

§ BOX TRANSDUCER §
TYPE CODE DESIGNATION

• SENSOR TRANSDUCER

TT-A series **①** TT **②** - **③** A

① Kind of input

Mark	Kind of input
H	Thermoelectric temperature
RH	Resistance temperature
R	Potentiometer
G	Revolution-speed (Frequency proportion)
GV	Revolution-speed (AC voltage proportion)

② Dielectric strength voltage

Mark	Dielectric strength voltage (50/60Hz)
No number	Non-insulated between input and output
2	AC2,000V for 1 min. between input and output

③ Kind of outer case and its dimensions

Mark	Material of outer case	Dimensions (mm)
		Length × Width × Height
82	Fire-retardant ABS resin	120× 56×130
83	Fire-retardant ABS resin	120×110×130

• SIGNAL TRANSDUCER

T-A series **①** **②** - **③** A

① Kind of conversion

Mark	Kind of conversion
ADTT	Adding
SCTT	Scaling (option)
VF	Analog/Pulse
SE	Input switching

② Dielectric strength voltage

Mark	Dielectric strength voltage (50/60Hz)
No number	Non-insulated between input and output
2	AC2,000V for 1 min. between input and output

③ Kind of outer case and its dimensions

Mark	Material of outer case	Dimensions (mm)
		Length × Width × Height
82	Fire-retardant ABS resin	120× 56×130
83	Fire-retardant ABS resin	120×110×130

§ BOX TRANSDUCER § SIGNAL TRANSDUCER

ADDING TRANSDUCER

ADDING TRANSDUCER

INPUT/OUTPUT NON-INSULATION TYPE ADTT-83A

INPUT/OUTPUT INSULATION TYPE ADTT2-83A

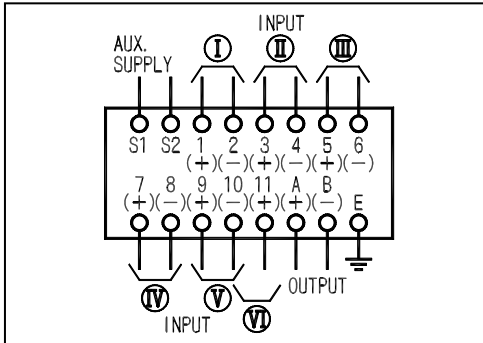


ADTT-83A
(120 × 110 × 130mm/800g)

Use

Convert multiple (Max.6 circuits) DC signal to necessary DC signal by adding according to certain ratio.

Connection diagram



In the case of DC auxiliary supply, connect with S1 as (+), S2 as (-).

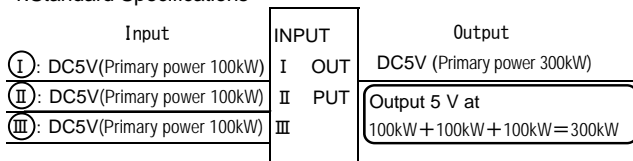
Specifications

Input (input resistance)	Output (load resistance)	Auxiliary supply	Common specifications
1: 0-1V (Approx. 50kΩ)	1: 0-1V (200)	1: AC100V±15%, 50/60Hz	ADTT-83A Tolerance: ±0.5% Response time: 0.1sec. (±1%) Consumption VA: AC power source 3VA DC power source 4W Weight: 0.8kg
2: 0-5V (Approx. 50kΩ)	2: 0-5V (1k)	2: AC110V±15%, 50/60Hz	
3: 0-10V (Approx. 50kΩ)	3: 0-10V (2k)	3: AC200V±15%, 50/60Hz	
4: 1-5V (Approx. 50kΩ)	4: 1-5V (1k)	4: AC220V±15%, 50/60Hz	
5: 0-1mA (Approx. 100Ω)	5: 0-1mA (10k)	5: DC24V±15%	
6: 0-5mA (Approx. 100Ω)	6: 0-5mA (2k)	6: DC48V±15%	
7: 0-10mA (Approx. 100Ω)	7: 0-10mA (1k)	7: DC110V (88-143V)	
8: 0-16mA (Approx. 100Ω)	8: 0-16mA (600)	0: other than those above	ADTT2-83A Tolerance: ±0.5% Response time: 0.5sec. (±1%) Consumption VA: AC power source 4VA DC power source 5W Weight: 1kg
9: 4-20mA (Approx. 100Ω)	9: 4-20mA (500)		
0: other than those above	0: other than those above		

Current output is open: No problem when current output terminal is constantly open. Approx. 15V voltage is generated on output terminal. Even though 4-20mA input becomes 0mA by input circuit shut-down, signal is treated as equivalent to 4mA input.(standard)

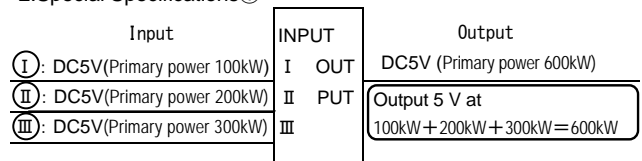
How to order (Examples for adding the 3 outputs of power transducer)

1. Standard Specifications



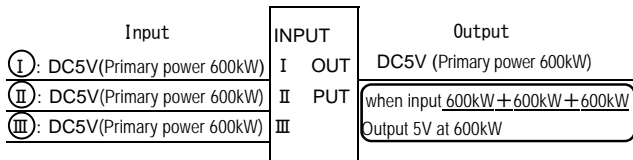
Please specify the addition ration as 1:1:1=3

2.Special Specifications①



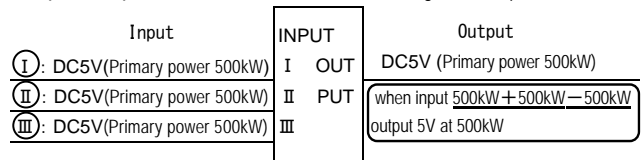
Please specify the addition ration as 1:2:3=6

3.Special Specifications②



Please specify the addition ration as 1:1:1=1

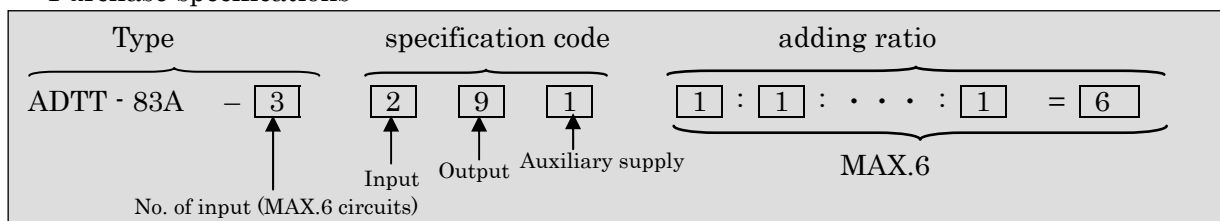
4.Special Specifications③ (in case of subtracting the 3rd input)



Please specify the addition ration as 1:1:-1=1

Specify please the adding ratio by the value of the primary power, or specify simplified as the above escribed examples. In case of subtracting, put "-" before addition ration to subtract. (Please refer to 4. Special Specifications ③)

Purchase specifications



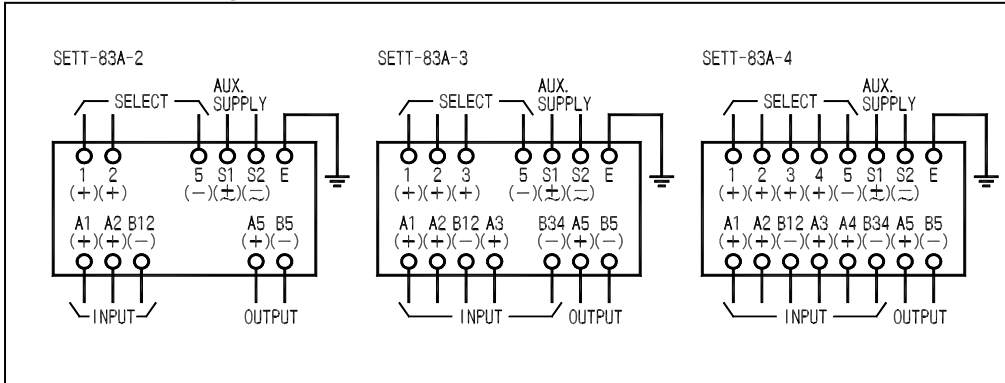
§ BOX TRANSDUCER § SIGNAL TRANSDUCER
INPUT SWITCHING TRANSDUCER

INPUT SWITCHING TRANSDUCER SETT-83A

Use

Convert input signal (Max. 4 circuits) to necessary DC signal by SELECT signal.

Connection diagram



Specifications

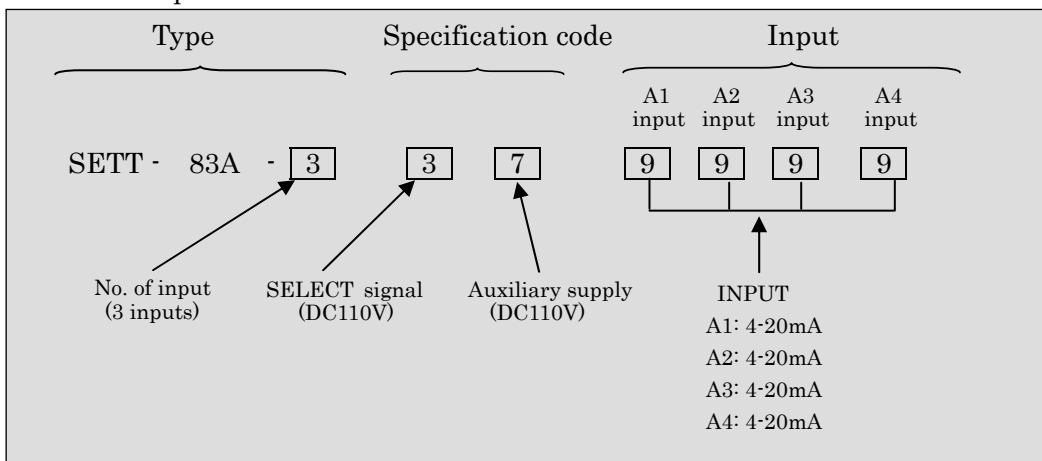
SELECT signal voltage	Auxiliary supply	Kind of input (load resistance)	Kind of output (load resistance)
1 : DC24V±15% 2 : DC48V±15% 3 : DC110V (88-143V) 4 : other than those above AC can not be manufactured. Current consumption: Approx. 10mA	1 : AC100V±15%, 50/60Hz 2 : AC110V±15%, 50/60Hz 3 : AC200V±15%, 50/60Hz 4 : AC220V±15%, 50/60Hz 5 : DC24V±15% 6 : DC48V±15% 7 : DC110V (88-143V) 0 : other than those above	1 : 0-1V (Approx. 50kΩ) 2 : 0-5V (Approx. 50kΩ) 3 : 0-10V (Approx. 50kΩ) 4 : 1-5V (Approx. 50kΩ) 5 : 0-1mA (Approx. 100Ω) 6 : 0-5mA (Approx. 100Ω) 7 : 0-10mA (Approx. 100Ω) 8 : 0-16mA (Approx. 100Ω) 9 : 4-20mA (Approx. 100Ω) 0 : other than those above B : no input (blank)	1 : 0-1V (200) 2 : 0-5V (1k) 3 : 0-10V (2k) 4 : 1-5V (1k) 5 : 0-1mA (10k) 6 : 0-5mA (2k) 7 : 0-10mA (1k) 8 : 0-16mA (600) 9 : 4-20mA (500) 0 : other than those above B : no input (blank)
Tolerance: ±0.5% Response time: 0.1sec. (±1%)		Consumption VA: AC power source 3VA DC power source 4W	Weight: 0.8kg

Open of current output: even if the current output terminal is used in a state of regular open, there is no problem. Also, a voltage of approx. 15V occurs on the output terminal.

Input/output non-insulation type

This product is non-insulation type. (-) side of each input and (-) side of output are electrically common.

Purchase specifications

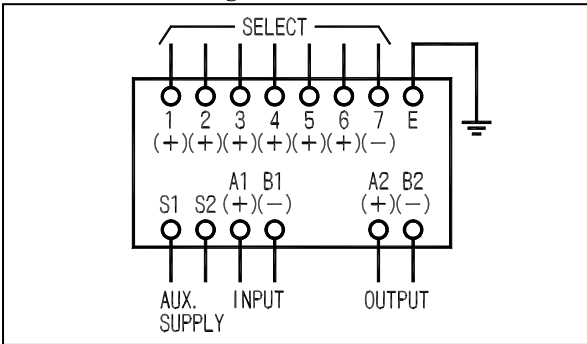


SCALING TRANSDUCER SCTT-83A

Use

Select scaling constant according to DC input (MAX. 6 range) and convert to necessary DC signal.

Connection diagram



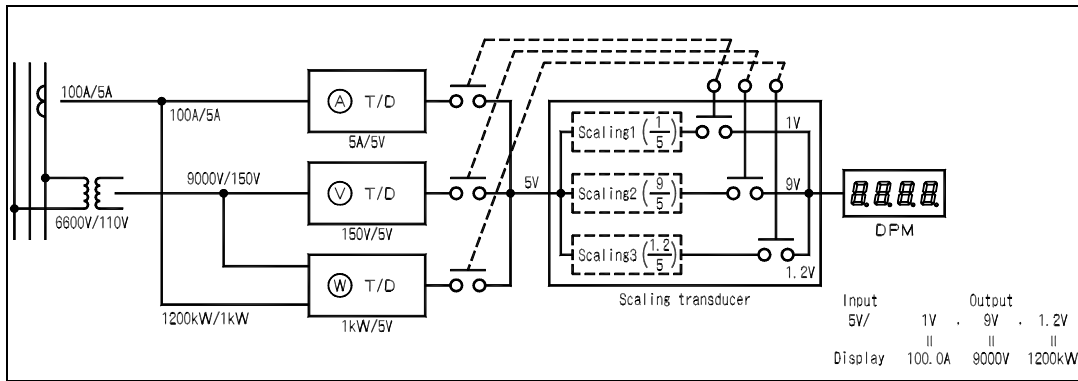
SCTT-83A

(120 × 110 × 130mm/800g)

Specifications

Kind of input (input resistance)	Scaling selection signal	Auxiliary supply	Common specifications
1 : 0-1V (Approx. 50kΩ) 2 : 0-5V (Approx. 50kΩ) 3 : 0-10V (Approx. 50kΩ) 4 : 1-5V (Approx. 50kΩ) 5 : 0-1mA (Approx. 100Ω) 6 : 0-5mA (Approx. 100Ω) 7 : 0-10mA (Approx. 100Ω) 8 : 0-16mA (Approx. 100Ω) 9 : 4-20mA (Approx. 100Ω) 0 : other than those above	1 : DC24V±15% 2 : DC48V±15% 3 : DC110V±15% 0 : other than those above Current consumption: Approx. 10mA	1 : AC100V±15%, 50/60Hz 2 : AC110V±15%, 50/60Hz 3 : AC200V±15%, 50/60Hz 4 : AC220V±15%, 50/60Hz 5 : DC24V±15% 6 : DC48V±15% 7 : DC110V (88-143V) 0 : other than those above	Tolerance: ±0.5% Response time: 0.1sec. or less/99% Consumption VA: AC power source 3VA DC power source 4W Weight: 0.8kg

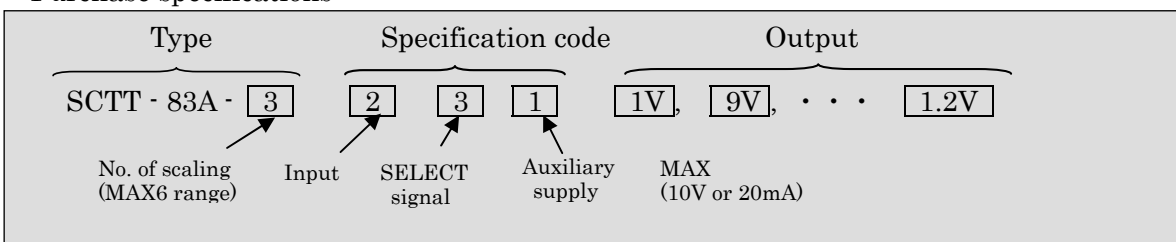
Open of current output: even if the current output terminal is used in a state of regular open, there is no problem. Also, a voltage of approx. 15V occurs on the output terminal.* Tolerance: % against Max. output value.



Input/output non-insulation type

This product is non-insulation type. (-) side of each input and (-) side of output are electrically common.

Purchase specifications



§ BOX TRANSDUCER § SIGNAL TRANSDUCER

ANALOG PULSE TRANSDUCER

ANALOG PULSE TRANSDUCER VF2-83A

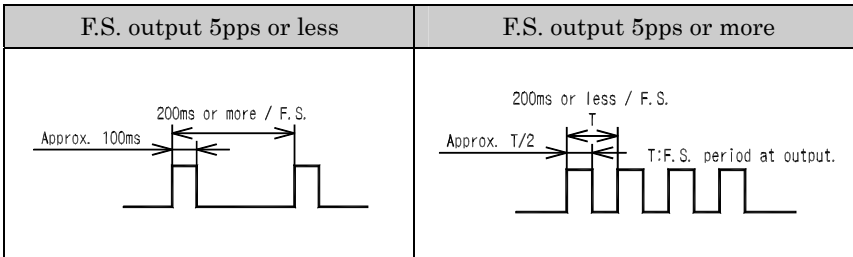
Use

Input is DC signal such as power/current transducer. Convert to frequency pulse in proportion to input after insulation.

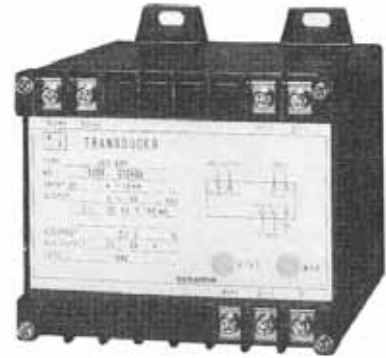
Features

Output signal system: either open collector output or voltage output.
 Withstand voltage 2,000V AC (between input/output/auxiliary supply/earth).
 Impulse withstand voltage $5kV \pm 1.2/50 \mu s$ (between electric circuit and earth), positive/negative polarity 3 times each is guaranteed.

Output pulse



F.S. output: 0.01111-277.8pps.

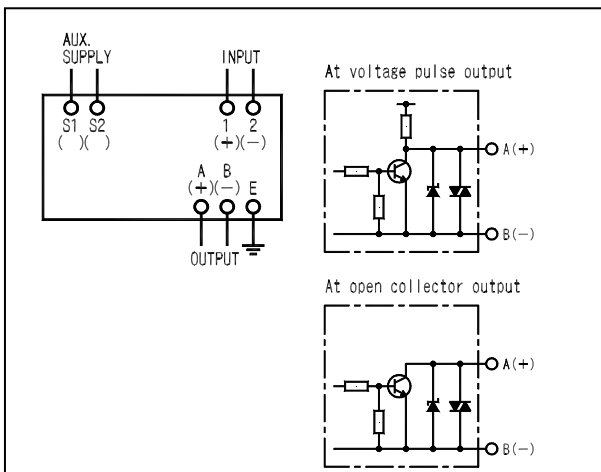


VF2-83A
 (120 × 110 × 130mm/1.2kg)

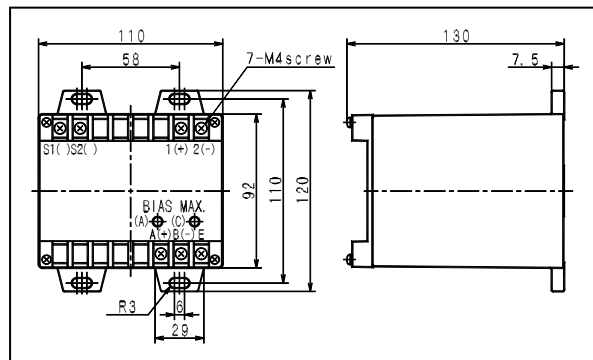
Specifications

Kind of input (input resistance)	Output signal method	Auxiliary supply	Common specifications
<ol style="list-style-type: none"> 1: 0-5V (Approx. 1MΩ) 2: 0-10V (Approx. 1MΩ) 3: 1-5V (Approx. 1MΩ) 4: 0-1mA (Approx. 100Ω) 5: 4-20mA (Approx. 100Ω) 	<ol style="list-style-type: none"> 1: voltage pulse 10Vp (load 2k) 2: Tr. open connector (O.C.) DC48V, 100mA MAX. 	<ol style="list-style-type: none"> 1: AC100V±15%, 50/60Hz 2: AC110V±15%, 50/60Hz 3: AC200V±15%, 50/60Hz 4: AC220V±15%, 50/60Hz 5: DC24V±10% 6: DC48V±10% 7: DC110V (88-143V) 0: other than those above 	Tolerance: ±0.5% Response time: 0.1sec. or less/99% Consumption VA: AC power source 2.5VA DC power source 3W Weight: 1.2kg

Connection diagram



Dimensions (mm)



Purchase specifications

Type	Specification code	Output
VF2-83A	5 1 5	3.333pps
Input	Output signal method	Auxiliary supply

Please specify number of output pulse by 4 effective digits.
 For example, specify 0.2778pps for the case of 0.27777...pps.

§ BOX TRANSDUCER § SIGNAL TRANSDUCER

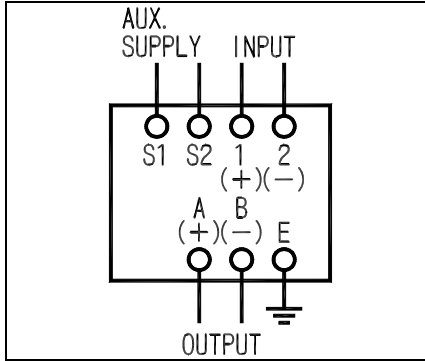
ANALOG PULSE TRANSDUCER

ANALOG PULSE TRANSDUCER VF-82A

Use

Input is DC signal such as power/current transducer.
Convert to frequency pulse in proportion to input.

Connection diagram



VF-82A

(120 × 56 × 130mm/500g)

Specifications

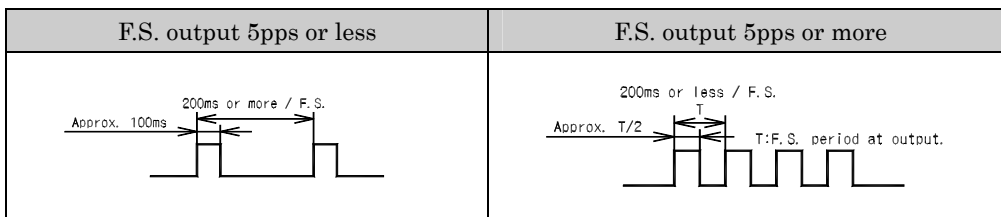
Kind of input (input resistance)	Output signal method	Auxiliary supply	Common specifications
<ul style="list-style-type: none"> 1 : 0-1V (Approx. 50kΩ) 2 : 0-5V (Approx. 50kΩ) 3 : 0-10V (Approx. 50kΩ) 4 : 1-5V (Approx. 50kΩ) 5 : 0-1mA (Approx. 100Ω) 6 : 0-5mA (Approx. 100Ω) 7 : 0-10mA (Approx. 100Ω) 8 : 0-16mA (Approx. 100Ω) 9 : 4-20mA (Approx. 100Ω) 0 : other than those above 	<ul style="list-style-type: none"> 1 : voltage pulse 10Vp (load 2k) 2 : Tr. open connector (O.C.) DC48V, 100mA MAX. 	<ul style="list-style-type: none"> 1 : AC100V±15%, 50/60Hz 2 : AC110V±15%, 50/60Hz 3 : AC200V±15%, 50/60Hz 4 : AC220V±15%, 50/60Hz 5 : DC24V±15% 6 : DC48V±15% 0 : other than those above 	Tolerance: ±0.5% Response time: 0.1sec. or less/99% Consumption VA: AC power source 2.5VA DC power source 3W Weight: 500g

Use VF2-83A for 110V DC power source.
At the time of min. input value below: no output pulse.

Input/output non-insulation type

This product is non-insulation type. (-) side of each input and (-) side of output are electrically common.

Output pulse



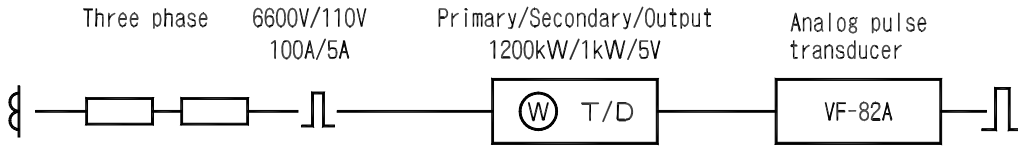
F.S. output: 0.01111-277.8pps (40pulse/h-1, 000, 000pulse/h).

Purchase specifications

Type	Specification code	Output
VF - 82A	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">2</div> <div style="border: 1px solid black; padding: 2px;">1</div> <div style="border: 1px solid black; padding: 2px;">1</div> </div>	3.333pps
	Input → Output signal method → Auxiliary supply	Please specify number of output pulse by 4 effective digits. For example, specify 0.2778pps for the case of 0.27777...pps.

Sample of use

(About pulse constant in integrating power and analog pulse transducer).



Primary pulse constant:

Integrating pulse number when the device is operated for 1 hour in 1kW at primary side power.

Secondary pulse constant:

Integrating pulse number when the device is operated for 1 hour in 1kW at secondary side power.

Pulse constant: pulse/kWh

Primary F.S. power/F.S. input	Primary pulse constant	Pulse number/F.S. input/hour	Pulse number/F.S. input/sec.	Input/output (VF-82A)
1, 200kW/5V	10pulse/kW/h Primary	1, 200×10/1, 200kW/h primary 1, 200×10/5V/h	3.333pulse/1, 200kW/s primary 3.333pulse/5V/s	5V/3.333pps
1, 200kW/5V	1, 000pulse/kW/h	1, 200×1,000/1, 200kW/h primary 1, 200×1,000/5V/h	3.333pulse/1, 200kW/s primary 3.333pulse/5V/s	5V/3.333pps
Primary F.S. power/secondary F.S. input/F.S. input	Secondary pulse constant	Pulse number/F.S. input/hour	Pulse number/F.S. input/sec.	Input/output
1, 200kW/1kW/5V (6.600/110V 100/5A)	1, 200pulse/kW/h secondary 10pulse×6, 600V/ 110V×100A/5A	12,000pulse/kW/h secondary 12,000pulse/5V/h	3.333pulse/kW/s secondary 3.333pulse/5V/s	5V/3.333pps