

6. 배전반용 역률계 (Panel & Switch-board Power Factor Meter)



TYPE : WY-R □ □P



TYPE : WY-S □ □P



TYPE : WY-SH96 □ □



TYPE : WY-W □ □P

● Specifications

· 1 Phase 2 Wire P.F meter (1상 2선식 역률계)

Type	Size(mm)	Input		Oper. Prin.	Class (%)	Burden(VA)		Weight (g)	Dimen.	Trans-ducer	
		Volt	Curr.			Volt	Curr.				
WY-R06P	60 x 60	110V or 220V	5A or 1A		± 5.0	0.5	0.5	630	Refer to Page 220	Ext.	
WY-R08P	80 x 80							660			
WY-R10P	100 x 80							670			
WY-S47P	47 x 47							600			
WY-S72P	72 x 72							610			
WY-S96P1	96 x 96							680			Int.
WY-SH96P1								Refer to Page 221			Ext.
WY-SH96P1T											750
WY-W08P1	80 x 80							760			Int.
WY-W11P1	110 x 110							Int.			
WY-W11P1T		Ext.									

※ Ext. : 변환기 별도 외부형(External Transducer Type), Int. : 변환기 내부 일체형(Internal Transducer Type)

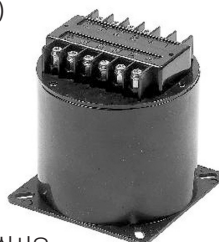
· 1 Phase 3 Wire P.F meter (1상 3선식 역률계)

Type	Size(mm)	Input		Oper. Prin.	Class (%)	Burden(VA)		Weight (g)	Dimen.	Trans-ducer	
		Volt	Curr.			Volt	Curr.				
WY-R06P2	60 x 60	110V	5A or 1A		± 5.0	0.5	0.5	630	Refer to Page 220	Ext.	
WY-R08P2	80 x 80							660			
WY-R10P2	100 x 80							670			
WY-S47P2	47 x 47							600			
WY-S72P2	72 x 72							610			
WY-S96P2	96 x 96							680			Int.
WY-SH96P2								Refer to Page 221			Ext.
WY-SH96P2T											750
WY-W08P2	80 x 80							760			Int.
WY-W11P2	110 x 110							Int.			
WY-W11P2T		Ext.									

※ Ext. : 변환기 별도 외부형(External Transducer Type), Int. : 변환기 내부 일체형(Internal Transducer Type)

● External T/D & Internal T/D 의 제품 구성도

External T/D (별도 분리형)



Internal T/D (일체형)



※ 계측기와 T/D는 제조 번호가 일치하도록 설치 하십시오.
Install the manufacturer's serial number of meter and T/D unitedly.

PANEL BOARD METER

교류역률계 Power Factor Meter (PF)



· 3 Phase 3 Wire P.F meter (3상 3선식 역률계)

Type	Size(mm)	Input		Oper. Prin.	Class (%)	Burden(VA)		Weight (g)	Dimen.	Trans-ducer	Remarks	
		Volt	Curr.			Volt	Curr.				Load	
WY-R06P3	60 x 60	110V or 220V	5A or 1A	[Symbol]	±5.0	0.5	0.5	760	Refer to Page 220	Ext.	B	
WY-R06P3U											Un	
WY-R08P3	80 x 80										B	
WY-R08P3U											Un	
WY-R10P3	100 x 80										B	
WY-R10P3U											Un	
WY-S47P3	47 x 47			B								
WY-S47P3U				Un								
WY-S72P3	72 x 72			B								
WY-S72P3U				Un								
WY-S96P3	96 x 96			B								
WY-S96P3U				Un								
WY-SH96P3	96 x 96	Int.	B									
WY-SH96P3T		Ext.	B									
WY-SH96P3U		Int.	Un									
WY-SH96P3UT		Ext.	Un									
WY-W08P3	80 x 80	Refer to Page 221	B									
WY-W08P3U			Un									
WY-W11P3	110 x 110		Int.	B								
WY-W11P3T			Ext.	B								
WY-W11P3U			Int.	Un								
WY-W11P3UT			Ext.	Un								

※ Ext. : 변환기 별도 외부형(External Transducer Type), Int. : 변환기 내부 일체형(Internal Transducer Type)

· 3 Phase 4 Wire P.F meter (3상 4선식 역률계)

Type	Size(mm)	Input		Oper. Prin.	Class (%)	Burden(VA)		Weight (g)	Dimen.	Trans-ducer	Remarks	
		Volt	Curr.			Volt	Curr.				Load	
WY-R06P4	60 x 60	190 / √3V or 380 / √3V	5A or 1A	[Symbol]	±5.0	0.5	0.5	760	Refer to Page 220	Ext.	B	
WY-R06P4U											Un	
WY-R08P4	80 x 80										B	
WY-R08P4U											Un	
WY-R10P4	100 x 80										B	
WY-R10P4U											Un	
WY-S47P4	47 x 47			B								
WY-S47P4U				Un								
WY-S72P4	72 x 72			B								
WY-S72P4U				Un								
WY-S96P4	96 x 96			B								
WY-S96P4U				Un								
WY-SH96P4	96 x 96	Int.	B									
WY-SH96P4T		Ext.	B									
WY-SH96P4U		Int.	Un									
WY-SH96P4UT		Ext.	Un									
WY-W08P4	80 x 80	Refer to Page 221	B									
WY-W08P4U			Un									
WY-W11P4	110 x 110		Int.	B								
WY-W11P4T			Ext.	B								
WY-W11P4U			Int.	Un								
WY-W11P4UT			Ext.	Un								

※ Ext. : 변환기 별도 외부형(External Transducer Type), Int. : 변환기 내부 일체형(Internal Transducer Type)

TRANS = NCT
 리액터
 REACTOR
 무정전용량레이
 SSSR
 전력조정기
 TPR
 스위칭파워
 SMPSP
 노이즈필터
 NF
 하모닉필터
 HF
 서지보호기
 SPD
 보호계전기
 RELAY
 누전경보기
 ELD = GFR
 영상변류기
 ZCT
 판넬메타
 METER
 계기용변성기
 CT = VT
 션트팬
 SHUNT = FAN

● Description

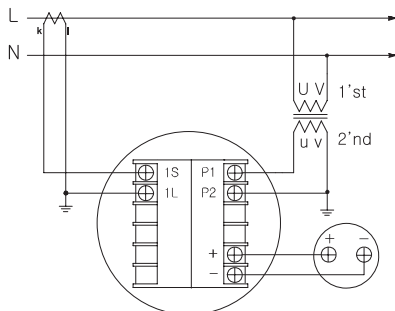
- 본 계측기는 Transducer 형으로 불평형 역률계와 평형 역률계로 구분한다.
- 동작 전압의 범위는 정격전압의 $\pm 10\%$ 이내입니다.
- 동작전류의 범위는 20 ~ 100%입니다.
- Specification 이외의 계측기는 정격 2차전압 110V 와 정격 2차전류 5A (1A) 인 VT와 C.T 를 연결하여 사용하십시오.
- WY-W11P type 의 역률계는 transducer box 를 내장하고 있으며, WY-R□□P, WY-S□□P, WY-W08P type 의 역률계는 외부에 transducer box 를 연결하여 사용하십시오.
- 3상 4선식의 정격전압은 선간전압/ $\sqrt{3}$ 으로 표시합니다.
- 정격전압의 90% 이하인 작은 부하에서는 본 계측기의 동작이 부정확하며, 정격전류의 1/5이상인 부하에서 본 계측기의 정확한 오차가 보장됩니다.
- 역률계의 표준 눈금은 LEAD 0.5~1~0.5 LAG 입니다.

● Description

- The type of operating principle of these meters are the transducer type and also the meter classify into the balanced power factor meter and the unbalanced power factor meter.
- Operating voltage range is $\pm 10\%$ of rated voltage.
- Operating current range is 20 to 100% of rated current.
- For other voltage and / or current ratings higher than listed on the in Specification. use external C.T and / or external VT with a 110V (220V) / 5A (1A) instrument.
- In case of the WY-W11P type of P.F meters, transducer box is self-contained and the WY-R□□P, WY-S□□P, WY-W08P type of P.F meters are provided with on external transducer box.
- Rating voltage of 3phase 4wire is at phase voltage. ($1/\sqrt{3}$)
- The meter do not operate when load current is under 10% of rated current. And : If the circuit current is less than a 1/3 of the rating (or less then 1.66A if the rating is 5A) the error of P.F meter may have happened more then that of rated current.
- Standard scale : LEAD 0.5~1~0.5 LAG.

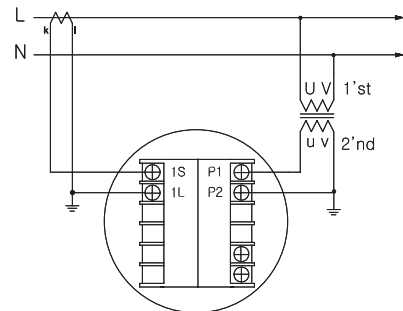
● Outside Connection

- With Ext. Transducer
(WY-R□□P, WY-S□□P, WY-W08P)



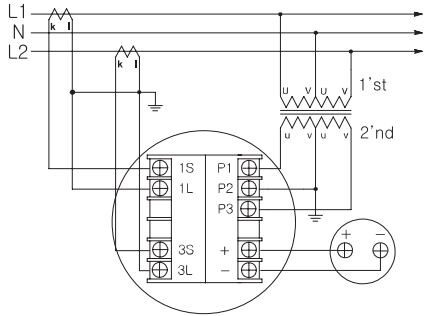
1상2선식
1 Phase 2Wire
Power Factor Meter

- Int. Transducer
(WY-W11P)

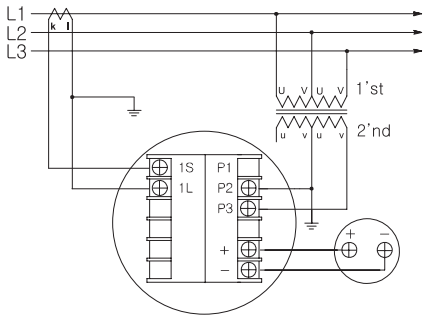


● Outside Connection

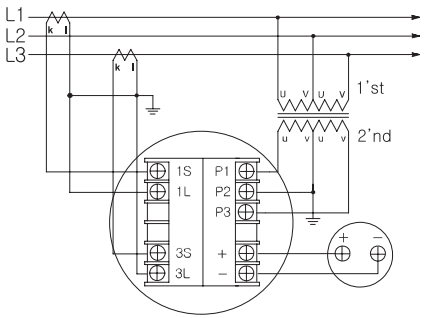
· With Ext. Transducer (WY-R, WY-S, WY-W08)



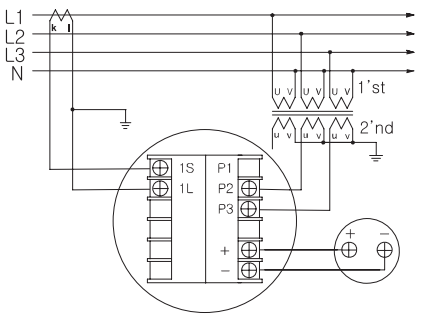
1상3선식
1 Phase 3Wire
Power Factor Meter



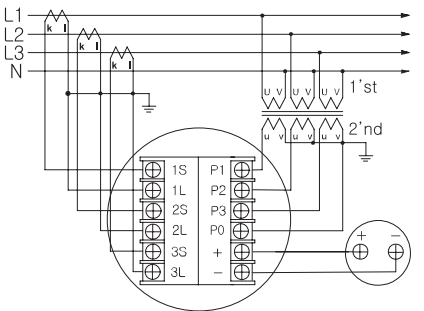
3상3선식
3 Phase 3Wire
Power Factor Meter
Balance Type



3상3선식
3 Phase 3Wire
Power Factor Meter
UnBalance Type

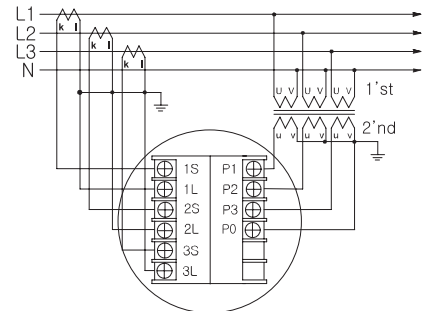
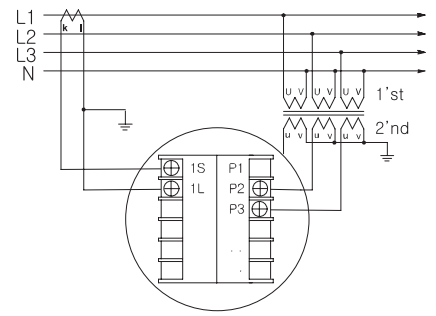
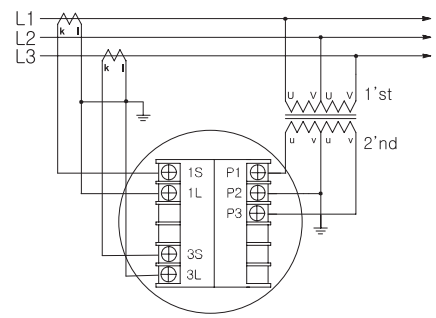
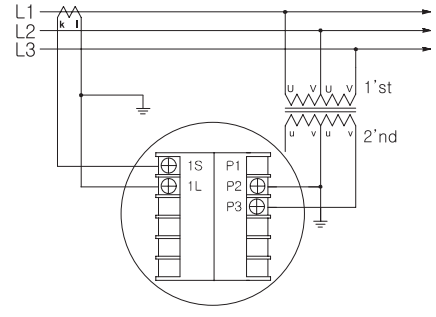
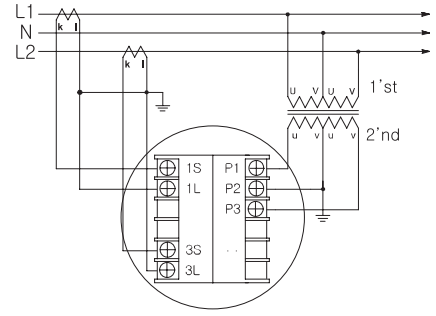


3상4선식
3 Phase 4Wire
Power Factor Meter
Balance Type



3상4선식
3 Phase 4Wire
Power Factor Meter
UnBalance Type

· Int. Transducer (WY-11, WY-SH96)



트랜스포머
REACTOR
리액터
무정전압릴레이
SSR
전력조정기
TPR
스위칭파워
SMP
노이즈필터
N/F
하모닉필터
H/F
서지보호기
SPD
보호계전기
RELAY
누전경보기
ELD=GF
영상변류기
ZCT
판넬메타
METER
계기용변성기
CT=VT
선편팬
SHUNT=FAN

● Dimension

· WY-R Type Dimension

(Unit = mm)

<p>Front view</p>									
<p>Rear view</p>	Type	W	H	D	A	B	C	E	∅
	WY-R08	80	80	36	15	34	30	64	65
	WY-R10	100	80	36	15	36	28	80	65

· WY-R Type Dimension

(Unit = mm)

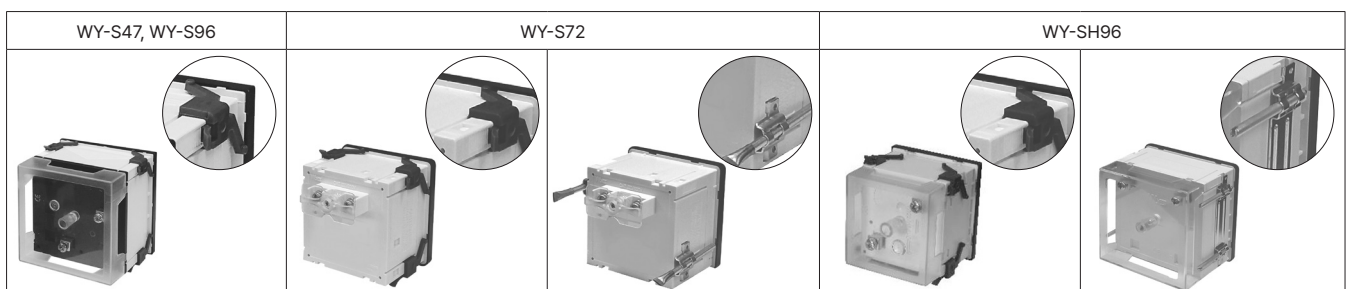
<p>Front view</p>									
<p>Rear view</p>	Type	W	H	D	A	B	C	E	∅
	WY-R05	51	51	35	14	18	18	36	44
	WY-R06	60	60	35	14	24	24	48	54

· WY-S Type Dimension

(Unit = mm)

<p>Front view</p>									
<p>Rear view</p>	Type	W	H	D	A	B	C	X	Y
	WY-S47	47	47	44	5	44	12	44.5	44.5
	WY-S72	72	72	67	5	44	22	68	68
	WY-S96, SH96	96	96	91	5	44	22	92	92

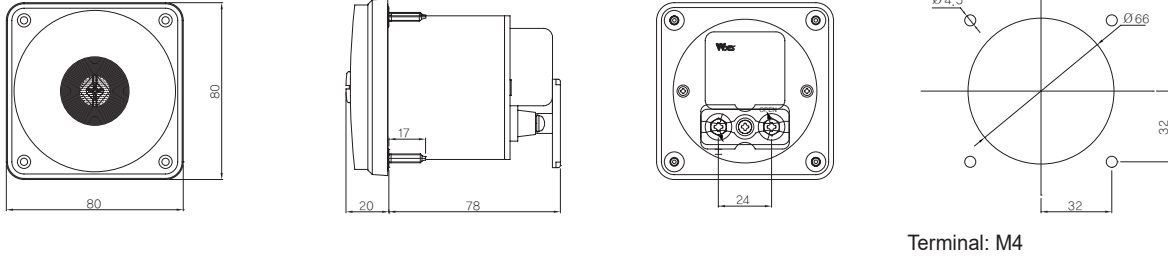
· Mounting Introduction



트랜스포머
REACTOR
리액터
무정전압릴레이
SSR
전력조정기
TPR
스위칭파워
SMPs
노이즈필터
N/F
하모닉필터
H/F
서지보호기
SPD
보호계전기
RELAY
누전경보기
ELD = GFR
영상변류기
ZCT
패널메타
METER
계기용변성기
CT = VT
선트랜팬
SHUNT = FAN

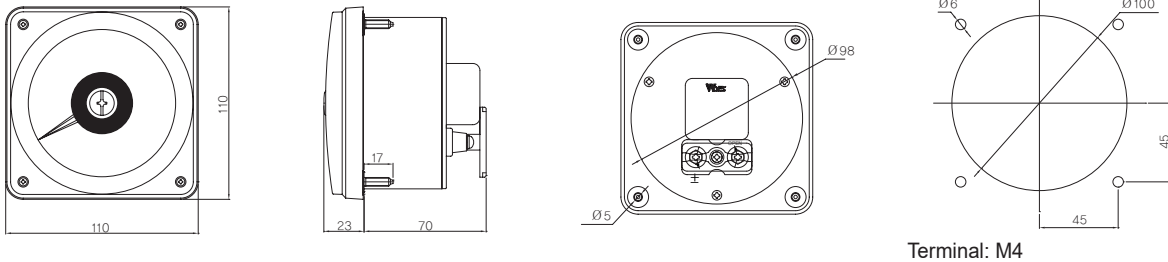
● Dimension

· WY-W08 Type Dimension



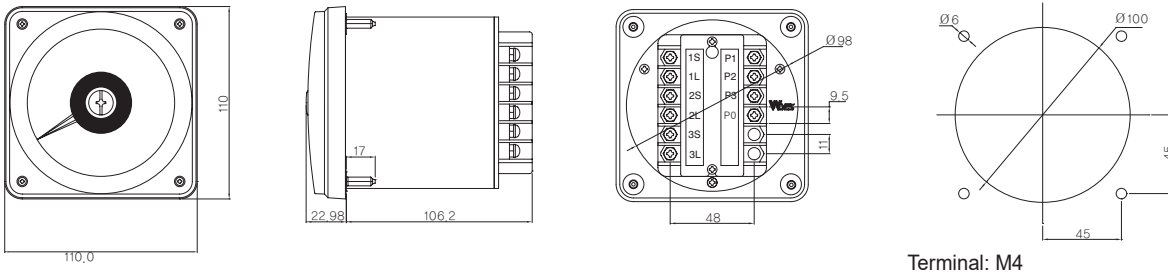
Terminal: M4

· WY-W11 A, V Type Dimension



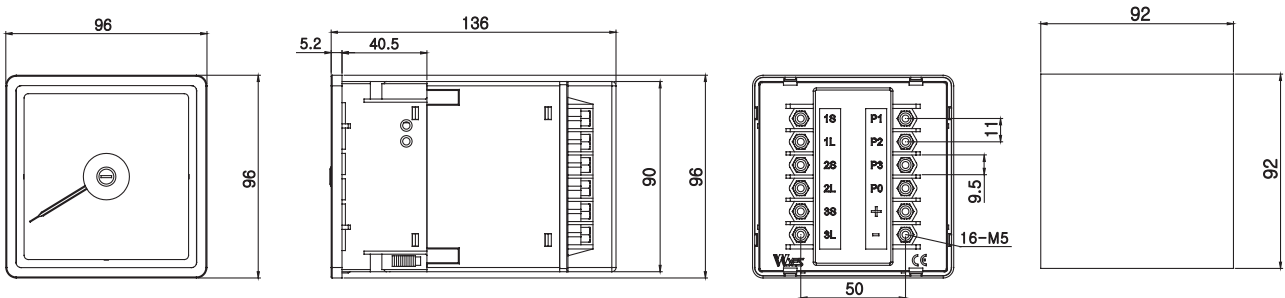
Terminal: M4

· WY-W11 KW, var, PF Type Dimension



Terminal: M4

· WY-SH96 KW, var PF Dimension



● 외부 변환기 사용

R, S, W08 타입의 Watt, var, Hz PF 계측기는 외부에 우측과 같은 변환기 (T/D) 를 사용합니다.

● External Transducers (For meter)

The Transducer for meter is used with the Watt, var and PF meter, etc., of the R type and S type or W08 type which is external transducer.

