YOKOGAWA ◆

DIN METER SERIES

Yokogawa Corporation of America

Contents

Meter Product Line-up

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					96×96	72×72	
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		Unbal.				○	●	
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		Unbal.				○	●	
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		Unbal.		Feedback time division multiplier type		○	●	
	3P4W	Unbal.				○	●	

Remark: ●shows these meters needs external transducer.

Usage Precautions - Safety instructions for DIN meter

Warning
Indicates usage precautions that must be read to ensure the safety of users and the equipment.

1. Usage environment & conditions

Do not use YOKOGAWA DIN meters in locations such as the following:

① Locations where the ambient temperature is outside the range of 0-45℃.

②Locations where relative humidity is outside the range of 30-75%.

③Locations subject to vibrations or shock impact.

④Locations subject to rain, dripping water, or direct sunlight.

⑤Locations exposed to large amounts of dust, salt, soot, or corrosive gases
(sulfurous acid gas, ammonia gas, hydrogen sulfide gas, or other gases that corrode metals of plastics)

⑥ Locations subject to strong external noise or electromagnetic waves.

⑦ Locations subject to large amounts of static electricity.

⑧ Locations subject to large amounts of high frequencies and waveform distortion(e.g., from inverters or thyristor circuits)

2. Mounting method

Adhere to safety rule at the construction, maintenance and inspection

①Check the appearance of the packing box and DIN meters and confirm that there is no damage

②If necessary, combine with washers and others and fasten, in the case of panel boards and switchboards are thin.

③Fasten nuts on clamp panel mount to the proper torque for the size of screw being used with the proper tool.
Recommended tightening torque:
M3 screws – 0.6N • m

3. Wiring

Adhere to the following rules when connecting the wires:

①When connecting an instrument with accessories, first make sure none of the wires are live.

②The connector terminals on the wires should be appropriate for the electricity load and terminal size.

③Connect the wires properly as illustrated in the wiring diagrams of the catalog or on the product labels.

④Attach to terminal cover for safety.

⑤Fasten terminal screws to the proper torque for the size of screw being used with the proper tool.
Recommended tightening torque:
M3 screws – 0.6N • m
M4 screws – 1.2N • m

⑥ Instruments that are combined with current transformers (CT) should be properly connected to the secondary side of the CT. Improper connection may result in a CT failure, burned components, or a fire. When the secondary side of a CT is disconnected, especially while the primary side is powered, the secondary side terminal will carry a high voltage which could result in electrical shock. Therefore, the secondary side should be short-circuited before the instrument is disconnected.

4. Usage precautions

①Use the instrument within the rated specifications.
Failure to do so can cause the equipment to malfunction or result in a failure.

②While the power is on, do not touch any terminals or open the cover or case.

③The current transformer emits heat while powered, so do not touch it.

5. What to do if the equipment functions abnormally or fails

①If you notice abnormal heating, or a strange odor, noises, or smoking or if the equipment seems to have failed, immediately take steps such as cutting off the input.
Next, contact your YOKOGAWA sales office.

6. Maintenance and inspection

To ensure that your instrument operates properly, perform the following checks on a regular basis:

①Check for damage to the instrument or accessories due to heating or other factors.

②Check for loose attachments or screws (always turn off the power before doing this to ensure safety).

③ The instrument covers have been coated with an antistatic agent to block static electricity. Gently wipe dirt off the cover surfaces with a soft, dry cloth. Do not use a wet cloth as this will reduce the effects of the antistatic coating. Do not allow cloths made from synthetic materials to contact the cover for an extended period of time, and do not use benzene, paint thinner, or similar substances. Doing so may cause the cover to become deformed, discolor it, or cause cracking.

④If the indicator reading becomes unstable due to static electricity, coat the front and back of the cover with a commercially available antistatic agent.

⑤ Instrument service life will vary according to usage conditions. In general, however, we recommend replacing the instrument after about 10 years of use.

7. Disposal of product

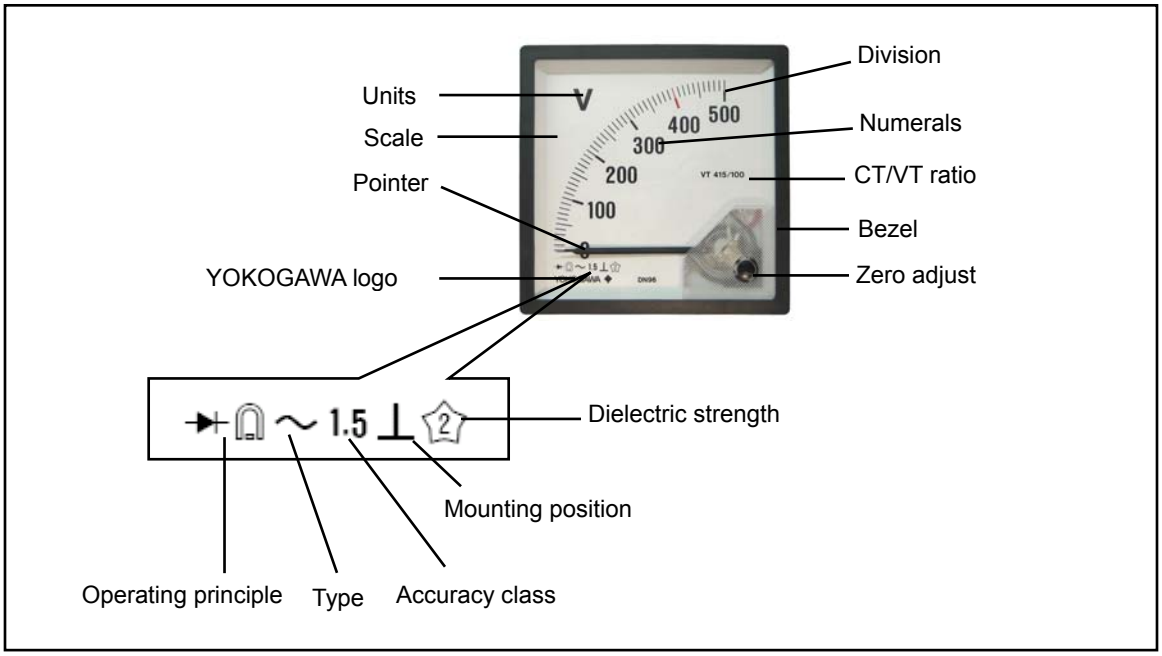
①Panel meters do not contain batteries.

②Dispose of panel meters as general industrial waste.

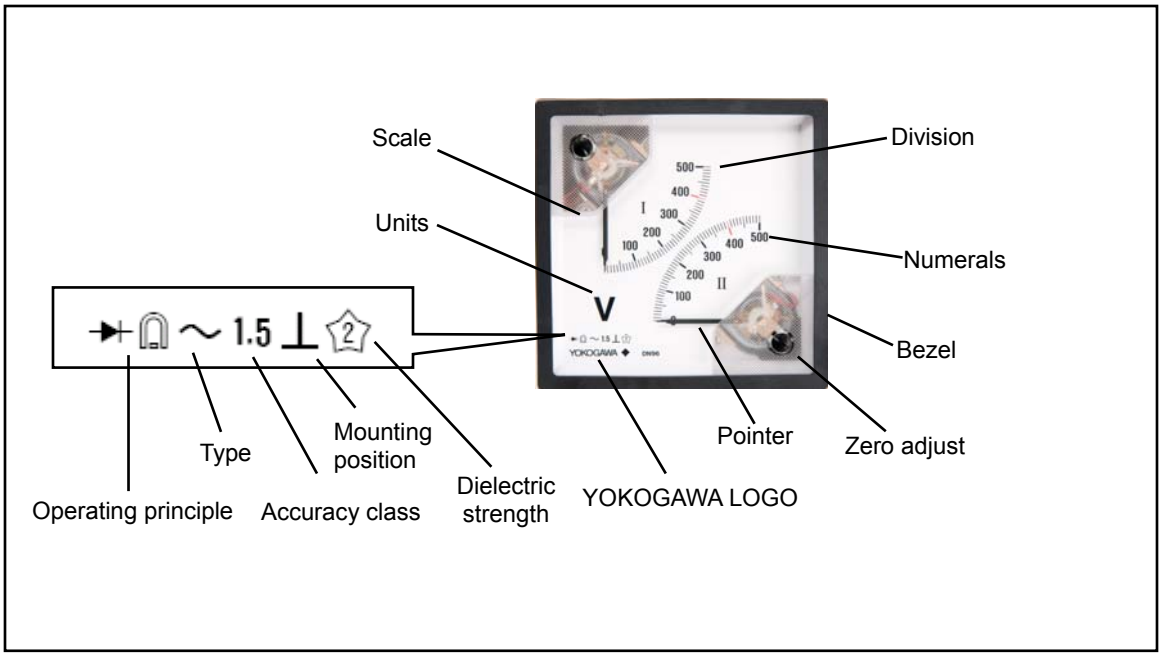
8. For aluminum electrolytic capacitors

Frequency meters use aluminum electrolytic capacitors. The lifetime of aluminum electrolytic capacitors are around 10 years when ambient temperatures are 23℃.
If aluminum electrolytic capacitors run down and the meters are damaged, replace new frequency meters.

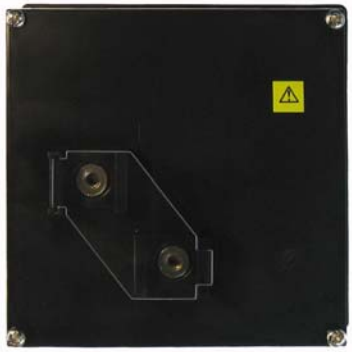
- **Front view**(DN72 And DN96 Series Except DN96A22, 23, 82, 83)



- **Front view** (DN96A22, 23, 82, 83)



- **Back view**(DN72 And DN96 Series Except DN96A22, 23, 82, 83)



Safety terminal cover

The clear cover is used to prevent touching the input terminals.
Don't forget to close this cover.
Object: All DIN series meters.

- **Back view**(DN96A22, 23, 82, 83)

Safety terminal cover

The clear cover is used to prevent touching the input terminals.
Don't forget to close this cover.
Object: All DIN series meters.
Note:Circuit I and II are independent.

- **Set pointer**

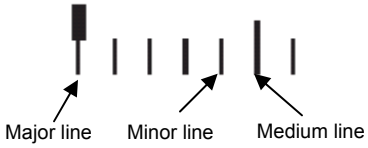
Set pointer（red）

Easy to manage, the pointer can be set to any value.

Note:The double pointer meter does not have a set pointer.

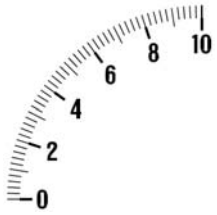
• Scale form

a) Types of division



b) Standard scale (Except moving iron type)

Linear scales

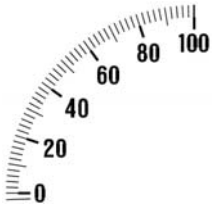


c) Moving iron type

Non-linear scales.
Lines near “0” are omitted because of limited space and low usage.

d) Suppressed meters

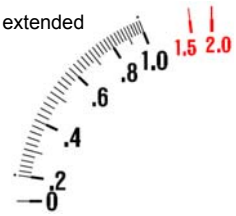
In the case of 4-20mA current input, when value to be input is 4mA, the pointer read 0; when the value to be input is 0mA, the pointer points to the mechanical zero,



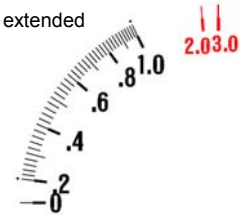
e) Extended scale (Moving iron type)

Used in measuring the loading current of the electromotor.
The Colored scales and figures with red, which are beyond the effective range. This kind is used to measure the starting current.

● Two-fold extended

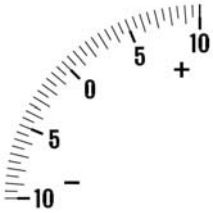


● Three-fold extended



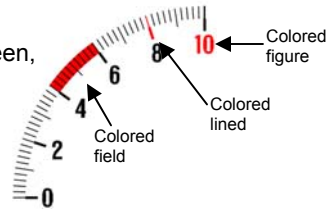
f) Zero-center meter

Zero-center: the scale division is the same as the standard scale.



g) Color of scale

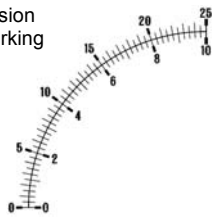
Confirm the color is “red, green, blue or yellow”.
Colored line, colored field:
maximum 2 piece / 2 color.
Colored figure:
maximum 2 piece 1color.



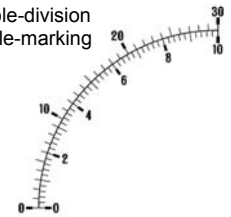
h) Multiple-division & multiple-marking

The larger scale is on external side; the smaller one is on inner side. Multiple-division is as the same as the standard scale.

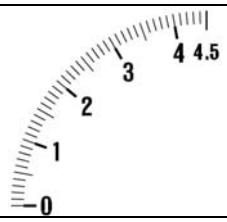
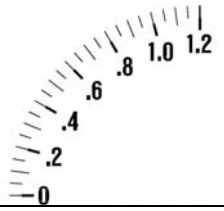
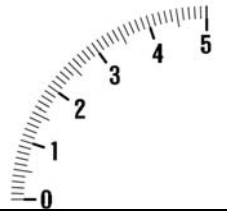
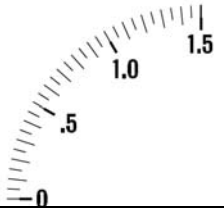
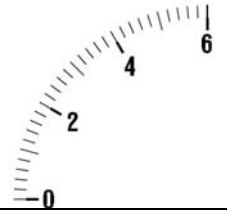
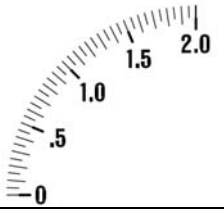
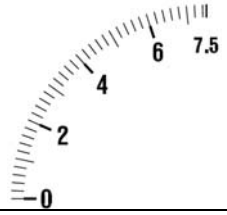
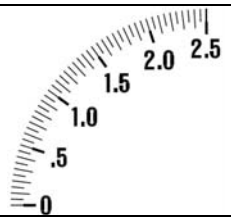
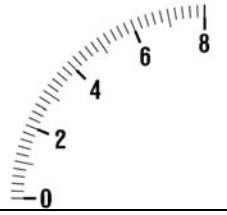
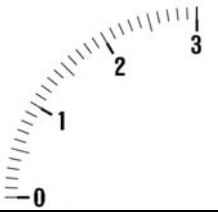
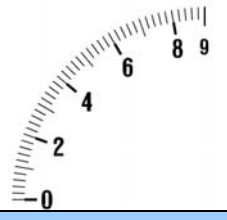
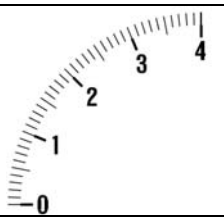
● Single-division double-marking



● Double-division double-marking



• Scale division

Maximum scale value	Value of per division	Division	Maximum scale value	Value of per division	Division
1 10 100	0.02 0.2 2	50 division 	4.5 45 450	0.1 1 10	45 division 
1.2 12 120	0.05 0.5 5	24 division 	5 50 500	0.1 1 10	50 division 
1.5 15 150	0.05 0.5 5	30 division 	6 60 600	0.2 2 20	30 division 
2 20 200	0.05 0.5 5	40 division 	7.5 75 750	0.2 2 20	37.5 division 
2.5 25 250	0.05 0.5 5	50 division 	8 80 800	0.2 2 20	40 division 
3 30 300	0.1 1 10	30 division 	9 90 900	0.2 2 20	45 division 
4 40 400	0.1 1 10	40 division 			

Item		DN96		DN72	
Suspension type		Taut band	Pivot & jewel	Taut band	Pivot & jewel
Pointer type		Lance type (black color)		Lance type(black color)	
Bezel color		Black		Black	
Front cover dimensions		96×96mm		72×72mm	
Scale length		53mm（DN9622,23,82,83）		61mm	
		95mm（DN96Series others）			
The length between element center and pointer end		33.7mm（DN9622,23,82,83）		39mm	
		60.5mm（DN96Series others）			
Full scale deflection angle		90°±2°			
Meter mounting position		Vertical（□）			
Insulation resistance		Between electrical circuit and the case:500V DC/More than 10MΩ			
		Between current circuit and voltage circuit:500V DC/More than 5MΩ			
Dielectric strength		Linemax:500V (Ammeters only)			
		①Between electrical circuit and the case(I/V): 3320V AC for 5S; ②Between electrical circuit and case(FREQ., WATT,P.F.,VAR):3320 AC for 5S，between current circuit and case:2600V AC for 5S; ③Others：2210V AC for 5S; ④Between electrical circuit I and II with double pointer meter: 3320V AC for 5S			
Operating temperature range		0～45□			
Operating humidity range		30～75%RH			
Storage temperature range		-10～50□			
Storage humidity range		25～80%RH			
Case material		Case & base material： ABS resin（Nonflammable）			
		Window material：PMMA（Unit electrostatic process）			
		Bezel material：ABS resin（Nonflammable）			
Meter weight	DC A（1mA）	Approx 160g		Approx 115g	
	AC A（AVE）	Approx 160g(DN96A20,21)		Approx 115g	
		Approx 220g(DN96A22,23)			
	AC A (I/V)	Approx 155g		Approx 115g	
	WATT（3Φ3W）	Approx 320g		Approx 115g (TRD BOX 460g)	
	VAR（3Φ3W）	Approx 320g		Approx 115g (TRD BOX 460g)	
	P.F.（3Φ3W）	Approx 320g		Approx 115g (TRD BOX 460g)	
	FRQ.	Approx 172g(DN96A80,81)		Approx 125g	
		Approx 220g(DN96A82,83)			

DN□□A□□-□□□-□-□-□□/□□□

	SHAPE & DIMENSION
DN96	96X96
DN72	72X72

	TYPE CODE
10	T/B type DC Ammeter, Voltmeters
11	P/J type DC Ammeter, Voltmeters
20	T/B type rectifying AC Ammeters, Voltmeters
21	P/J type rectifying AC Ammeters, Voltmeters
22	T/B type rectifying AC Voltmeters(Double pointer,Only DN96)
23	P/J type rectifying AC Voltmeters(Double pointer,Only DN96)
31	I/V type AC Ammeters, Voltmeters (P/J type only)
51	Watt Meters 1P2W T/B type
52	Watt Meters 1P3W
54	Watt Meters 3P4W BAL
55	Watt Meters 3P3W UNBAL
56	Watt Meters 3P4W UNBAL
61	Var Meters 1P2W
63	Var Meters 3P3W BAL
64	Var Meters 3P4W BAL
65	Var Meters 3P3W UNBAL
66	Var Meters 3P4W UNBAL
71	Power Factor Meter 1P2W
73	Power Factor Meter 3P3W BAL
75	Power Factor Meter 3P3W UNBAL
76	Power Factor Meter 3P4W UNBAL
80	Frequency Meters (T/B type
81	Frequency Meters (P/J type)
82	Frequency Meters (T/B type) (Double pointer,Only DN96)
83	Frequency Meters (P/J type) (Double pointer,Only DN96)

	INPUT CODE
□□□	See rating input code table

	RATED FREQUENCY
N	DC & rectifying AC(40～2kHz), I/V type AC(50/60Hz)
A	50Hz Var & Power Factor
B	60Hz Var & Power Factor
C	400Hz I/V type AC

	POINTER
L	Spear type (black)

	WINDOW & BEZEL
BL	Clear (black)
BS	Set pointer (red).Double pointer meter has no set pointer.

	OPTIONAL INPUT CODE
□□□	See rating input code table

Specify the following information from ☐ when ordering

Code: Ex. DN96A10 – AFA – N – L – BL / □□□

Model	Suffix Code	Always "N"	Pointer	Cover color & set pointer	Optional

Scale and unit: Specify full scale value and unit. (Ex. 0 to 1mA)
Optional feature: If necessary, specify optional feature.

Product line-up

Model		Descriptions		
Taut band	Pivot & jewel	Dimensions (Width × Height)	Operating principle	Accuracy class
DN96A10	DN96A11	96 × 96	Moving coil type	1.5
DN72A10	DN72A11	72 × 72		

Standard descriptions

Name		Suffix codes	Available range	Internal resistance, Voltage drop, Current consumption		Notes
				Taut band	Pivot & jewel	
DC Ammeters	Self-contained	-ABZ	0～10μA	5900Ω	—	Suspension type is taut band
		-ACJ	0～25μA	3700Ω	—	
		-ACY	0～50μA	2000Ω	6000Ω	
		-ADR	0～100μA	484Ω	1950Ω	
		-ADX	0～150μA	1315Ω	3310Ω	
		-AEA	0～200μA	121Ω	980Ω	
		-AEG	0～300μA	680Ω	1670Ω	
		-AEM	0～500μA	40Ω	226Ω	
		-AEU	0～750μA	132Ω	407Ω	
		-AFA	0～1mA	10.5Ω	42.4Ω	
		-AFD	0～1.5mA	33.1Ω	66Ω	
		-AFG	0～2mA	7.2Ω	22.4Ω	
		-AFN	0～3mA	16.4Ω	29.6Ω	
		-AFX	0～5mA	50mV		
		-AGN	0～7.5mA			
		-AGZ	0～10mA			
		-AHC	0～15mA			
		-AHF	0～20mA			
		-AHM	0～30mA			
		-AHY	0～50mA			
		-AJG	0～75mA			
		-AJR	0～100mA			
		-AJX	0～150mA			
		-AKA	0～200mA			
		-AKG	0～300mA			
		-AKM	0～500mA			
		-AKU	0～750mA			
		-ALA	0～1A			
		-ALC	0～1.5A			
		-ALE	0～2A			
		-ALJ	0～3A			
		-ALS	0～5A			
		-AMF	0～7.5A			
		-AMT	0～10A			
		-AND	0～15A			
		-ANG	0～20A			
		-ANL	0～30A			
	For external shunt *1,3	-A01	0～50mV	24.8Ω	12.5Ω	
		-A04	0～60mV	61.5Ω	15.3Ω	
		-A05	0～100mV	101.5Ω	24.3Ω	
		-A07	0～75mV			
	Meter with VR	-A06	0～50mV	*2		

● Standard descriptions

Name		Suffix codes	Available range	Internal resistance, Voltage drop, Current consumption		Notes
				Taut band	Pivot & jewel	
DC Ammeters	Zero-center meter	-DAX	±5μA	5900Ω	—	Suspension type is taut band
		-DCJ	±25μA	2000Ω	6000Ω	
		-DCY	±50μA	484Ω	1950Ω	
		-DDH	±75μA	1315Ω	3310Ω	
		-DDR	±100μA	121Ω	980Ω	
		-DDX	±150μA	680Ω	1670Ω	
		-DED	±250μA	40Ω	226Ω	
		-DEM	±500μA	10.5Ω	42.4Ω	
		-DEU	±750μA	33.1Ω	66Ω	
		-DFA	±1mA	7.2Ω	22.4Ω	
		-DFD	±1.5mA	16.4Ω	29.6Ω	
		-DFK	±2.5mA	±25mV		
		-DFX	±5mA			
		-DGN	±7.5mA			
		-DGZ	±10mA			
		-DHC	±15mA			
		-DHJ	±25mA			
		-DHY	±50mA			
		-DJG	±75mA			
		-DJR	±100mA			
		-DJX	±150mA			
		-DKD	±250mA			
		-DKM	±500mA			
		-DKU	±750mA			
		-DLA	±1A			
		-DLC	±1.5A			
		-DLG	±2.5A			
		-DLS	±5A			
		-DMF	±7.5A			
		-DMT	±10A			
		-DND	±15A			
	For external shunt *1,3	-D01	±50mV	101.5Ω	24.3Ω	
Designation of frequency used		-N	Always “-N”			
Pointer type		-L	Lance type (black color)			
Cover type	Standard type	-BL	Clear			
	With set pointer (red)	-BS	Clear			

Note: *1 The 50mV, 60mV, 75mV, 100mV and ±50mV instruments are not provided with any shunt lead.
Use any lead wire of which resistance is less than 0.05Ω in total. External shunts are not supplied.

*2 For 50mV instrument with VR, current consumption is 1mA and shunt lead’s resistance compensates 2 to 0Ω.

*3 An external shunt is not supplied.

Optional feature

Code	Feature	Notes
/003	Single-Division, Double-marking	
/004	Double-Divisions, Double-marking	
/005	Color line (Red, Green, Yellow, Blue)	
/006	Color band (Red, Green, Yellow, Blue)	
/007	Color marking (Red, Green, Yellow, Blue)	
/008	Meter mounting position	
/011	Shunt leads resistance	
/012	Designation of Internal Resistance	
/013	Class up	Used in DN72A10,11
/015	Triple set of numbers - Double set of divisions	
/016	Triple set of numbers - Triple set of divisions	
/018	Except Yokogawa standard scale divisions	
/022	Vibration proof	Used in DN72A10,DN96A10
/CJ	Pass the attestation used in ship (IP42)	

Specify the following information from ☐ when ordering

Code: Ex. DN96A10 – VNT – N – L – BL / □□□

Model	Suffix Code	Always "N"	Pointer	Cover color & set pointer	Optional

Scale and unit: Specify full scale value and unit. (Ex. 0 to 50V)
Optional feature: If necessary, specify optional feature.
Range: For suffix V04, V05, V08, V11, specify rating.

• Product line-up

Model		Descriptions		
Taut band	Pivot & jewel	Dimensions (Width × Height)	Operating principle	Accuracy class
DN96A10	DN96A11	96 × 96	Moving coil type	1.5
DN72A10	DN72A11	72 × 72		

• Standard descriptions

Name		Suffix codes	Available range	Internal resistance, Voltage drop, Current consumption		Notes
				Taut band	Pivot & jewel	
DC Voltmeters	Self-contained	-VKM	0～0.5V	1mA		
		-VLA	0～1V			
		-VLC	0～1.5V			
		-VLE	0～2V			
		-VLJ	0～3V			
		-VLS	0～5V			
		-VMF	0～7.5V			
		-VMT	0～10V			
		-VND	0～15V			
		-VNG	0～20V			
		-VNL	0～30V			
		-VNT	0～50V			
		-VPB	0～75V			
		-VPK	0～100V			
		-VPZ	0～150V			
		-VRL	0～200V			
		-VRX	0～300V			
		-VSD	0～450V			
		-VSF	0～500V			
		-VSJ	0～600V			
	For external multiplier *3	-V01	0～1mA	10.5Ω	42.4Ω	
	Specified loss current for direct instrument	-V04	*1	□V/50μA		
		-V05		□V/100μA		
		-V08		□V/500μA		
	Meter with VR	-V11	0～(1～300)V *2	□V/1mA		

Notes: *1 Specify from the above-mentioned rating between 0.5V and 300V.
*2 ±20% Variable.
*3 An external multiplier is not supplied

●Standard descriptions

Name		Suffix codes	Available range	Internal resistance, Voltage drop, Current consumption		Notes
				Taut band	Pivot & jewel	
DC Ammeters	Zero-center meter	-EKD	±0.25V	0.5mA		
		-EKM	±0.5V			
		-EKU	±0.75V			
		-ELA	±1V			
		-ELC	±1.5V			
		-ELG	±2.5V			
		-ELS	±5V			
		-EMF	±7.5V			
		-EMT	±10V			
		-END	±15V			
		-ENJ	±25V			
		-ENT	±50V			
		-EPB	±75V			
		-EPK	±100V			
		-EPZ	±150V			
		-ERS	±250V			
		-ERX	±300V			
	For external multiplier *3	-E01	±1mA	7.2Ω	22.4Ω	
Designation of frequency used		-N	Always “-N”			
Pointer type		-L	Lance type (black color)			
Cover type	Standard type	-BL	Clear			
	With set pointer (red)	-BS	Clear			

● Optional feature

Code	Feature	Notes
/003	Single-Division, Double-marking	
/004	Double-Divisions, Double-marking	
/005	Color line (Red, Green, Yellow, Blue)	
/006	Color band (Red, Green, Yellow, Blue)	
/007	Color marking (Red, Green, Yellow, Blue)	
/008	Meter mounting position	
/011	Shunt leads resistance	
/012	Designation of Internal Resistance	
/013	Class up	Used in DN72A10,11
/015	Triple set of numbers - Double set of divisions	
/016	Triple set of numbers - Triple set of divisions	
/018	Except Yokogawa standard scale divisions	
/022	Vibration proof	Used in DN72A10,DN96A10
/CJ	Pass the attestation used in ship (IP42)	

Specify following information from ☐ when ordering

Code: Ex. DN96A10 – AHE – N – L – BL / □□□

Model	Suffix Code	Always "N"	Pointer	Cover color & set pointer	Optional

Scale and unit: Specify full scale value and unit. (Ex. 0 to 750℃)
Optional feature: If necessary, specify optional feature.

• Product line-up

Model		Descriptions		
Taut band	Pivot & jewel	Dimensions (Width × Height)	Operating principle	Accuracy class
DN96A10	DN96A11	96 × 96	Moving coil type	1.5
DN72A10	DN72A11	72 × 72		

• Standard descriptions

Name		Suffix codes	Available range	Internal resistance, Voltage drop, Current consumption		Notes
				Taut band	Pivot & jewel	
Suppressed meters	DC Ammeters	-AHE	4～20mA	3.1Ω	3Ω	
		-AHX	10～50mA	1.2Ω	2.4Ω	
		-A11	0.2～1mA	125Ω	—	
		-A12	1～5mA	12.2Ω	—	
		-A13	2～10mA	6.2Ω	—	
	DC Voltmeters	-VLR	1～5V	3.9Ω		
Designation of frequency used		-N	Always "-N"			
Pointer type		-L	Lance type (black color)			
Cover type	Standard type	-BL	Clear			
	With set pointer (red)	-BS	Clear			

•Optional feature

Code	Feature	Notes
/003	Single-Division, Double-marking	
/004	Double-Divisions, Double-marking	
/005	Color line (Red, Green, Yellow, Blue)	
/006	Color band (Red, Green, Yellow, Blue)	
/007	Color marking (Red, Green, Yellow, Blue)	
/008	Meter mounting position	
/010	AC symbol mark	
/013	Class up	Used in DN72A10,11
/015	Triple set of numbers - Double set of divisions	
/016	Triple set of numbers - Triple set of divisions	
/018	Except Yokogawa standard scale divisions	
/022	Vibration proof	Used in DN72A10,DN96A10
/CJ	Pass the attestation used in ship (IP42)	

Specify following information from ☐ when ordering

Code: Ex. DN96A20 – AEA – N – L – BL / ☐☐☐

Model	Suffix Code	Always "N"	Pointer	Cover color & set pointer	Optional

Scale and unit: Specify full scale value and unit. (Ex. 0 to 200 μA)
Optional feature: If necessary, specify optional feature.
CT ratio: If necessary, specify CT ratio.

● Product line-up

Model		Descriptions		
Taut band	Pivot & jewel	Dimensions (Width × Height)	Operating principle	Accuracy class
DN96A20	DN96A21	96 × 96	Mean rectifier type	1.5
DN72A20	DN72A21	72 × 72		

● Standard descriptions

Name		Suffix codes	Available range	Internal resistance, Voltage drop, Current consumption		Notes
				Taut band	Pivot & jewel	
AC Ammeters	Self-contained	-AEA	0～200 μA	2536Ω	3380Ω	
		-AEM	0～500 μA	1286Ω	1470Ω	
		-AFA	0～1mA	774Ω	797Ω	
		-AFG	0～2mA	508Ω	507Ω	
		-AFX	0～5mA	285Ω	292Ω	
		-AGZ	0～10mA	207Ω	181Ω	
		-AHF	0～20mA	118Ω	94Ω	
	For external CT *1	-A40	0～10mA *1	207Ω	181Ω	
Designation of frequency used		-N	Always "-N" (40Hz to 2kHz)			
Pointer type		-L	Lance type (black color)			
Cover type	Standard type	-BL	Clear			
	With set pointer (red)	-BS	Clear			

Notes: *1 An external CT is not supplied. If necessary, externally connect a CT(224800).

● Optional feature

Code	Feature	Notes
/003	Single-Division, Double-marking	
/004	Double-Divisions, Double-marking	
/005	Color line (Red, Green, Yellow, Blue)	
/006	Color band (Red, Green, Yellow, Blue)	
/007	Color marking (Red, Green, Yellow, Blue)	
/008	Meter mounting position	
/013	Class up	
/015	Triple set of numbers - Double set of divisions	
/016	Triple set of numbers - Triple set of divisions	
/018	Except Yokogawa standard scale divisions	
/022	Vibration proof	Used in DN72A20,DN96A20
/CJ	Pass the attestation used in ship (IP42)	

Specify following information from ☐ when ordering

Code: Ex. DN96A20 – VRX – N – L – BL / □□□

Model	Suffix Code	Always "N"	Pointer	Cover color & set pointer	Optional

Scale and unit: Specify full scale value and unit. (Ex. 0 to 300V)
Range: For suffix code V06, V08, V11, specify rating.
Optional feature: If necessary, specify optional feature.
CT ratio: If necessary, specify CT ratio.

• Product line-up

Type	Model		Descriptions		
	Taut band	Pivot & jewel	Dimensions (Width × Height)	Operating principle	Accuracy class
———	DN96A20	DN96A21	96 × 96	Mean rectifier type	1.5
Double pointer	DN96A22	DN96A23			
———	DN72A20	DN72A21	72 × 72		

• Standard descriptions

Name		Suffix codes	Available range	Internal resistance		Notes
				Taut band	Pivot & jewel	
AC Voltmeter	Self-contained	-VLJ	0～3V	3kΩ	2.8 kΩ	
		-VLS	0～5V	5 kΩ	4.7 kΩ	
		-VMT	0～10V	9.8 kΩ	9.6 kΩ	
		-VND	0～15V	15 kΩ	14.8 kΩ	
		-VNL	0～30V	30 kΩ	29.8 kΩ	
		-VNT	0～50V	48.5 kΩ		
		-VPB	0～75V	75 Ω		
		-VPK	0～100V	101.6 kΩ		
		-VPZ	0～150V	151.6 kΩ		
		-VRL	0～200V	201.6 kΩ		
		-VRX	0～300V	301.6 kΩ		
	For external multiplier	-V01	0～1mA	774 Ω	797 kΩ	
	For external VT *3	-V12	0～150V	151.6 kΩ		
		-V51	0～275V	271.6 kΩ		
		-V52	0～289.5V	301.6 kΩ		
		-V53	0～293.3V			
	Specified loss current for direct instrument	-V06	*1	□V/200μA		
		-V08		□V/500μA		
	Meter with VR	-V11	0～3V, 0～5V,,	□V/1mA		
Designation of frequency used		-N	Always "-N" (40Hz to 2kHz)			
Pointer type		-L	Lance type (black color)			
Cover type	Standard type	-BL	Clear			
	With set pointer (red)	-BS	Clear			

• Optional feature

Code	Feature	Notes
/003	Single-Division, Double-marking	
/004	Double-Divisions, Double-marking	
/005	Color line (Red, Green, Yellow, Blue)	
/006	Color band (Red, Green, Yellow, Blue)	
/007	Color marking (Red, Green, Yellow, Blue)	
/008	Meter mounting position	
/013	Class up	
/015	Triple set of numbers - Double set of divisions	
/016	Triple set of numbers - Triple set of divisions	
/018	Except Yokogawa standard scale divisions	
/022	Vibration proof	Used in DN72A20,DN96A20
/CJ	Pass the attestation used in ship (IP42)	

Specify following information from ☐ when ordering

Code: Ex. DN96A31 – A42 – N – L – BL / ☐☐☐

Model	Suffix Code	Always "N"	Pointer	Cover color & set pointer	Optional

Scale and unit: Specify full scale value and unit. (Ex. 0 to 300A)
Optional feature: If necessary, specify optional feature.
CT ratio: If necessary, specify CT ratio. (Ex. 300/5A)

• Product line-up

Model		Descriptions	
Pivot & jewel	Dimensions (Width × Height)	Operating principle	Accuracy class
DN96A31	96 × 96	Mean rectifier type	1.5
DN72A31	72 × 72		

• Standard descriptions

Name		Suffix codes	Available range	Power consumption VA	Notes
AC Voltmeters		-AHY	0～50mA	0.4	
		-AJR	0～100mA	0.4	
		-AJX	0～150mA	0.3	
		-AKG	0～300mA	0.4	
		-AKM	0～500mA	0.4	
		-ALA	0～1A	0.4	
		-ALC	0～1.5A	0.3	
		-ALE	0～2A	0.4	
		-ALJ	0～3A	0.4	
		-ALS	0～5A	0.5	
		-AMF	0～7.5A	0.4	
		-AMT	0～10A	0.4	
		-AND	0～15A	0.6	
		-ANG	0～20A	0.7	
		-ANL	0～30A	0.6	
	Two-fold extended	-A21	0～0.5～1A	0.4	
		-A22	0～1～2A	0.4	
		-A23	0～2～4A	0.4	
		-A24	0～3～6A	0.4	
		-A25	0～5～10A	0.5	
		-A26	0～10～20A	0.4	
		-A27	0～15～30A	0.6	
		-A28	0～20～40A	0.7	
		-A29	0～30～60A	0.6	
	Three-fold extended	-A32	0～1～3A	0.4	
		-A33	0～2～6A	0.4	
		-A34	0～3～9A	0.4	
		-A35	0～5～15A	0.5	
		-A36	0～10～30A	0.4	
		-A37	0～15～45A	0.6	
		-A38	0～20～60A	0.7	
	For external CT*1	-A41	0～1A	0.4	
		-A42	0～5A	0.5	
	Two-fold extended (For external CT*1)	-A43	0～1～2A	0.4	
		-A44	0～5～10A	0.5	
	Three-fold extended (For external CT*1)	-A45	0～1～3A	0.4	
		-A46	0～5～15A	0.5	

Standard descriptions

Name		Suffix codes	Available range Current	Notes
Designation of frequency used		-N	50/60Hz	
		-C	400Hz	
Pointer type		-L	Lance type (black color)	
Cover type	-BL	Clear	Clear	
	-BS	Clear	Clear	

Note: *1 An external CT is not supplied.

Optional feature

Code	Feature	Notes
/003	Single-Division, Double-marking	
/004	Double-Divisions, Double-marking	
/005	Color line (Red, Green, Yellow, Blue)	
/006	Color band (Red, Green, Yellow, Blue)	
/007	Color marking (Red, Green, Yellow, Blue)	
/008	Meter mounting position	
/013	Class up	Used in DN72A30
/015	Triple set of numbers - Double set of divisions	
/016	Triple set of numbers - Triple set of divisions	
/018	Except Yokogawa standard scale divisions	
/CJ	Pass the attestation used in ship (IP42)	

Specify following information from ☐ when ordering

Code: Ex. DN96A30 – VRX – N – L – BL / ☐☐☐

Model	Suffix Code	Always "N"	Pointer	Cover color & set pointer	al

Scale and unit: Specify full scale value and unit. (Ex. 0 to 300V)
Optional feature: If necessary, specify optional feature.
CT ratio: If necessary, specify VT ratio.

• Product line-up

Model		Descriptions	
Pivot & jewel	Dimensions (Width × Height)	Operating principle	Accuracy class
DN96A31	96 × 96	Mean rectifier type	1.5
DN72A31	72 × 72		

• Standard descriptions

Name		Suffix codes	Available range	Power consumption VA	Notes
AC Ammeters	Self-contained	-VMT	0～10V	1.6	
		-VND	0～15V	1.2	
		-VNG	0～20V	1.7	
		-VNL	0～30V	1.5	
		-VNT	0～50V	1.6	
		-VPB	0～75V	1.3	
		-VPK	0～100V	1.6	
		-VPZ	0～150V	1.4	
		-VRL	0～200V	1.3	
		-VRS	0～250V	1.6	
		-VRX	0～300V	1.4	
		-VSD	0～450V		
		-VSF	0～500V	1.8	
		-VSJ	0～600V	2.2	
		-V14	0～$150/\sqrt{3}$ V	1.5	
	For external VT*1	-V12	0～150V	1.4	
Designation of frequency used		-N	50/60Hz		
		-C	400Hz		
Pointer type		-L	Lance type (black color)		
Cover type	Standard type	-BL	Clear		
	With set pointer (red)	-BS	Clear		

Note: *1 An external multiplier and VT are not supplied.

• Optional feature

Code	Feature	Notes
/003	Single-Division, Double-marking	
/004	Double-Divisions, Double-marking	
/005	Color line (Red, Green, Yellow, Blue)	
/006	Color band (Red, Green, Yellow, Blue)	
/007	Color marking (Red, Green, Yellow, Blue)	
/008	Meter mounting position	
/013	Class up	Used in DN72A30
/015	Triple set of numbers - Double set of divisions	
/016	Triple set of numbers - Triple set of divisions	
/018	Except Yokogawa standard scale divisions	
/CJ	Pass the attestation used in ship (IP42)	

Specify following information from ☐ when ordering

Code: Ex. DN96A80 – H11 – N – L – BL / ☐☐☐

Model	Suffix Code	Always "N"	Pointer	Cover color & set pointer	Optional

Optional feature: If necessary, specify optional feature.

• Product line-up

Type	Model		Descriptions		
	Taut band	Pivot & jewel	Dimensions (Width × Height)	Operating principle	Accuracy class
————	DN96A80	DN96A81	96 × 96	Differential type	0.5 or 1.0
Double pointer	DN96A82	DN96A83			
————	DN72A80	DN72A81	72 × 72		

• Standard descriptions

Name	Suffix codes	Available range		Available range	Power consumption VA	Operating range	Notes
Frequency meters	-H30	45～55Hz	100V	0.5	0.4	80～130V	
	-H31	55～65Hz		0.5			
	-H32	45～65Hz		1.0			
	-H10	45～55Hz	110V	0.5			
	-H11	55～65Hz		0.5			
	-H12	45～65Hz		1.0			
	-H40	45～55Hz	115V	0.5			
	-H41	55～65Hz		0.5			
	-H42	45～65Hz		1.0			
	-H50	45～55Hz	200V	0.5	0.8	160～260V	
	-H51	55～65Hz		0.5			
	-H52	45～65Hz		1.0			
	-H20	45～55Hz	220V	0.5			
	-H21	55～65Hz		0.5			
	-H22	45～65Hz		1.0			
	-H60	45～55Hz	230V	0.5			
	-H61	55～65Hz		0.5			
	-H62	45～65Hz		1.0			
Designation of frequency used		-N	50/60Hz				
Pointer type		-L	Lance type (black color)				
Cover type	Standard type	-BL	Clear				
	With set pointer (red)	-BS	Clear				

• Optional feature

Code	Feature	Notes
/005	Color line (Red, Green, Yellow, Blue)	
/006	Color band (Red, Green, Yellow, Blue)	
/007	Color marking (Red, Green, Yellow, Blue)	
/008	Meter mounting position	
/022	Vibration proof	Used in DN72A80,DN96A80
/CJ	Pass the attestation used in ship (IP42)	

Specify following information from ☐ when ordering

Code: Ex. DN96A55 – W14 – N – L – BL / □□□

Model	Suffix Code	Always "N"	Pointer	Cover color & set pointer	Optional

Scale and unit: Specify full scale value and unit. (Ex. 0 to 120kW)
Calibration watts: In case of using external CT and/of VT, calculate the possible full scale from the follow page and be sure that is within the range shown above. (Ex. 750W)
Optional feature: If necessary, specify optional feature.
VT ratio: If necessary, specify VT ratio. (Ex. 440/110V)

• Product line-up

Model (Taut band)					Dimensions (Width×Height)	Operating principle	Accuracy class	Transducer
1P2W	1P3W	3P3W	3P4W					
		Unbal	Bal.	Unbal.				
DN96A51	DN96A52	DN96A55	DN96A54	DN96A56	96×96	Feedback time division multiplier type	1.5	Self contained
DN72A51	DN72A52	DN72A55	DN72A54	DN72A56	72×72			External box

• Standard descriptions

Name	Suffix codes	Available range		Notes
		Current	Voltage	
Wattmeters	-W71	0.1A	100V	
	-W72	0.5A		
	-W51	1A		
	-W52	5A		
	-W01	0.1A	110/$\sqrt{3}$ V	
	-W02	0.5A		
	-W11	1A		
	-W12	5A		
	-W03	0.1A	110V	
	-W04	0.5A		
	-W13	1A		
	-W14	5A		
	-W73	0.1A	115V	
	-W74	0.5A		
	-W53	1A		
	-W54	5A		
	-W75	0.1A	120V	
	-W76	0.5A		
	-W55	1A		
	-W56	5A		
	-W81	0.1A	200V	
	-W82	0.5A		
	-W61	1A		
	-W62	5A		
	-W05	0.1A	220V	
	-W06	0.5A		
	-W15	1A		
	-W16	5A		
	-W83	0.1A	230V	
	-W84	0.5A		
	-W63	1A		
	-W64	5A		
	-W85	0.1A	240V	
	-W86	0.5A		
	-W65	1A		
	-W66	5A		

• Standard descriptions

Name		Suffix codes	Available range Current	Notes
Designation of frequency used		-N	50/60Hz	
Pointer type		-L	Lance type (black color)	
Cover type	-BL	Clear	Clear	
	-BS	Clear	Clear	

• Optional feature

Code	Feature	Notes
/003	Single-Division, Double-marking	
/004	Double-Divisions, Double-marking	
/005	Color line (Red, Green, Yellow, Blue)	
/006	Color band (Red, Green, Yellow, Blue)	
/007	Color marking (Red, Green, Yellow, Blue)	
/008	Meter mounting position	
/CJ	Pass the attestation used in ship (IP42)	

• Available standard calibration watts

Rating (Model)		Single phase 2-wire	Single phase 3-wire	3-phase 3-wire	3-phase 4-wire
Voltage	Current	DN96A51	DN96A52	DN96A55	DN96A54/56
		DN72A51	DN72A52	DN72A55	DN72A54/56
110/$\sqrt{3}$ V	1A	32 to 95W	—	—	95 to 285W
	5A	160 to 475W	—	—	475 to 1400W
110V, 115V, 120V	1A	55 to 164W	95 to 285W	95 to 285W	218 to 495W
	5A	275 to 820W	475 to 1400W	475 to 1400W	1090 to 2475W
220/$\sqrt{3}$ V	1A	—	—	—	250 to 570W
	5A	—	—	—	1250 to 2850W
200V, 220V, 240V	1A	110 to 328W	250 to 570W	250 to 570W	430 to 990W
	5A	550 to 1640W	1250 to 2850W	1250 to 2850W	2150 to 4950W

(1) When using VT and/or CT, calibration watts will be as follows;

$$\text{Calibration watts} = \frac{\text{MAX. Full scale value}}{\text{VT ratio} \times \text{CT ratio}}$$

	Connection	Full scale value	VT ratio	CT ratio	Calibration watts
EX.1	3-phase 3-wire	20kW	440/110V	30/5A	FS= $\frac{20\text{kW}}{440/110\times30/5}$ =833.3W Available
EX.2	Single phase 2-wire	7.5kW	660/110V	20/5A	FS= $\frac{7.5\text{kW}}{660/110\times20/5}$ =833.3W Special order with TOKUCHU sheet

(2) Calibration watts are 65 to 150%. Standard watts beyond the limits are not available.

Single phase 2-wire: Standard watts = Voltage rating × Current rating
3-phase 3-wire: Standard watts = $\sqrt{3}$ × Line voltage rating × Current rating
3-phase 4-wire: Standard watts = 3 × Phase voltage rating × Current rating

Specify following information from ☐ when ordering

Code: Ex. DN96A65 – M14 – N – L – BL / ☐☐☐

Model	Suffix Code	Always "N"	Pointer	Cover color & set pointer	Optional

Scale and unit: Specify full scale value and unit. (Ex. 0 to 10kvar)
Calibration watts: In case of using external CT and/of VT, calculate the possible full scale from the follow page and be sure that is within the range shown above. (Ex. 416.6 var)
Optional feature: If necessary, specify optional feature.
VT ratio: If necessary, specify VT ratio. (Ex. 660/110V)
CT ratio: If necessary, specify CT ratio. (Ex. 20/5V)

• Product line-up

Model (Taut band)					Dimensions (Width×Height)	Operating principle	Accuracy class	Transducer
1P2W	3P3W		3P4W					
	Bal.	Unbal	Bal.	Unbal				
DN96A61	DN96A63	DN96A65	DN96A64	Self contained	96×96	Feedback time division multiplier type	1.5	Self contained
DN72A61	DN72A63	DN72A65	DN72A64	External box	72×72			External box

• Standard descriptions

Name	Suffix codes	Available range		Notes
		Current	Voltage	
Varmeters	-M71	0.1A	100V	
	-M72	0.5A		
	-M51	1A		
	-M52	5A		
	-M01	0.1A	110/$\sqrt{3}$ V	
	-M02	0.5A		
	-M11	1A		
	-M12	5A		
	-M03	0.1A	110V	
	-M04	0.5A		
	-M13	1A		
	-M14	5A		
	-M73	0.1A	115V	
	-M74	0.5A		
	-M53	1A		
	-M54	5A		
	-M75	0.1A	120V	
	-M76	0.5A		
	-M55	1A		
	-M56	5A		
	-M81	0.1A	200V	
	-M82	0.5A		
	-M61	1A		
	-M62	5A		
	-M05	0.1A	220V	
	-M06	0.5A		
	-M15	1A		
	-M16	5A		
	-M83	0.1A	230V	
	-M84	0.5A		
	-M63	1A		
	-M64	5A		
	-M85	0.1A	240V	
	-M86	0.5A		
	-M65	1A		
	-M66	5A		

• Standard descriptions

Name		Suffix codes	Available range Current	Notes
Designation of frequency used		-N	50/60Hz	For DN□□A63, DN□□A64
		-A	50Hz	For DN□□A61, DN□□A65, DN□□A66.
		-B	60Hz	
Pointer type		-L	Lance type (black color)	
Cover type	Standard type	Clear	Clear	
	With set pointer (red)	Clear	Clear	

• Optional feature

Code	Feature	Notes
/003	Single-Division, Double-marking	
/004	Double-Divisions, Double-marking	
/005	Color line (Red, Green, Yellow, Blue)	
/006	Color band (Red, Green, Yellow, Blue)	
/007	Color marking (Red, Green, Yellow, Blue)	
/008	Meter mounting position	
/009	Polarity change marking (LAG to LEAD)	
/CJ	Pass the attestation used in ship (IP42)	

• Available standard calibration vars(Zero-center meter)

Rating \ Model		Single phase 2-wire	3-phase 3-wire (Unbalanced)	3-phase 3-wire(Balanced) 3-phase 4-wire(Balanced)	3-phase 4-wire (Unbalanced)
Voltage	Current	DN96A51	DN96A55	DN96A53/54	DN96A56
		DN72A51	DN72A55	DN72A53/54	DN72A56
110/$\sqrt{3}$ V	1A	21 to 95 var	—	—	—
	5A	105 to 475 var	—	—	—
110V, 115V, 120V	1A	36 to 164 var	95 to 285 var	62 to 285 var	190 to 570 var
	5A	180 to 820 var	475 to 1400 var	312 to 1400 var	950 to 2850 var
220/$\sqrt{3}$ V	1A	—	—	—	—
	5A	—	—	—	—
200V, 220V, 240V	1A	72 to 328 var	190 to 570 var	125 to 570 var	—
	5A	360 to 1640 var	950 to 2850 var	625 to 2850 var	—

(1) When using VT and/or CT, calibration vars will be as follows;

$$\text{Calibration vars} = \frac{\text{MAX. Full scale value}}{\text{VT ratio} \times \text{CT ratio}}$$

	Connection	Full scale value	VT ratio	CT ratio	Calibration vars
EX.1	3-phase 3-wire (Balanced)	10kvar	660/110V	30/5A	FS= $\frac{10\text{kvar}}{660/110\times30/5}$ =416.6 var Available
EX.2	3-phase 2-wire (Unbalanced)	7.5kvar	660/110V	20/5A	FS= $\frac{7.5\text{kvar}}{660/110\times20/5}$ =312.5 var Special order

(2) Calibration vars are 33 to 150%. Standard vars beyond the limits are not available.

Single phase 2-wire: Standard vars = Voltage rating × Current rating
3-phase 3-wire: Standard vars = $\sqrt{3}$ × Line voltage rating × Current rating
3-phase 4-wire: Standard vars = 3 × Phase voltage rating × Current rating

Specify following information from ☐ when ordering

Code: Ex. DN96A75 – C14 – N – L – BL / ☐☐☐

Model	Suffix Code	Always "N"	Pointer	Cover color & set pointer	Optional

Optional feature: If necessary, specify optional feature.
VT ratio: If necessary, specify VT ratio. (Ex. 660/110V)
CT ratio: If necessary, specify CT ratio. (Ex. 20/5V)

• Product line-up

Model (Taut band)				Dimensions (Width×Height)	Operating principle	Accuracy class	Transducer
1P2W	3P3W		3P4W				
	Bal.	Unbal	Unbal.				
DN96A71	DN96A73	DN96A75	DN96A76	Self contained	Phase defection type For single-phase and 3-phase(balanced) Feedback time division multiplier type For 3-phase(unbalanced)	5.0	Self contained
DN72A71	DN72A73	DN72A75	DN72A76	External box			External box

• Standard descriptions

Name		Suffix codes	Available range		Notes	
			Current	Voltage		
Power factor meters	Single phase 2-wire 3-phase 3-wire	-C71	0.1A	100V	For: DN96A71/73/75, DN72A71/73/75	Standard scale: LEAD 0.5～0.5 LAG
		-C72	0.5A			
		-C51	1A			
		-C52	5A			
		-C01	0.1A	110V		
		-C02	0.5A			
		-C13	1A			
		-C14	5A			
		-C73	0.1A	115V		
		-C74	0.5A			
		-C53	1A			
		-C54	5A			
		-C75	0.1A	120V		
		-C76	0.5A			
		-C55	1A			
		-C56	5A			
		-C81	0.1A	200V		
		-C82	0.5A			
		-C61	1A			
		-C62	5A			
		-C03	0.1A	220V		
		-C04	0.5A			
		-C15	1A			
		-C16	5A			
		-C83	0.1A	230V		
		-C84	0.5A			
		-C63	1A			
		-C64	5A			
		-C85	0.1A	240V		
		-C86	0.5A			
		-C65	1A			
		-C66	5A			
	3-phase 4-wire	-C07	0.1A	$110/\sqrt{3}$ V	For: DN96A76, DN72A76	
		-C08	0.5A			
		-C11	1A			
		-C12	5A			

(Continued to next page)

• Standard descriptions

Name		Suffix codes	Available range Current	Notes
Designation of frequency used		-N	50/60Hz	For DN□□A73, DN□□A74
		-A	50Hz	For DN□□A71, DN□□A75, DN□□A76.
		-B	60Hz	
Pointer type		-L	Lance type (black color)	
Cover type	Standard type	Clear	Clear	
	With set pointer (red)	Clear	Clear	

• Optional feature

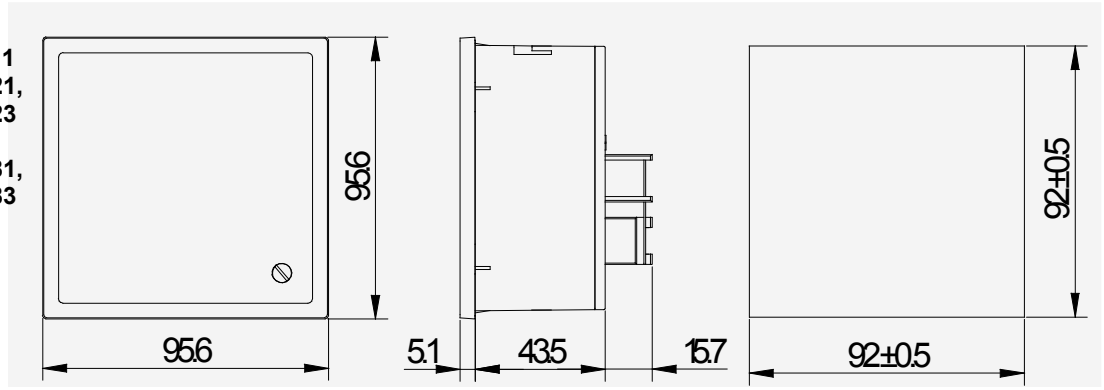
Code	Feature	Notes
/003	Single-Division, Double-marking	
/004	Double-Divisions, Double-marking	
/005	Color line (Red, Green, Yellow, Blue)	
/006	Color band (Red, Green, Yellow, Blue)	
/007	Color marking (Red, Green, Yellow, Blue)	
/008	Meter mounting position	
/009	Polarity change marking (LAG to LEAD)	
/CJ	Pass the attestation used in ship (IP42)	

• Standard rating

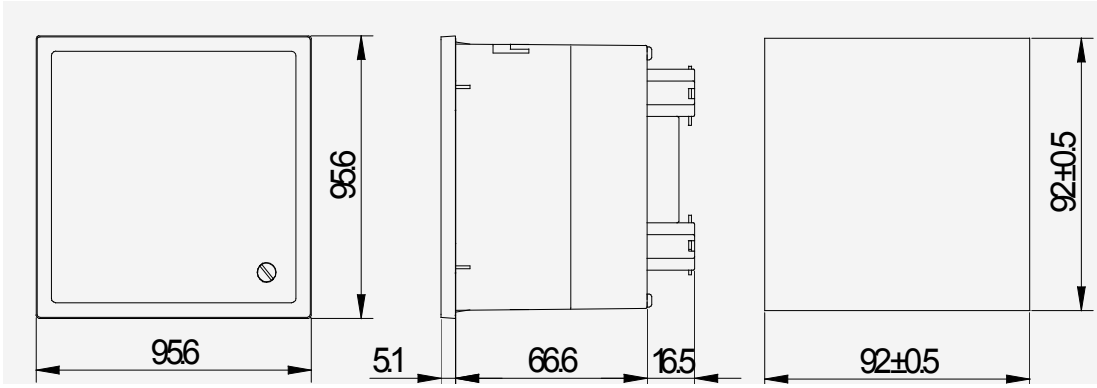
Rating		Usable	
Voltage	Current	Voltage	Current
$110/\sqrt{3}$ V	1A	52 to 75 V	0.3 to 1.2 A
	5A		1.5 to 6 A
110V	1A	90 to 130 V	0.3 to 1.2 A
	5A		1.5 to 6 A
$220/\sqrt{3}$ V	1A	104 to 150 V	0.3 to 1.2 A
	5A		1.5 to 6 A
220V	1A	180 to 260 V	0.3 to 1.2 A
	5A		1.5 to 6 A

• DN96 series

DN96A10,11
DN96A20,21,
DN96A22,23
DN96A31
DN96A80,81,
DN96A82,83

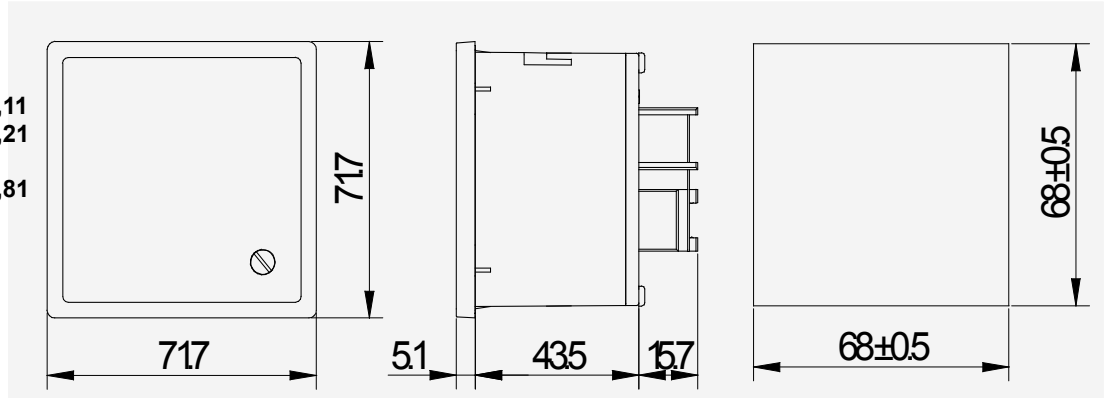


DN96A5☐
DN96A6☐
DN96A7☐

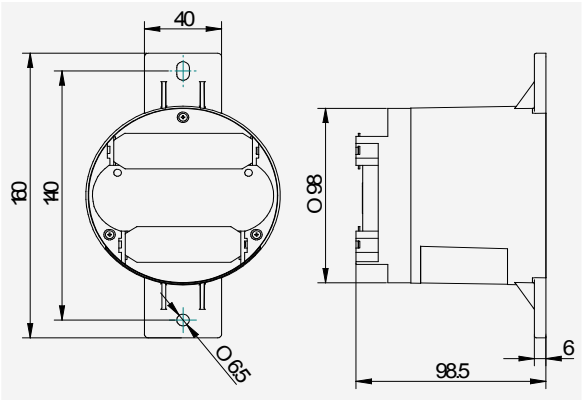


• DN72 series

DN72A10,11
DN72A20,21
DN72A31
DN72A80,81



External transducer:
DN72A5☐
DN72A6☐
DN72A7☐

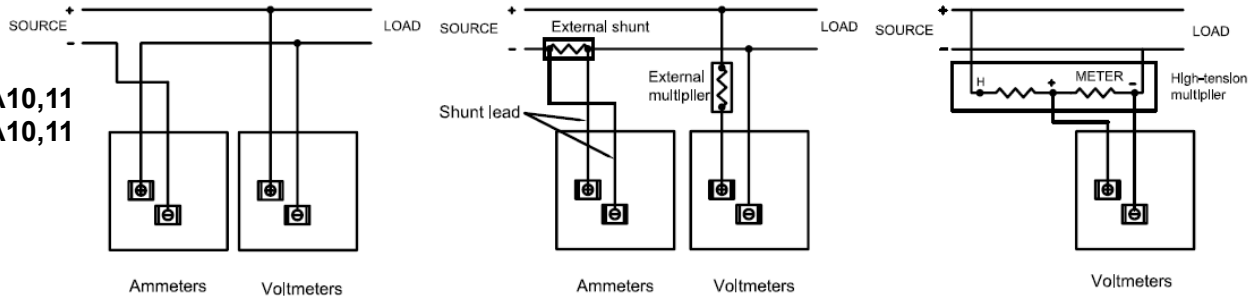


• DC Ammeters, Voltmeters

<With external shunt, multiplier>

<With high-tension multiplier>

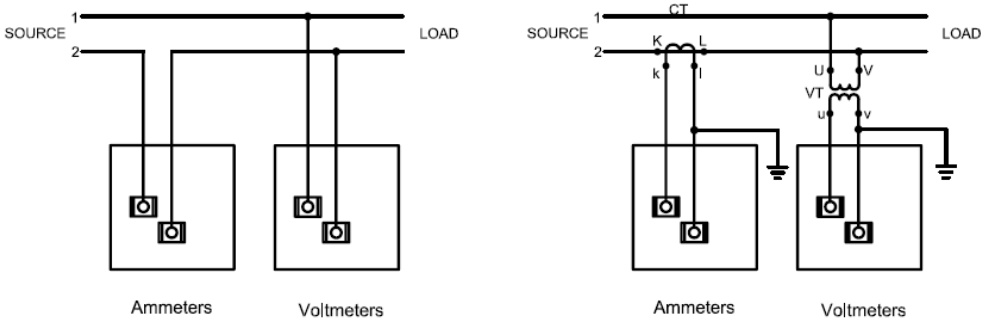
DN96A10,11
DN72A10,11



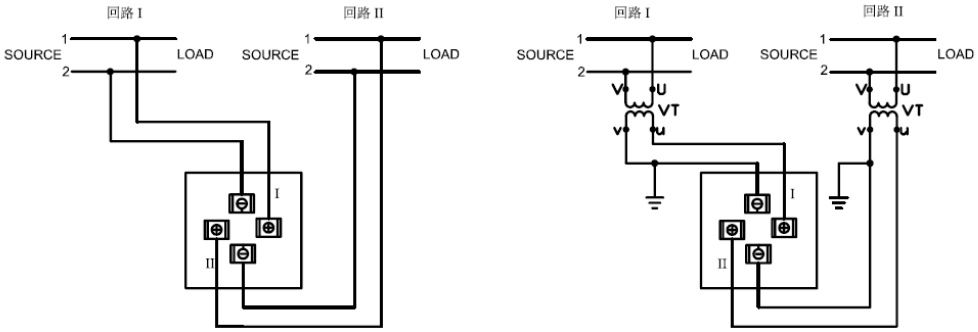
• AC Ammeters, Voltmeters

<With CT, VT>

DN96A20,21
DN72A20,21
DN96A31
DN72A31



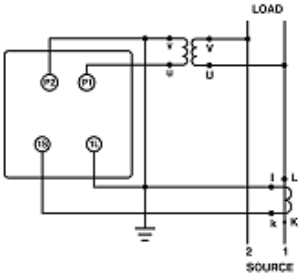
DN96A22,23



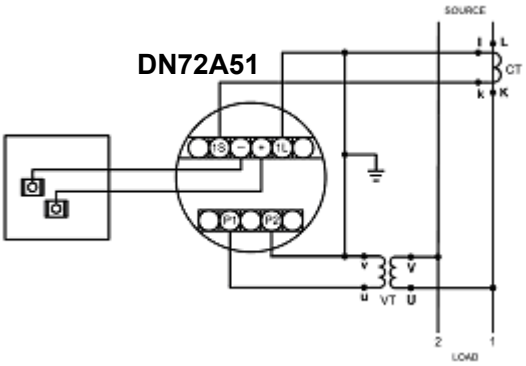
• Wattmeters

Single phase 2-wire

DN96A51

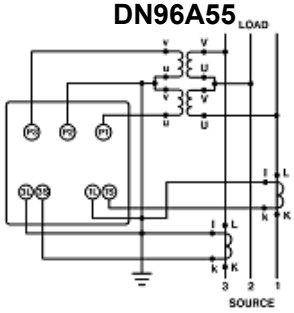


DN72A51

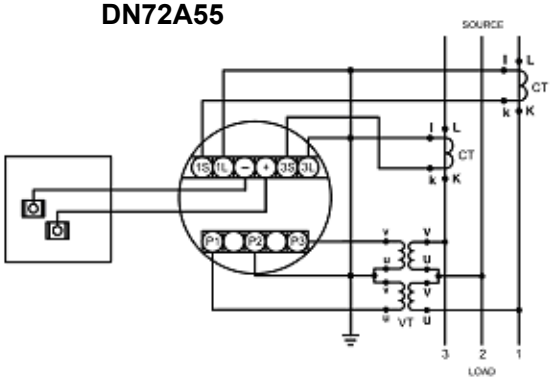


3-phase 3-wire (Unbalanced)

DN96A55

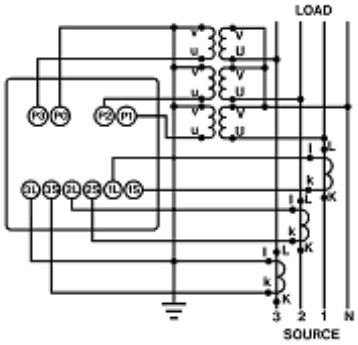


DN72A55

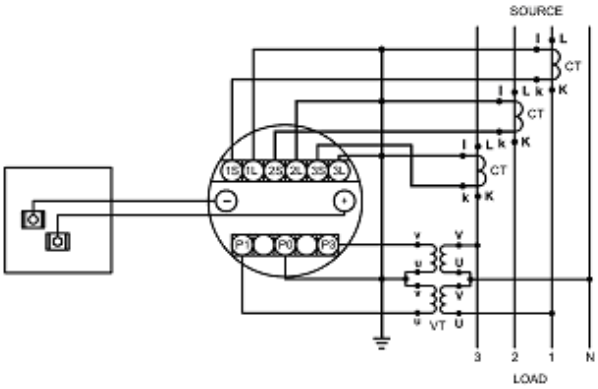


3-phase 4-wire (Balanced)

DN96A54

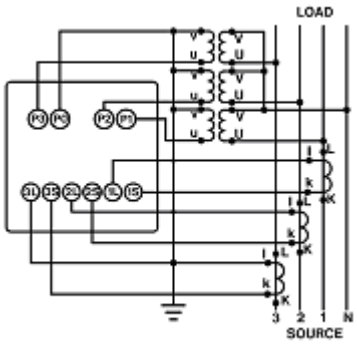


DN72A54



3-phase 4-wire (Unbalanced)

DN96A56



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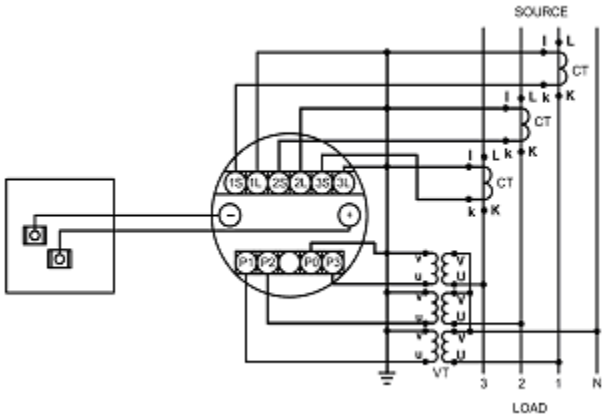
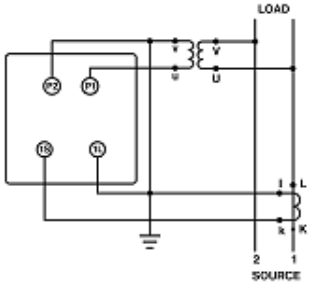


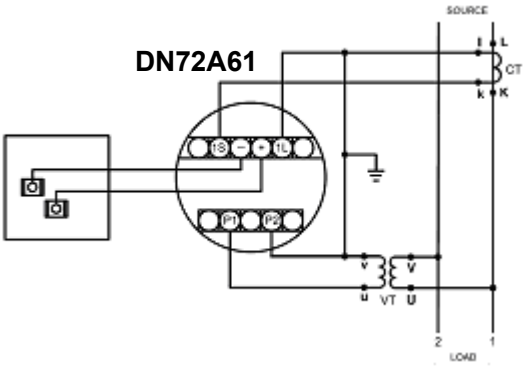
- **Varmeters**

Single phase 2-wire

DN96A61

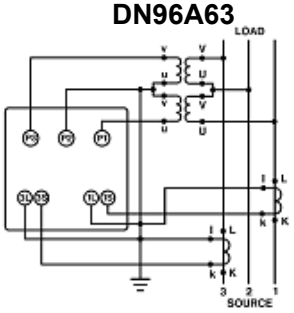


DN72A61

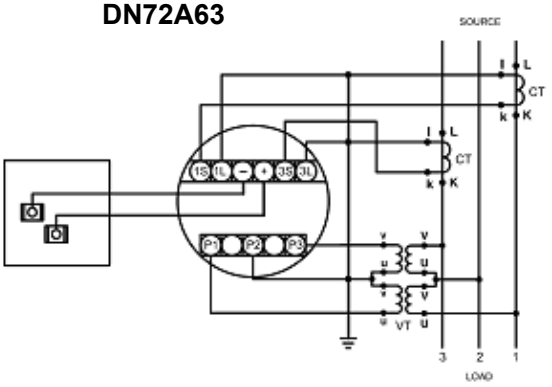


3-phase 3-wire (Balanced)

DN96A63

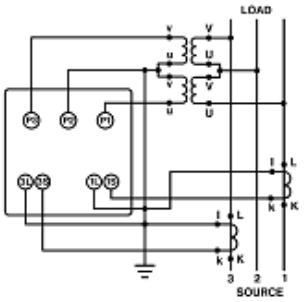


DN72A63

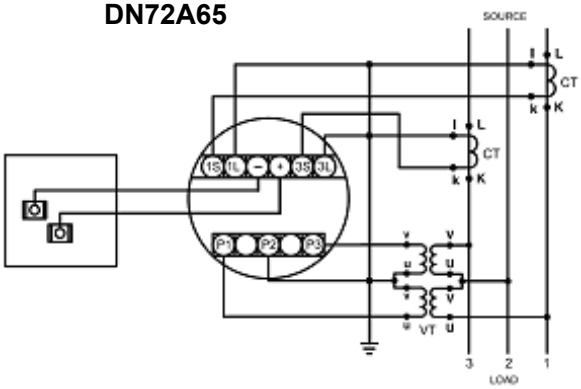


3-phase 3-wire (Unalanced)

DN96A65

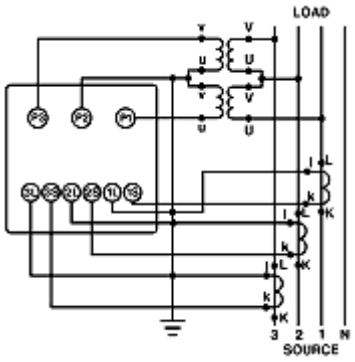


DN72A65

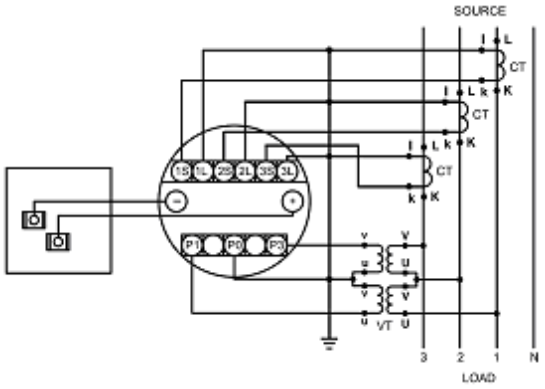


3-phase 4-wire (Balanced)

DN96A64

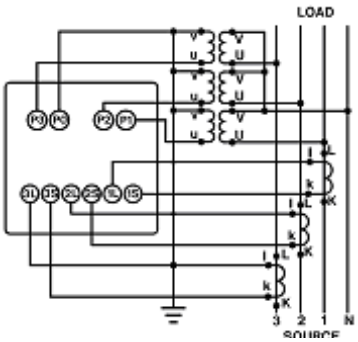


DN72A64

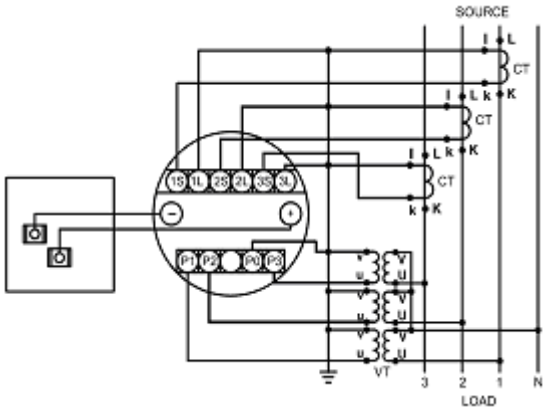


3-phase 4-wire (Unbalanced)

DN96A66



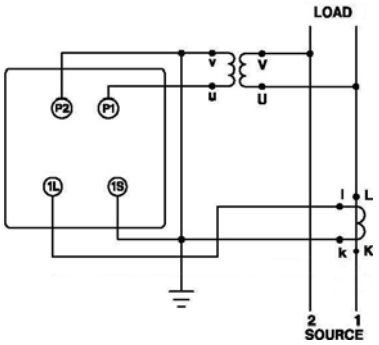
DN72A66



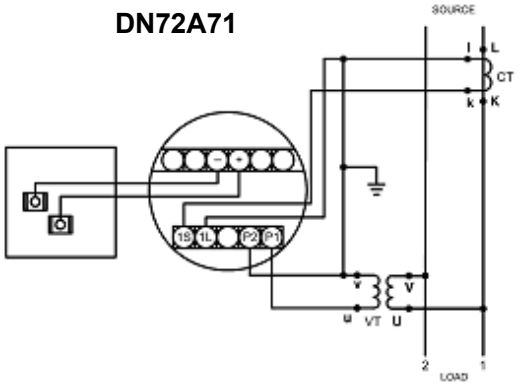
• Power factor meters

Single phase 2-wire

DN96A71

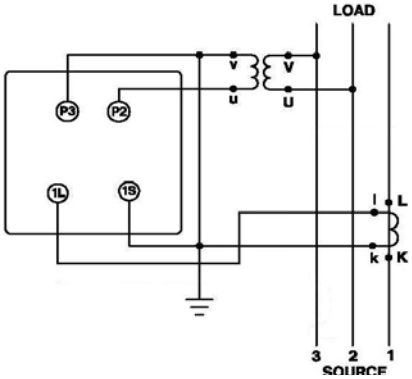


DN72A71

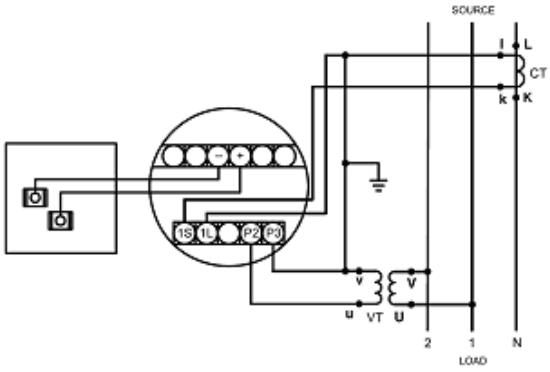


3-phase 3-wire (Balanced)

DN96A73

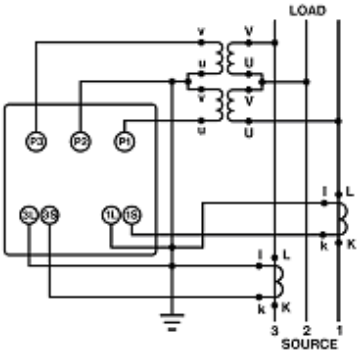


DN72A73

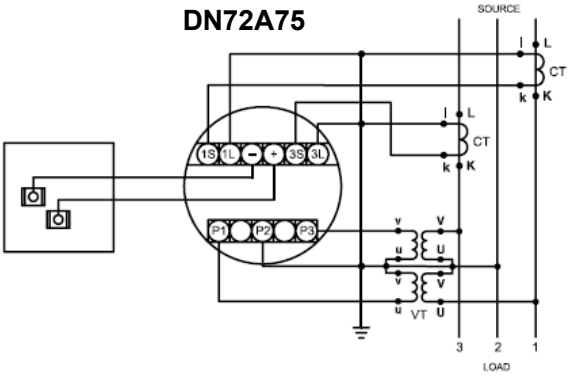


3-phase 3-wire (Unbalanced)

DN96A75

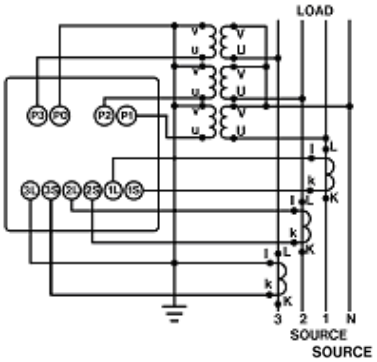


DN72A75

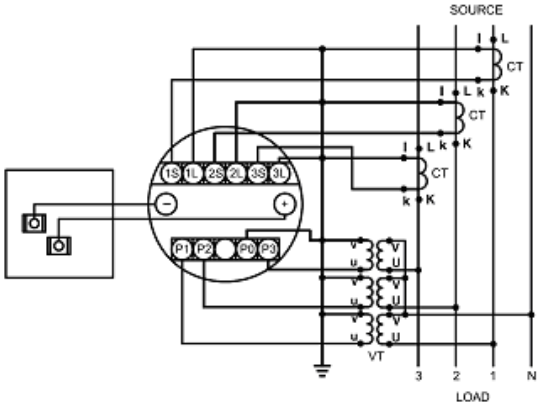


3-phase 4-wire (Unbalanced)

DN96A76

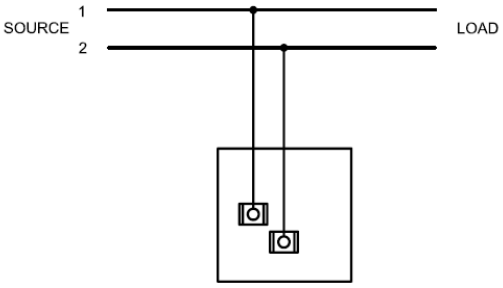


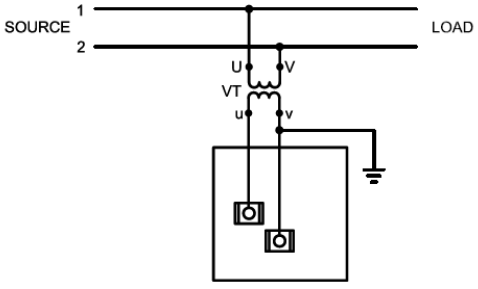
DN72A76



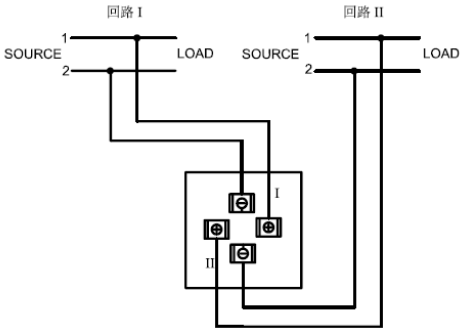
- **Frequency meters**

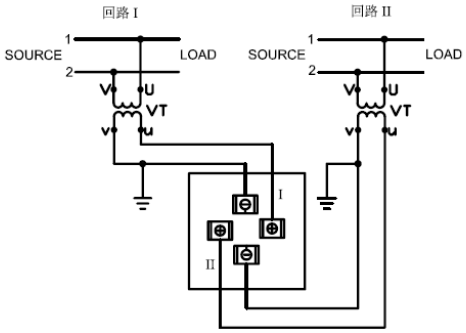
DN96A80,81
DN72A80,81





DN96A82,83





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