Input bias model)

## OVERVIEW



This is narrow-width plug-in ratio transmitter with dual-output that accepts high-level voltage or electric current input signal, apply ratio and bias calculation and converts it into any desired standard process signal.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL	OPEN
DMS37391B-□□-1□□-6□□-7 N	
①      ②      ③	
DUAL-OUTPUT MODEL	OPEN
DMS37391B-□□-1□□-6□□-7□□	
①      ②      ③      ④	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	2VA max.	55mA max.
	Dual Voltage Output	2.5VA max.	65mA max.
	Single Current Output	2.5VA max.	70mA max.
	Dual Current Output	2.5VA max.	75mA max.
Current and Voltage Output	3VA max.	85mA max.	

### INPUT SECTION

Input Signal (Specify at ② when ordering)	■ 1~5V DC.....V1
	■ 0~1V DC.....V4
■ 0~5V DC.....V5	■ 0~10V DC.....V6
	■ ±5V DC.....W5
■ ±10V DC.....W6	■ Other DC voltage signal.....X2(□~□)
	Please specify between 200mV to 300V or ±200mV to ±300V. Specify input signal in parentheses.
■ 4~20mA DC.....C1	■ 2~10mA DC.....C1
	■ 1~5mA DC.....C1
■ 10~50mA DC.....C1	■ Other DC current signal.....CY(□~□)
	Please specify between 0~100 μA to 0~100mA or ±100 μA to ±100mA. Specify input signal in parentheses.
Input Resistance	Voltage input: 1MΩ min. (1MΩ minimum without power) Current input: 250Ω (Standard for 4~20mA)
Allowable Input Voltage	Voltage input: 30V DC max. continuous (Standard for span up to 10V) Current input: 40mA DC max. continuous (Standard for 4~20mA)

### OUTPUT SECTION

Output Signal (Specify at ③ ④ 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 (750Ω load).....C1
	Applicable only to out-1. Out-2 must be voltage signal.
■ 4~20mA DC (350Ω load).....C9	Applicable only when 4~20mA output is required for both outputs.
	■ Other DC current signal.....CX(□~□)
Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.	Maximum Output Load
	Voltage output: 1V span min. 2mA max. 10mV 10KΩ min. 100mV 100KΩ min. Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Ratio Setting Range	Positive slope: 0.1~4.00 Negative slope: -0.1~-4.00 (0.01 step)
Bias Setting Range	-100~100% (1% step)
Output Range	Approx. -10~+120% (1~5V DC)

# General Specifications

Ratio transmitter with isolated dual-output

**AREX-37**

比率 設定器(Input bias model)

## PERFORMANCE

Accuracy Rating	$\pm 0.2\%/F.S$ (25°C $\pm 5^\circ\text{C}$ ) In conditions Ratio = 1 and Bias = 0% (Positive slope), or Ratio = -1 and Bias = 0% (Negative Slope)
Equation	$Y = K(X + B)$ (Positive slope) $Y = K(X + B) + F$ (Negative slope) Y: Output (%) K: Ratio X: Input (%) B: Bias (-100% ~ +100%) F: 100%
Temperature Effect	$\pm 0.15\%$ of span @10°C variation
Response Time	85msec max. (0 → 90%) @100% step input
Ratio and Bias Value Indicator	Red LED, 8.0mm height, 3 digits
CMRR	100dB min. (@500V AC, 50/60Hz)
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29 × H86 × D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

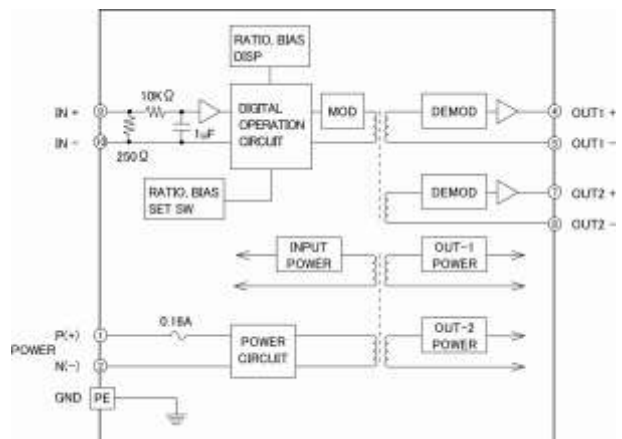
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) ■ Change response frequency..... Fc = □□□ Hz (Up to 6Hz) ■ Change response time..... Tc = □□□ sec (Up to 70msec @90%)
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	N. C.
⑩	N. C.
⑪	N. C.

## BLOCK DIAGRAM



## OVERVIEW



This is narrow-width plug-in reverser with dual-output that converts high-level voltage or electric current input signal into any desired standard process signal having reverse characteristics against input.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL	
DMS3740-□□-1□□□-6□□-7 N	OPEN
①            ②            ③	
DUAL-OUTPUT MODEL	
DMS3740-□□-1□□□-6□□-7□□	OPEN
①            ②            ③            ④	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	1.5VA max.	30mA max.
	Dual Voltage Output	1.5VA max.	40mA max.
	Single Current Output	2VA max.	50mA max.
	Dual Current Output	2VA max.	55mA max.
Current and Voltage Output	2.5VA max.	60mA max.	

### INPUT SECTION

Input Signal (Specify at ② when ordering)	■ 1~5V DC.....V1
	■ 0~1V DC.....V4
	■ 0~5V DC.....V5
	■ 0~10V DC.....V6
	■ ±5V DC.....W5
	■ ±10V DC.....W6
	■ Other DC voltage signal.....X2(□~□) Please specify between 200mV to 300V or ±200mV to ±300V. Specify input signal in parentheses.
	■ 4~20mA DC.....C1
	■ 2~10mA DC.....C1
	■ 1~5mA DC.....C1
■ 10~50mA DC.....C1	
■ Other DC current signal.....CY(□~□) Please specify between 0~100 μA to 0~100mA or ±100 μA to ±100mA. Specify input signal in parentheses.	
Input Resistance	Voltage input: 1MΩ min. (1MΩ minimum without power) Current input: 250Ω (Standard for 4~20mA)
Allowable Input Voltage	Voltage input: 30V DC max. continuous (Standard for span up to 10V) Current input: 40mA DC max. continuous (Standard for 4~20mA)

### OUTPUT SECTION

Output Signal (Specify at ③ ④ when ordering)	■ 5~1V DC.....V1
	■ 10~0mV DC.....V2
	■ 100~0mV DC.....V3
	■ 1~0V DC.....V4
	■ 5~0V DC.....V5
	■ 10~0V DC.....V6
	■ Other DC voltage signal ranging up to 10V.....VX(□~□) Specify output signal in parentheses.
	■ +10~-10mV DC.....W2
	■ +100~-100mV DC.....W3
	■ +1~-1V DC.....W4
■ +5~-5V DC.....W5	
■ +10~-10V DC.....W6	
■ Other DC voltage signal ranging within ±10V.....WX(□~□) Specify output signal in parentheses.	
■ 20~4mA DC (750Ω load).....C1 Applicable only to out-1. Out-2 must be voltage signal.	
■ 20~4mA DC (350Ω load).....C9 Applicable only when 20~4mA output is required for both outputs.	
■ Other DC current signal.....CX(□~□) Please specify between 8~4mA to 20~4mA. Specify output signal in parentheses.	
Maximum Output Load	Voltage output: 1V span min. 2mA max. 10mV 10KΩ min. 100mV 100KΩ min. Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)

# General Specifications

Reverse with isolated dual-output

**AREX-37**

逆信號 變換器

## PERFORMANCE

Accuracy Rating	±0.1%/F.S (25°C±5°C)
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, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

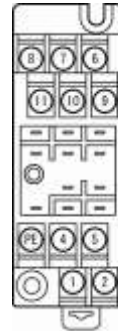
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

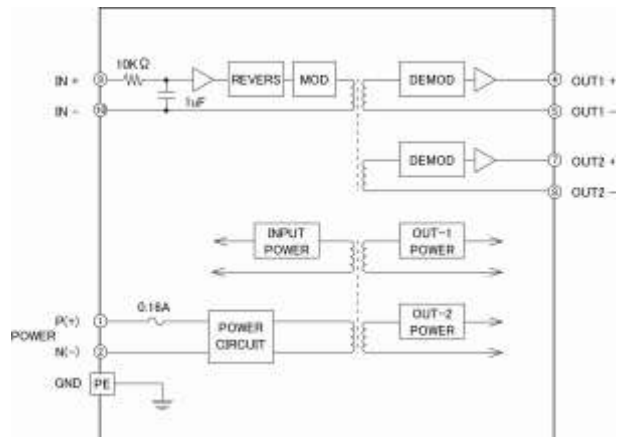
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) <ul style="list-style-type: none"> <li>■ Change response frequency..... Fc = □□□Hz (Up to 200Hz)</li> <li>■ Change response time..... Tc = □□□sec (Up to 2msec @90%)</li> </ul>
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+)
②	N (-)
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	N. C.

## BLOCK DIAGRAM



# General Specifications

High-level signal conditioner with isolated dual-output **AREX-37**

High-level 信號變換器(高速應答型)

## OVERVIEW



This is narrow-width plug-in isolator with dual-output that converts high-level voltage or electric current input signal into any desired standard process signal. This product features faster response than standard model (MS3703).

- ▽ Fast response: 80  $\mu$  sec (0 $\rightarrow$ 90%)
- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL DMS3744—□□—1□□—6□□—7 N ① ② ③	OPEN
DUAL-OUTPUT MODEL DMS3744—□□—1□□—6□□—7□□ ① ② ③ ④	OPEN

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	<ul style="list-style-type: none"> <li>■ 85~264V AC (47~63Hz).....AU</li> <li>■ 24V DC <math>\pm</math>10%.....D1</li> <li>■ 110V DC <math>\pm</math>10%.....D4</li> </ul>
Power Sensitivity	$\pm$ 0.1% of span maximum for each power input range
Power Line Fuse	160mA fuse is installed. (Standard)
Power Consumption	Single-output: 2.5VA max. @100V AC, 60mA max. @24V DC Dual-output: 3VA max. @100V AC, 75mA max. @24V DC

### INPUT SECTION

Input Signal (Specify at ② when ordering)	<ul style="list-style-type: none"> <li>■ 1~5V DC .....V1</li> <li>■ 0~1V DC .....V4</li> <li>■ 0~5V DC .....V5</li> <li>■ 0~10V DC .....V6</li> <li>■ <math>\pm</math>5V DC .....W5</li> <li>■ <math>\pm</math>10V DC .....W6</li> <li>■ Other DC voltage signal.....X2(□~□) Please specify between 200mV to 300V or <math>\pm</math>200mV to <math>\pm</math>300V. Specify input signal in parentheses.</li> <li>■ 4~20mA DC .....C1</li> <li>■ Other DC current signal.....CY(□~□) Please specify between 100 <math>\mu</math> A to 100mA or <math>\pm</math>100 <math>\mu</math> A to <math>\pm</math>100mA. Specify input signal in parentheses.</li> </ul>
Input Resistance	Voltage input: 1M $\Omega$ min. (1M $\Omega$ minimum without power) Current input: 250 $\Omega$ (Standard for 4~20mA)
Allowable Input Voltage	Voltage input: 30V DC max. continuous (Standard for span up to 10V) Current input: 40mA DC max. continuous (Standard for 4~20mA)

### OUTPUT SECTION

Output Signal (Specify at ③④ when ordering)	<ul style="list-style-type: none"> <li>■ 1~5V DC .....V1</li> <li>■ 0~10mV DC .....V2</li> <li>■ 0~100mV DC .....V3</li> <li>■ 0~1V DC .....V4</li> <li>■ 0~5V DC .....V5</li> <li>■ 0~10V DC .....V6</li> <li>■ Other DC voltage signal ranging up to 10V·VX (□~□) Specify output signal in parentheses.</li> <li>■ <math>\pm</math>10mV DC .....W2</li> <li>■ <math>\pm</math>100mV DC .....W3</li> <li>■ <math>\pm</math>1V DC .....W4</li> <li>■ <math>\pm</math>5V DC .....W5</li> <li>■ <math>\pm</math>10V DC .....W6</li> <li>■ Other DC voltage signal ranging within <math>\pm</math>10VWX (□~□) Specify output signal in parentheses.</li> </ul>
Maximum Output Load	1V span min.: 2mA max. 0~10mV : 10K $\Omega$ min. 0~100mV : 100K $\Omega$ min.
Zero Adjustment	Approx. $\pm$ 5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx. $\pm$ 5% of span (Adjustable by front-accessible trimmer)

# General Specifications

High-level signal conditioner with isolated dual-output **AREX-37**

High-level 信號變換器(高速應答型)

## PERFORMANCE

Accuracy Rating	$\pm 0.1\%/F.S$ ( $25^{\circ}C \pm 5^{\circ}C$ )
Temperature Effect	$\pm 0.2\%$ of span @ $10^{\circ}C$ variation
Response Time	80 $\mu$ sec max. (0 $\rightarrow$ 90%) @100% step input (Frequency Response: 10KHz-3dB)
CMRR	100dB min. (@500V AC, 50/60Hz)
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100M $\Omega$ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current : 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current : 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current : 0.5mA)
Surge Withstand Capability	Tested for ANSI/IEEE C37.90.1-1989
Operating Environment	Ambient temperature: $-5 \sim 55^{\circ}C$ Humidity: 5~90%RH (Non-condensation)
Storage Temperature	$-10 \sim 60^{\circ}C$

## PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29 $\times$ H86 $\times$ D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

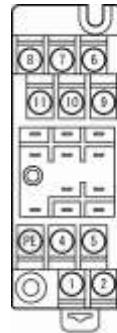
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 $\mu$ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27 (Polyurethane)

## ADDITIONAL

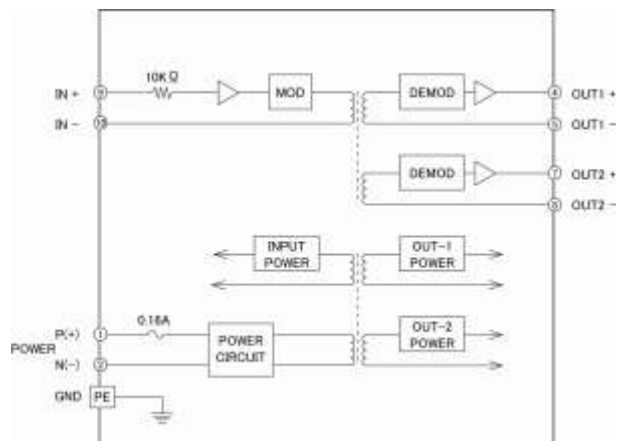
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) <ul style="list-style-type: none"> <li>■ Change response frequency..... <math>F_c = \square\square\square</math> Hz (Up to 10kHz)</li> <li>■ Change response time..... <math>T_c = \square\square\square</math> sec (Up to 80 <math>\mu</math> sec @90%)</li> </ul>
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	N. C.

## BLOCK DIAGRAM





#### OVERVIEW



This is narrow-width plug-in analog adder with dual-output that accepts two channels of high-level voltage or electric current input signal and converts it into any desired standard process signal proportional to the sum of both inputs.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL	
DMS3761-□□-1□□(□/□)-6□□-7N	OPEN
①            ②            ③            ④            ⑤	
DUAL-OUTPUT MODEL	
DMS3761-□□-1□□(□/□)-6□□-7□□	OPEN
①            ②            ③            ④            ⑤            ⑥	

#### SPECIFICATIONS

##### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	1.5VA max.	35mA max.
	Dual Voltage Output	2VA max.	45mA max.
	Single Current Output	2VA max.	55mA max.
	Dual Current Output	2.5VA max.	65mA max.
Current and Voltage Output	2.5VA max.	70mA max.	

##### INPUT SECTION

Input Signal (Specify at ② when ordering)	■ 1~5V DC.....V1
	■ 0~1V DC.....V4
	■ 0~5V DC.....V5
	■ 0~10V DC.....V6
	■ Other DC voltage signal.....X2(□~□) Please specify between 200mV to 300V or ±200mV to ±300V. Specify input signal in parentheses.
Coefficient:K1 Coefficient:K2 (Specify at K1:③ K2:④ when ordering)	■ 4~20mA DC.....C1
	■ 2~10mA DC.....C3
	■ 1~5mA DC.....C4
	■ 10~50mA DC.....C5
	■ Other DC current signal.....CY(□~□) Please specify between 0~100 μA to 0~100mA or ±100 μA to ±100mA. Specify input signal in parentheses.
Input Resistance	Voltage input: 1MΩ min. (1MΩ minimum without power) Current input: 250Ω (Standard for 4~20mA)
Allowable Input Voltage	Voltage input: 30V DC max. continuous (Standard for span up to 10V)
	Current input: 40mA DC max. continuous (Standard for 4~20mA)

##### OUTPUT SECTION

Output Signal (Specify at ⑤ ⑥ 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	
Maximum Output Load	■ ±5V DC.....W5	
	■ ±10V DC.....W6	
	■ Other DC voltage signal ranging within ±10V.....WX(□~□) Specify output signal in parentheses.	
	■ 4~20mA DC (750Ω load).....C1 Applicable only to out-1. Out-2 must be voltage signal.	
	■ 4~20mA DC (350Ω load).....C9 Applicable only when 4~20mA output is required for both outputs.	
	■ Other DC current signal.....CX(□~□) Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.	
	Voltage output: 1V span min.      2mA max. 10mV      10KΩ min. 100mV      100KΩ min.	
	Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each	
	Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
	Span Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Output Range	0~Approx. 120%	
Equation	Output=(K1×IN1+K2×IN2) IN1, IN2: 0~120%	

# General Specifications

Analog adder with isolated dual-output

**AREX-37**

絶縁 2 出力 加算器

## PERFORMANCE

Accuracy Rating	±0.1%/F.S (25°C±5°C)
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, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current : 0.5mA)
	Across Power input and Ground: 2000V AC for 1 minute (cutoff current : 5mA)
	Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current : 0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter : Approx. 120g Socket : Approx. 80g

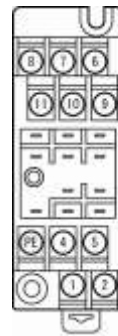
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

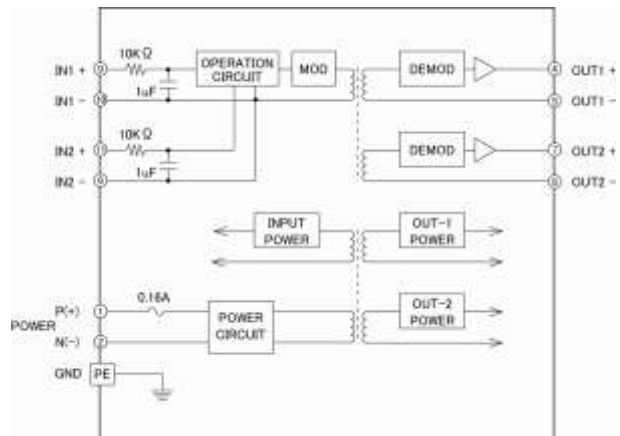
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) <ul style="list-style-type: none"> <li>■ Change response frequency.....Fc = □□□Hz (Up to 200Hz)</li> <li>■ Change response time.....Tc = □□□sec (Up to 2msec @90%)</li> </ul>
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	- INPUT 2
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT 1
⑩	- INPUT 1
⑪	+ INPUT 2

## BLOCK DIAGRAM



# General Specifications

Analog subtracter with isolated dual-output

**AREX-37**

絶縁 2 出力 減算器

## OVERVIEW



This is narrow-width plug-in analog subtracter with dual-output that accepts two channels of high-level voltage or electric current input signal and converts it into any desired standard process signal proportional to the difference of both inputs.

- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL	
DMS3762-□□-1□□(□/□)-6□□-7N	OPEN
①      ②      ③      ④      ⑤	
DUAL-OUTPUT MODEL	
DMS3762-□□-1□□(□/□)-6□□-7□□	OPEN
①      ②      ③      ④      ⑤      ⑥	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	1.5VA max.	35mA max.
	Dual Voltage Output	2VA max.	45mA max.
	Single Current Output	2VA max.	55mA max.
	Dual Current Output	2.5VA max.	65mA max.
Current and Voltage Output	2.5VA max.	70mA max.	

### INPUT SECTION

Input Signal (Specify at ② when ordering)	■ 1~5V DC.....V1	
	■ 0~1V DC.....V4	
	■ 0~5V DC.....V5	
	■ 0~10V DC.....V6	
	■ Other DC voltage signal.....X2(□~□) Please specify between 200mV to 300V or ±200mV to ±300V. Specify input signal in parentheses.	
	■ 4~20mA DC.....C1	
Coefficient: K1 (Specify at ③ when ordering)	■ 2~10mA DC.....C3	
	■ 1~5mA DC.....C4	
	■ 10~50mA DC.....C5	
	■ Other DC current signal.....CY(□~□) Please specify between 0~100 μA to 0~100mA or ±100 μA to ±100mA. Specify input signal in parentheses.	
	Any range from 0.4~2.0.	
	Coefficient: K2 (Specify at ④ when ordering)	Any range from 0.1~2.0.
Input Resistance		Voltage input: 1MΩ min. (1MΩ minimum without power) Current input: 250Ω (Standard for 4~20mA)
Allowable Input Voltage	Voltage input: 30V DC max. continuous (Standard for span up to 10V)	
	Current input: 40mA DC max. continuous (Standard for 4~20mA)	

### OUTPUT SECTION

Output Signal (Specify at ⑤ ⑥ 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		
Maximum Output Load	■ ±5V DC.....W5		
	■ ±10V DC.....W6		
	■ Other DC voltage signal ranging within ±10V.....WX(□~□) Specify output signal in parentheses.		
	■ 4~20mA DC (750Ω load).....C1 Applicable only to out-1. Out-2 must be voltage signal.		
	■ 4~20mA DC (350Ω load).....C9 Applicable only when 4~20mA output is required for both outputs.		
	■ Other DC current signal.....CX(□~□) Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.		
	Voltage output: 1V span min.      2mA max. 10mV      10KΩ min. 100mV      100KΩ min.		
	Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each		
	Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)	
		Span Adjustment (Adjustable by front-accessible trimmer)	
Output Range	0~Approx. 120%		
Equation	Output=(K1×IN1-K2×IN2) IN1, IN2: 0~120%		

# General Specifications

Analog subtracter with isolated dual-output

**AREX-37**

絶縁 2 出力 減算器

## PERFORMANCE

Accuracy Rating	±0.1%/F.S (25°C ±5°C)
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, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current :0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current :5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current :0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

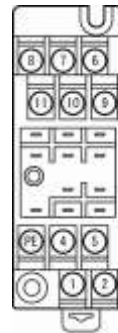
## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

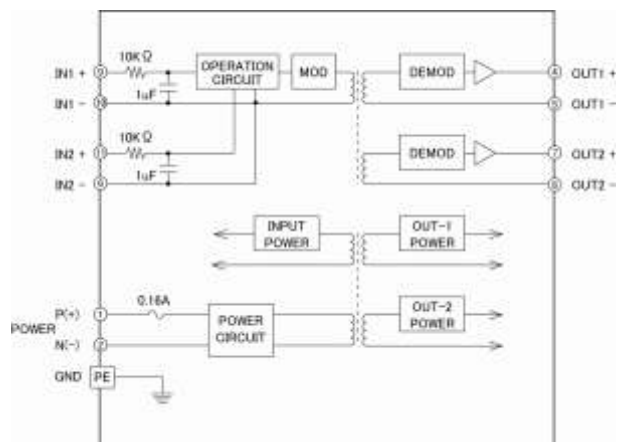
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) <ul style="list-style-type: none"> <li>■ Change response frequency..... Fc = □□□ Hz (Up to 200Hz)</li> <li>■ Change response time..... Tc = □□□ sec (Up to 2msec @90%)</li> </ul>
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## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	- INPUT 2
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT 1
⑩	- INPUT 1
⑪	+ INPUT 2

## BLOCK DIAGRAM



# General Specifications

## RTD differential temperature transmitter with isolated Dual-output **AREX-37** 測溫抵抗體 溫度差 變換器

### OVERVIEW



This is narrow-width plug-in RTD differential temperature transmitter with dual-output that accepts two channels of RTD input signal and converts it into any desired standard process signal proportional to the difference of both inputs.

- ▽ Integrated with RTD linearization and burnout protection function.
- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
SINGLE-OUTPUT MODEL DMS3763-□□-□-6□□-7 N ① ② ③	OPEN
DUAL-OUTPUT MODEL DMS3763-□□-□-6□□-7□□ ① ② ③ ④	OPEN

### SPECIFICATIONS

#### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Maximum Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	2VA max.	40mA max.
	Dual Voltage Output	2VA max.	50mA max.
	Single Current Output	2.5VA max.	60mA max.
	Dual Current Output	2.5VA max.	70mA max.
Current and Voltage Output	3VA max.	75mA max.	

#### INPUT SECTION

Input Signal (Specify at ② when ordering)	Two channels of RTD input (JIS 2-wired and others) ■ Pt100.....Pt100 ■ JPt100.....JPt100 * The resistance-temperature table used will be that of latest revision of JIS unless otherwise specified by the customer.
Measurement Temperature Range	0~50°C (fixed)
Difference of Temperature	0~20°C (fixed)
RTD Excitation Current	Approx. 2mA
Input Lead-wire Resistance	100Ω/wire max.

#### OUTPUT SECTION

Output Signal (Specify at ③ ④ 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 (750Ω load).....C1 Applicable only to out-1. Out-2 must be voltage signal.	
■ 4~20mA DC (350Ω load).....C9 Applicable only when 4~20mA output is required for both outputs.	
■ Other DC current signal.....CX (□~□) Please specify between 4~8mA to 4~20mA. Specify output signal in parentheses.	
Maximum Output Load	Voltage output: 1V span min. 2mA max. 10mV 10KΩ min. 100mV 100KΩ min. Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
Zero Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Approx. ±5% of span (Adjustable by front-accessible trimmer)
Burnout Protection	Upward (Whichever H, L or COM gets open.)

# General Specifications

RTD differential temperature transmitter with isolated **AREX-37**  
 Dual-output  
 測溫抵抗體 溫度差 變換器

## PERFORMANCE

Accuracy Rating	±0.2%/F.S @Input range 15~35°C (25°C±5°C)
Temperature Effect	±0.2% of span @10°C variation
Response Time	200msec max. (0→90%) @100% step input
CMRR	100dB min. (@500V AC, 50/60Hz)
Isolation	Across Input, Out-1, Out-2, and Power input mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across Input, Output and Power input and Ground mutually: 2000V AC for 1 minute (cutoff current :0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current :5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current :0.5mA)
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	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## ADDITIONAL

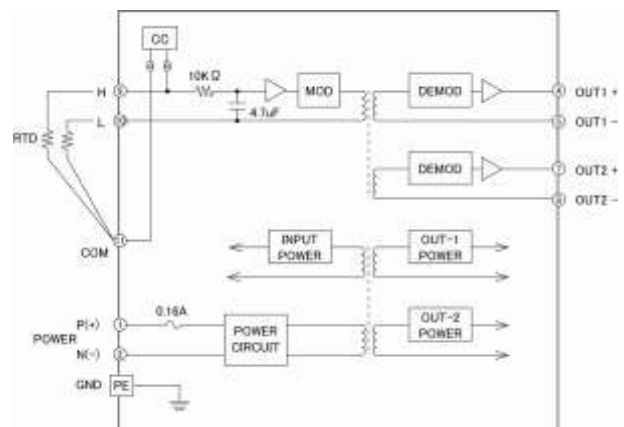
Optional Items (Specify at ⑤ when ordering)	■ Standard .....no letter ■ Without Linearization .....P
Other Options	Please consult our sales representatives for the availability of the following options before ordering: (Items) ..... (How to specify) ■ Change response frequency.....Fc = □□□Hz (Up to 100Hz) ■ Change response time.....Tc = □□□sec (Up to 4msec @90%)

## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N.C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	RTD H
⑩	RTD L
⑪	COM

## BLOCK DIAGRAM



### OVERVIEW



This is narrow-width plug-in 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 and gold-plate on contacts are standard for improved environmental protection.
- ▽ Drop-proof screw terminals for ease of installation.
- ▽ No special spacing is required between the units.

### ORDERING INFORMATION

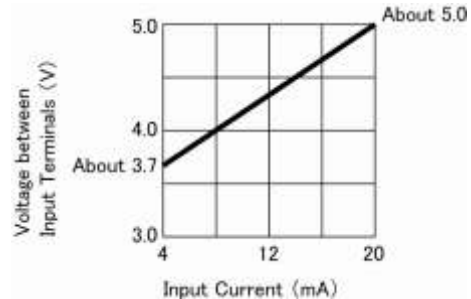
Ordering Code	Standard P rice
DMS3764—□□□ ①	OPEN

### SPECIFICATIONS

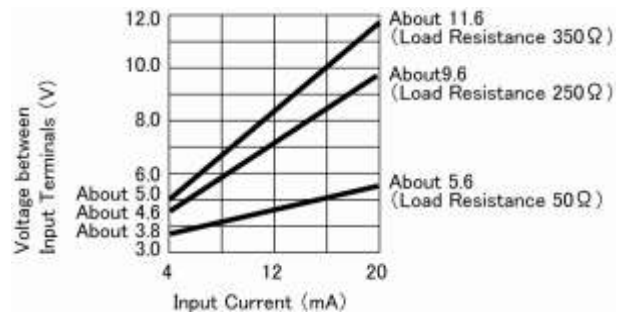
#### INPUT SECTION

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.

#### • Voltage Output



#### • Current Output



### OUTPUT SECTION

Output Signal (Specify at ① when ordering)	<ul style="list-style-type: none"> <li>■ 1~5V DC/1~5V DC.....8V1</li> <li>■ 4~20mA DC/4~20mA DC.....8C9</li> </ul>
Maximum Output Load	Voltage output: 50K Ω min. Current output: 350 Ω min. (Allowable load resistance: 50~350 Ω)
Zero Adjustment	Voltage output: Approx. ±2.5% of span Current output: Approx. ±0.5% of span (Adjustable by front-accessible trimmer)
Span Adjustment	Voltage output: Approx. ±2.5% of span Current output: Approx. ±1.5% of span (Adjustable by front-accessible trimmer)

### PERFORMANCE

Accuracy Rating	±0.15%/F.S (25°C ±5°C)
Temperature Effect	±0.2% of span @10°C variation
Response Time	15msec max. (0→90%) @100% step input
Isolation	Across Input, Output, Channel mutually
Insulation Resistance	100M Ω min. (@500V DC)
Dielectric Strength	Across Input, Output: 1500V AC for 1 minute (cutoff current: 0.5mA) Across Channel: 1500V AC for 1 minute (cutoff current: 0.5mA)
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

# General Specifications

Loop-powered isolator

**AREX-37**

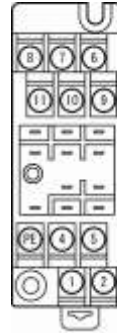
## PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter : Approx. 120g Socket : Approx. 80g

## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

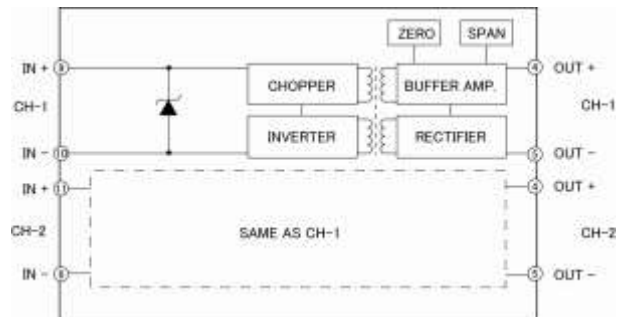
## TERMINAL ASSIGNMENT



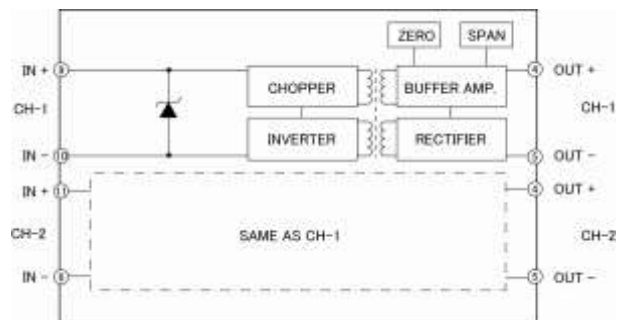
Terminal	Signal
①	N. C.
②	N. C.
PE	N. C.
④	+ OUTPUT ch1
⑤	- OUTPUT ch1
⑥	- INPUT ch2
⑦	+ OUTPUT ch2
⑧	- OUTPUT ch2
⑨	+ INPUT ch1
⑩	- INPUT ch1
⑪	+ INPUT ch2

## BLOCK DIAGRAM

### ■ Current Input/Current Output type



### ■ Current Input/Voltage Output type





# General Specifications

Thermocouple transmitter with isolated dual-output **AREX-37**

熱電對 溫度變換器(PROGRAM 設定型)

## OVERVIEW



This is narrow-width plug-in thermocouple transmitter with dual-output that converts thermocouple input signal into any desired standard process signal. This product features software reconfiguration capability for input and output signal levels.

- ▽ Input and output signal levels are software reconfigurable using PC.
- ▽ Integrated with cold junction compensation, thermocouple linearization and burnout protection function.
- ▽ Cold junction temperature sensor is integrated into the transmitter itself that eliminates the need for reserving extra space above and below transmitter. This feature helps to save space in control panel.
- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
DMS3771-□□-□ (□~□) - 8 □□-B□	OPEN
①    ②    ③    ④    ⑤	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	1.5VA max.	30mA max.
	Dual Voltage Output	2VA max.	40mA max.
	Single Current Output	2VA max.	45mA max.
	Dual Current Output	2 VA max.	50mA max.
Current and Voltage Output	2.5VA max.	60mA max.	

### INPUT SECTION

Input Signal (Specify at ② when ordering)	Thermocouples (Measurement range).....Code ■ K (-200~1200°C).....K ■ E (-200~800°C).....E ■ J (0~750°C).....J ■ T (-200~350°C).....T ■ B (600~1700°C).....B ■ R (0~1600°C).....R ■ S (0~1600°C).....S ■ N (-200~1200°C).....N ■ W97Re3-W75Re25(ASTM E988) 0~2000°C...W97 ■ W95Re5-W74Re26(ASTM E988) (0~2000°C)...W95 * Consult factory for other signal.
Input Span (Specify at ③ when ordering)	* Please specify measurement range in centigrade.
Input Resistance	1MΩ min. (1MΩ minimum without power)
Burnout Protection (Specify at ⑤ when ordering)	Software reconfigurable (Detection current: About 25nA) ■ Upward.....U ■ Downward.....D ■ None.....N
Burnout Drive Time	20sec max.
Allowable Input Voltage	25V DC continuous
Cold-Junction Compensation Error	±0.5°C max. (25°C ±15°C)
Factory Default Setting	Factory default settings are K0~1200°C and Burnout up unless otherwise specified by the customer.

### OUTPUT SECTION

Output Signal (Specify at ④ when ordering)	OUT1 / OUT2 .....Code ■ 1~5V DC/1~5V DC (※1).....V1 ■ 0~5V DC/0~5V DC (※1).....V5 ■ 0~10V DC/0~10V DC (※1).....V6 ■ 4~20mA DC/1~5V DC (※2).....C1 ■ 4~20mA DC/4~20mA DC (※2).....C9 ※1: Software reconfigurable. ※2: Fixed and cannot reconfigure afterwards.
Maximum Output Load	Voltage output: 2mA max. Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
Zero Adjustment	Approx. ±4% of span (Adjustable from PC through RS-232-Ccommunication.)
Span Adjustment	Approx. ±4% of span (Adjustable from PC through RS-232-Ccommunication.)
Factory Default Setting	In case of two voltage outputs models, factory default setting is code V1 (1~5V for both outputs) unless otherwise specified by the customer.

# General Specifications

Thermocouple transmitter with isolated dual-output **AREX-37**  
 熱電對 溫度變換器(PROGRAM 設定型)

## PERFORMANCE

Accuracy Rating	± (Input Allowance + 0.04) % ※See below table for input allowance.
Temperature Effect	100ppm/°C max.
Response Time	260msec max. (0→90%) @100% step input
CMRR	100dB min. (@500V AC, 50/60Hz)
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across [Input + RS-232-C ports ], Output and [Power input + Ground] mutually: 2000V AC for 1 minute (cutoff current : 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current : 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current : 0.5mA) Across Input and RS-232-C ports: 50V DC for 1 minute (cutoff current : 1mA)
Operating Environment	Ambient temperature : -5~55°C Humidity : 30~90%RH (Non-condensation)
Storage Temperature	-10~60°C

## Input Allowance

Thermocouple	Equation
K	$1400^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.02$
E	$1000^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.02$
J	$750^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.02$
T	$550^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.03$
R	$1600^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.04$
S	$1600^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.04$
B	$1100^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.06$
N	$1400^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.02$
W97Re3-W75Re25	$2000^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.03$
W95Re5-W74Re26	$2000^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.03$

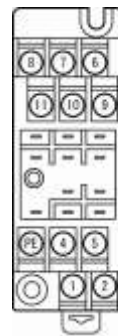
## PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter : Approx. 120g Socket : Approx. 80g

## MATERIAL

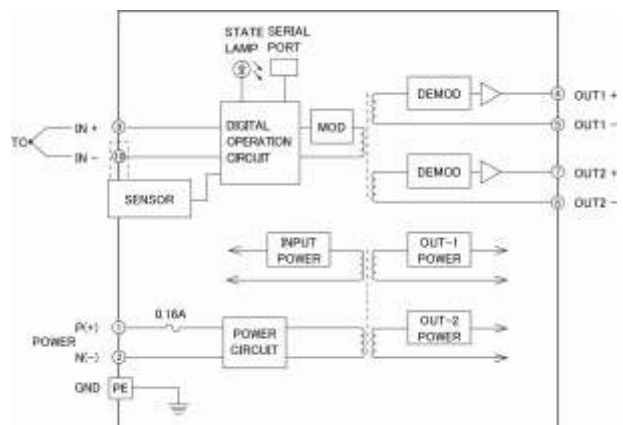
Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	T. C. +
⑩	T. C. -
⑪	N. C.

## BLOCK DIAGRAM



# General Specifications

RTD transmitter with isolated dual-output

**AREX-37**

測溫抵抗體 溫度 變換器(PROGRAM 設定型)

## OVERVIEW



This is narrow-width plug-in RTD transmitter with dual-output that detects the variation of resistance with RTD and converts into any desired standard process signal. . This product features software reconfiguration capability for input and output signal levels.

- ▽ Input and output signal levels are software reconfigurable using PC.
- ▽ Integrated with RTD linearization and burnout protection function.
- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
DMS3772-□□-□ (□~□) - 8□□-B□	OPEN
①    ②    ③    ④    ⑤	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz) ..... AU ■ 24V DC ±10% ..... D1 ■ 110V DC ±10% ..... D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	1.5VA max.	30mA max.
	Dual Voltage Output	2VA max.	40mA max.
	Single Current Output	2VA max.	45mA max.
	Dual Current Output	2VA max.	50mA max.
Current and Voltage Output	2.5VA max.	60mA max.	

### INPUT SECTION

Input Signal (Specify at ② when ordering)	JIS or other standard 3-wired RTD Resistance bulb (Measurement range)..... Code ■ Pt100 (ITS-90) (-200~660°C)..... ITS ■ Pt100 (IPTS-68) (-200~660°C)..... IPTS ■ JPt100 (JIS '89) (-200~510°C)..... JPt100 ■ Pt50 (JIS '81) (-200~649°C)..... Pt50 * Consult factory for other signal.
Input Span (Specify at ③ when ordering)	* Please specify in centigrade within the range of the resistance-temperature table.
RTD Excitation Current	Approx. 1mA
Input Lead-wire Resistance	200Ω /wire max.
Burnout Protection (Specify at ⑥ when ordering)	Software reconfigurable (Detection current: About 25nA) ■ Upward.....U ■ Downward.....D ■ None.....N
Burnout Drive Time	10sec max.
Factory Default Setting	Factory default settings are Pt100(ITS-90)0 ~ 100°C and Burnout up unless otherwise specified by the customer.

### OUTPUT SECTION

Output Signal (Specify at ④ when ordering)	OUT1 / OUT2 .....Code ■ 1~5V DC/1~5V DC (※1)..... V1 ■ 0~5V DC/0~5V DC (※1)..... V5 ■ 0~10V DC/0~10V DC (※1)..... V6 ■ 4~20mA DC/1~5V DC (※2)..... C1 ■ 4~20mA DC/4~20mA DC (※2)..... C9 ※1: Software reconfigurable. ※2: Fixed and cannot reconfigure afterwards.
Maximum Output Load	Voltage output: 2mA max. Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
Zero Adjustment	Approx. ±4% of span (Adjustable from PC through RS-232-C communication.)
Span Adjustment	Approx. ±4% of span (Adjustable from PC through RS-232-C communication.)
Factory Default Setting	In case of two voltage outputs models, factory default setting is code V1 (1~5V for both outputs) unless otherwise specified by the customer.

# General Specifications

RTD transmitter with isolated dual-output

**AREX-37**

測溫抵抗體 溫度 變換器(PROGRAM 設定型)

## PERFORMANCE

Accuracy Rating	± (Input Allowance + 0.04) % ※See below table for input allowance.
Temperature Effect	100ppm/°C max.
Response Time	260msec max. (0→90%) @100% step input
CMRR	100dB min. (@500V AC, 50/60Hz)
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across [Input + RS-232-C ports ], Output and [Power input + Ground] mutually: 2000V AC for 1 minute (cutoff current : 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current : 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current : 0.5mA) Across Input and RS-232-C ports: 50V DC for 1 minute (cutoff current : 1mA)
Operating Environment	Ambient temperature : -5~55°C Humidity : 30~90%RH (Non-condensation)
Storage Temperature	-10~60°C

## Input Allowance

RTD type	Equation
Pt100 (JIS'97)	$860^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.01$
Pt100 (JIS'89)	$860^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.01$
JPt100 (JIS'89)	$710^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.01$
Pt50 (JIS'81)	$849^{\circ}\text{C} \div \text{Input Span (Temperature Range)} \times 0.02$

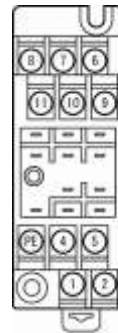
## PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

## MATERIAL

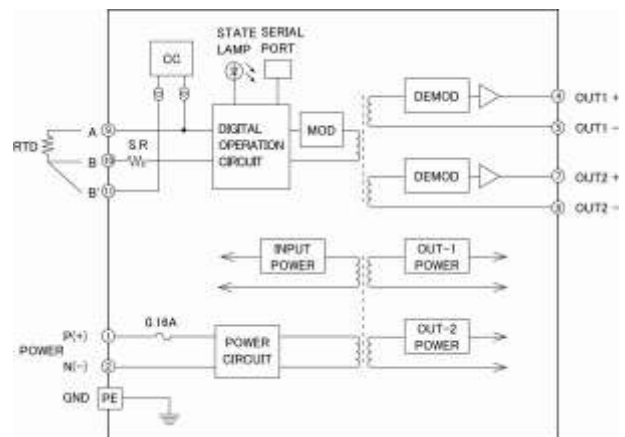
Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw	Steel/nickel plating
Terminal	
Terminals Connecting Main Unit and Socket Block	Brass with 0.2μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27NS (Polyurethane)

## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N.C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	A RTD
⑩	B RTD
⑪	B' RTD

## BLOCK DIAGRAM



# General Specifications

Millivolt isolator with isolated dual-output

**AREX-37**

mV 信號變換器(PROGRAM 設定型)

## OVERVIEW



This is narrow-width plug-in millivolt isolator with dual-output that converts millivolt input signal into any desired standard process signal. This product features software reconfiguration capability for input and output signal levels.

- ▽ Input and output signal levels are software reconfigurable using PC.
- ▽ Software configurable linearization option utilizing 6th-order polynomial.
- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
DMS3773-□□-□ (□~□) -8□□-B□	OPEN
①      ②      ③      ④      ⑤	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz).....AU		
	■ 24V DC ±10%.....D1		
	■ 110V DC ±10%.....D4		
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	1.5VA max.	30mA max.
	Dual Voltage Output	2VA max.	40mA max.
	Single Current Output	2VA max.	45mA max.
	Dual Current Output	2VA max.	50mA max.
Current and Voltage Output	2.5VA max.	60mA max.	

### INPUT SECTION

Input Range (Specify at ② when ordering)	Input range (Measurement range).....Code ■ 20mV (Selected for span of 5mV and up).....20mV ■ 40mV (Selected for span of 19mV and up).....40mV ■ 80mV (Selected for span of 37mV and up).....80mV ■ 160mV (Selected for span of 73mV and up).....160mV ■ 320mV (Selected for span of 145mV and up).....320mV ■ 640mV (Selected for span of 289mV and up).....640mV ■ 1V (Selected for span over 577mV and up to 1V).....1V ■ 2V (Selected for span over 1V and up to 2V).....2V * Optional linearization based on 6th-order polynomial is applicable by software configuration.
Input Span (Specify at ③ when ordering)	Please specify measurement range in parenthesis.
Input Resistance	1MΩ min. (1MΩ without power @rated input)
Burnout Protection (Specify at ⑤ when ordering)	Software reconfigurable (Detection current: About 25nA) ■ Upward.....U ■ Downward.....D ■ None.....N
Burnout Drive Time	10sec max.
Allowable Input Voltage	25V DC continuous
Factory Default Setting	Factory default settings are 0~100mV and Burnout down unless otherwise specified by the customer.

### OUTPUT SECTION

Output Signal (Specify at ④ when ordering)	OUT1 / OUT2 .....Code ■ 1~5V DC/1~5V DC (※1).....V1 ■ 0~5V DC/0~5V DC (※1).....V5 ■ 0~10V DC/0~10V DC (※1).....V6 ■ 4~20mA DC/1~5V DC (※2).....C1 ■ 4~20mA DC/4~20mA DC (※2).....C9 ※1: Software reconfigurable. ※2: Fixed and cannot reconfigure afterwards.
Maximum Output Load	Voltage output: 2mA max. Current output: When out-1 alone is current: 750Ω When both outputs are current: 350Ω each
Zero Adjustment	Approx. ±4% of span (Adjustable from PC through RS-232-Ccommunication.)
Span Adjustment	Approx. ±4% of span (Adjustable from PC through RS-232-Ccommunication.)
Factory Default Setting	In case of two voltage outputs models, factory default setting is code V1 (1~5V for both outputs) unless otherwise specified by the customer.

# General Specifications

Millivolt isolator with isolated dual-output

**AREX-37**

mV 信號變換器(PROGRAM 設定型)

## PERFORMANCE

Accuracy Rating	Input Allowance: $\text{Range} \div \text{Span} \times 0.02\%$ (Except linearization error) Output Allowance: $\pm 0.04\%$
Temperature Effect	100ppm/°C max.
Response Time	260msec max. (0→90%) @100% step input
CMRR	100dB min. (@500V AC, 50/60Hz)
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across [Input + RS-232-C ports ], Output and [Power input + Ground] mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA) Across Input and RS-232-C ports: 50V DC for 1 minute (cutoff current: 1mA)
Operating Environment	Ambient temperature: $-5 \sim 55^{\circ}\text{C}$ Humidity: 30~90%RH (Non-condensation)
Storage Temperature	$-10 \sim 60^{\circ}\text{C}$

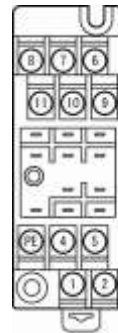
## PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

## MATERIAL

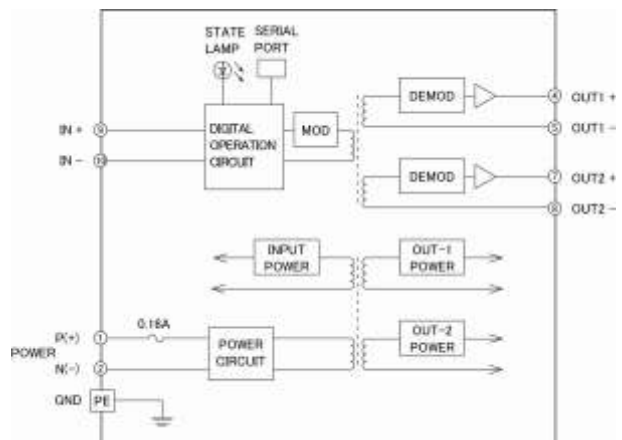
Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27 (Polyurethane)

## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	+ INPUT
⑩	- INPUT
⑪	N. C.

## BLOCK DIAGRAM



# General Specifications

High-level signal conditioner with isolated dual-output **AREX-37**

High-level 信號變換器(Software configurable)

## OVERVIEW



This is narrow-width plug-in isolator with dual-output that converts high-level voltage or electric current input signal into any desired standard process signal. This product features software reconfiguration capability for input and output signal levels.

- ▽ Input and output signal levels are software reconfigurable using PC.
- ▽ Software configurable linearization option utilizing 6th-order polynomial.
- ▽ Anti-humid coatings on PCB and gold-plate on contacts 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
DMS3774-□□-1□ (□~□) - 8□□	OPEN
①      ②      ③      ④	

## SPECIFICATIONS

### POWER SECTION

Power Requirement (Specify at ① when ordering)	■ 85~264V AC (47~63Hz) .....	AU	
	■ 24V DC ±10% .....	D1	
	■ 110V DC ±10% .....	D4	
Power Sensitivity	±0.1% of span maximum for each power input range		
Power Line Fuse	160mA fuse is installed. (Standard)		
Power Consumption	Power	AC100V	DC24V
	Single Voltage Output	1.5VA max.	30mA max.
	Dual Voltage Output	2VA max.	40mA max.
	Single Current Output	2VA max.	45mA max.
	Dual Current Output	2VA max.	50mA max.
Current and Voltage Output	2.5VA max.	60mA max.	

### INPUT SECTION

Input Range (Specify at ② when ordering)	Input range (Measurement range) .....	Code
	<ul style="list-style-type: none"> <li>■ 4V (Selected for span of 2V and up) .....</li> <li>■ 8V (Selected for span of 4V and up) .....</li> <li>■ 16V (Selected for span of 8V and up) .....</li> <li>■ 32V (Selected for span of 16V and up) .....</li> <li>■ 60V (Selected for span from 32V to 60V) .....</li> <li>■ 2mA (Selected for span of 1mA and up) .....</li> <li>■ 4mA (Selected for span of 2mA and up) .....</li> <li>■ 8mA (Selected for span of 4mA and up) .....</li> <li>■ 16mA (Selected for span of 8mA and up) .....</li> <li>■ 32mA (Selected for span of 16mA and up) .....</li> <li>■ 50mA (Selected for span from 32mA to 50mA) .....</li> </ul>	<ul style="list-style-type: none"> <li>4V</li> <li>8V</li> <li>16V</li> <li>32V</li> <li>60V</li> <li>2mA</li> <li>4mA</li> <li>8mA</li> <li>16mA</li> <li>32mA</li> <li>50mA</li> </ul>
Input Span (Specify at ③ when ordering)	Please specify measurement range in parenthesis.	
Input Resistance	Voltage Input : 1MΩ min.	
	(1MΩ minimum without power)	
Allowable Input Voltage	Voltage Input : 120V DC continuous	
	Current Input : 100mA DC continuous	
Factory Default Setting	Factory default settings are 0~5V unless otherwise specified by the customer.	

### OUTPUT SECTION

Output Signal (Specify at ④ when ordering)	OUT1 / OUT2 .....	Code
	<ul style="list-style-type: none"> <li>■ 1~5V DC / 1~5V DC (※1) .....</li> <li>■ 0~5V DC / 0~5V DC (※1) .....</li> <li>■ 0~10V DC / 0~10V DC (※1) .....</li> <li>■ 4~20mA DC / 1~5V DC (※2) .....</li> <li>■ 4~20mA DC / 4~20mA DC (※2) .....</li> </ul>	<ul style="list-style-type: none"> <li>V1</li> <li>V5</li> <li>V6</li> <li>C1</li> <li>C9</li> </ul>
※1: Software reconfigurable.		
※2: Fixed and cannot reconfigure afterwards.		
Maximum Output Load	Voltage output : 2mA max.	
	Current output : When out-1 alone is current : 750Ω	When both outputs are current : 350Ω each
Zero Adjustment	Approx. ±4% of span (Adjustable from PC through RS-232-Ccommunication.)	
Span Adjustment	Approx. ±4% of span (Adjustable from PC through RS-232-Ccommunication.)	
Factory Default Setting	In case of two voltage outputs models, factory default setting is code V1 (1~5V for both outputs) unless otherwise specified by the customer.	

# General Specifications

High-level signal conditioner with isolated dual-output **AREX-37**  
 High-level 信號變換器(Software configurable)

## PERFORMANCE

Accuracy Rating	Input Allowance: $\text{Range} \div \text{Span} \times 0.02\%$ (Except linearization error) Output Allowance: $\pm 0.04\%$
Temperature Effect	100ppm/°C max.
Response Time	260msec max. (0→90%) @100% step input
CMRR	100dB min. (@500V AC, 50/60Hz)
Isolation	Across Input, Out-1, Out-2, Power input and Ground mutually
Insulation Resistance	100MΩ min. (@500V DC)
Dielectric Strength	Across [Input + RS-232-C ports ], Output and [Power input + Ground] mutually: 2000V AC for 1 minute (cutoff current: 0.5mA) Across Power input and Ground: 2000V AC for 1 minute (cutoff current: 5mA) Across Out-1 and Out-2: 500V AC for 1 minute (cutoff current: 0.5mA) Across Input and RS-232-C ports: 50V DC for 1 minute (cutoff current: 1mA)
Operating Environment	Ambient temperature: $-5 \sim 55^{\circ}\text{C}$ Humidity: 30~90%RH (Non-condensation)
Storage Temperature	$-10 \sim 60^{\circ}\text{C}$

## PHYSICAL

Installation	Wall-mounting or DIN Rail-mounting
External Connection	With M3.5 screw terminals (With finger protector over power terminal and drop protection)
Outer Dimension	W29×H86×D125mm (Including socket terminal block and fixing screws.)
Weight	Transmitter: Approx. 120g Socket: Approx. 80g

## MATERIAL

Housing	ABS (UL94V-0)
Socket	ABS (UL94V-0)
Screw Terminal	Steel/nickel plating
Terminals Connecting Main Unit and Socket Block	Brass with 0.2 μ gold plating
PC Board	Glass Fabric Epoxy Resin
Anti-humidity Coating	HumiSeal 1A27 (Polyurethane)

## TERMINAL ASSIGNMENT



Terminal	Signal
①	P (+) POWER
②	N (-) POWER
PE	GND
④	+ OUTPUT 1
⑤	- OUTPUT 1
⑥	N. C.
⑦	+ OUTPUT 2
⑧	- OUTPUT 2
⑨	N. C.
⑩	N. C.
⑪	N. C.

## BLOCK DIAGRAM

