



This multimeter measures Single-phase 2-wire / Single-phase 3-wire / Three-phase 3-wire electric energy and displays it on the LCD panel.

Features

- ★ High-visibility 4.2-inch large LCD and white LED backlight
- ★ Display 4 elements at once. (1 bar graph & 3 numeral display)
- ★ Multi-range voltage / phase wire
- ★ Mesures 12 elements (Current, electric energy, etc.)

Ordering code

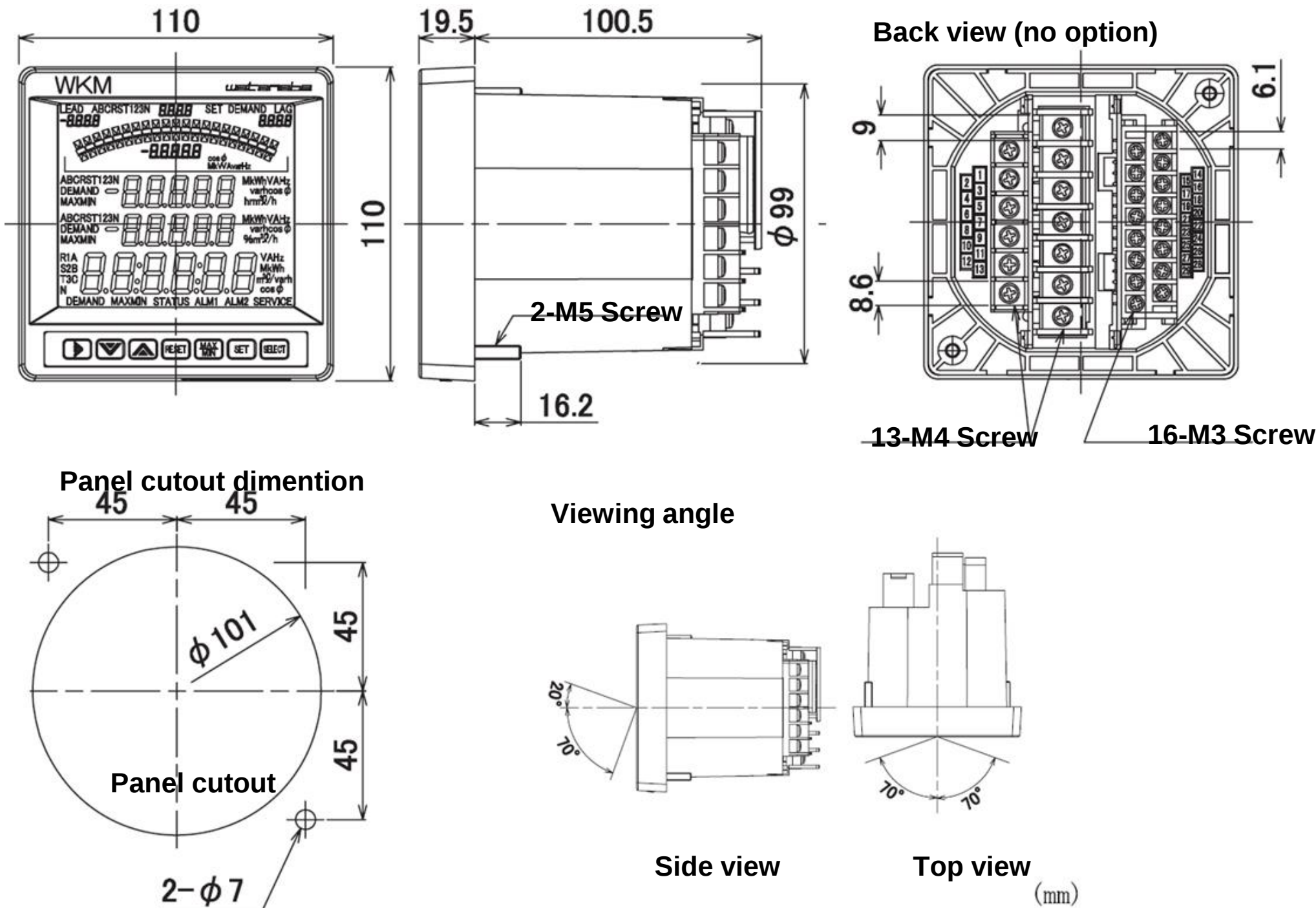
WKM-PA KF N- A 00- - - -

Series	Type	Option	LDC direction	Rated current	Power supply	Test report	Rank suffix	Phase wire	Rated voltage	Display pattern	Description
WKM											110mm multimeter
	PA										Standard power measuring
		KF									LON WORKS (TP / FT-10) + 2 digital input
			N								The upper row installation (bottom up)
				1							1Aac
				5							5Aac
					A						85 to 242Vac (50 / 60Hz), 90 to 132Vdc
						X					None
						T					With test report
							00				Standard
								12			1-phase 2-wire
								13			1-phase 3-wire
								33			3-phase 3-wire
									1		[Default settings] 110Vac
									2		[Default settings] 220Vac
									4		[Default settings] 440Vac
										01	[Default settings] Display pattern 1
										02	[Default settings] Display pattern 2
										03	[Default settings] Display pattern 3
										04	[Default settings] Display pattern 4
										05	[Default settings] Display pattern 5
										06	[Default settings] Display pattern 6
										07	[Default settings] Display pattern 7

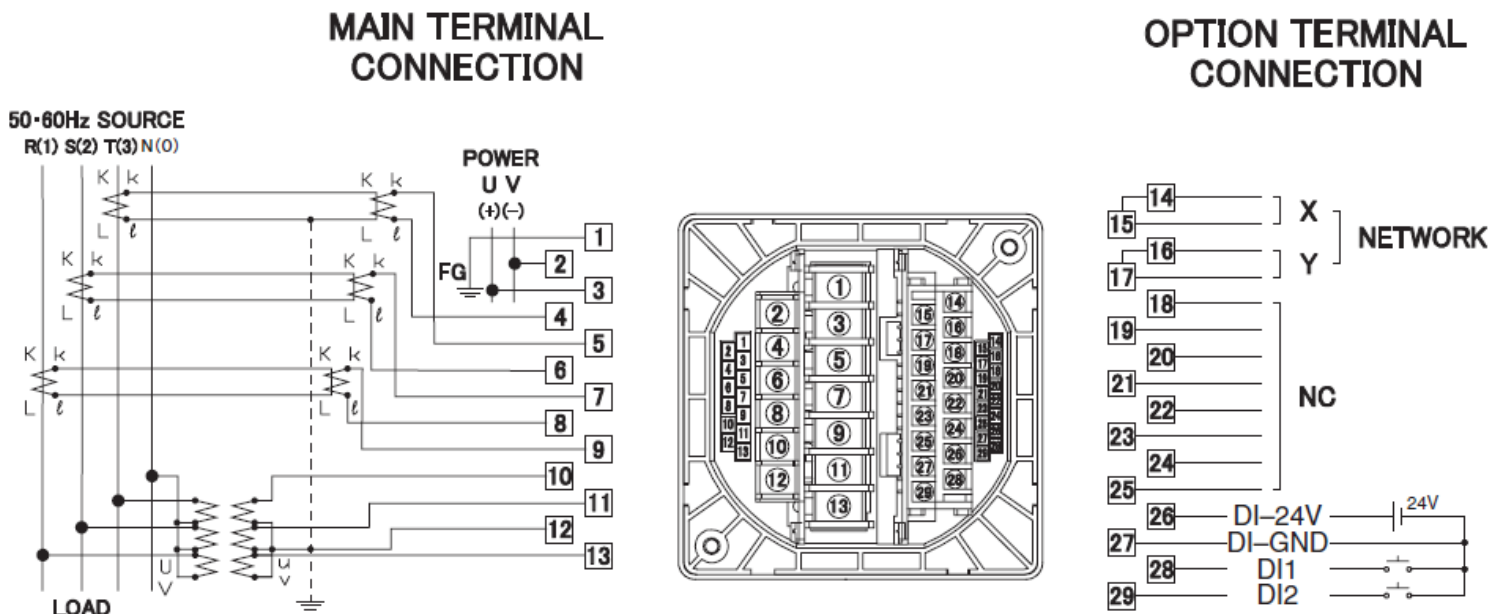
Specifications

Input signal	Voltage : 1-phase 2-wire 110V / 220V / 440V (configurable) 1-phase 3-wire 110V (between 1-2 220Vac) / 220V (between 1-2 440Vac) (configurable) 3-phase 3-wire 110V / 220V / 440V (configurable) Current : 1Aac / 5Aac (Specify when ordering)
Measuring circuit	1-phase 2-wire / 1-phase 3-wire / 3-phase 3-wire (configurable)
Measuring element	Active/reactive power, active/reactive electric energy, current, voltage, power factor, frequency, maximum of each factor, minimum of each factor
Input frequency	50/60 Hz sharing
Power supply voltage	85 to 242Vac / 90 to 132Vdc
Display factors	Active/reactive power, active/reactive electric energy, current, voltage, power factor, frequency, maximum of each factor, minimum of each factor
Operating temperature	-5 to +55°C
Operating relative humidity	90% or less (non-condensing)
Temperature coefficient	±0.01% FS of span per °C
Insulation resistance	100MΩ or more with a 500Vdc megger
Withstand voltage	2000 Vac for 1 minute
Power consumption	Approx. 7.7VA (220V) / Approx. 6VA (100Vac) / Approx. 70mA (110Vdc)
Dimention	110(H) X 110(W) X 120(D)mm
Weight	Approx. 600g
Mounting	Panel mount

Dimensions



Terminal Connections



1-phase 3-wire / 3-phase 3-wire

No	Signal	Description
1	POWER (FG)	Power Supply
2	POWER V(-)	
3	POWER U(+)	
4	D-OUTPUT 2 (DO2+)	DO2 output
5	D-OUTPUT COM (DO1•2-)	DO1/2 common
6	D-OUTPUT 1 (DO1+)	DO1 output
7	I (3L)	Current input terminal
8	k (3S)	
9	I (1L)	
10	k (1S)	Voltage input terminal
11	T(2) (P3)	
12	S(N) (P2)	
13	R(1) (P1)	Network terminal
14	NETWORK (X)	
15	NETWORK (X)	
16	NETWORK (Y)	No connection
17	NETWORK (Y)	
18	NC	
19	NC	No connection
20	NC	
21	NC	
22	NC	
23	NC	
24	NC	
25	NC	DI External power supply
26	INPUT(24V) (DI-24V)	
27	INPUT-COM (DI-GND)	
28	INPUT1 (DI1)	
29	INPUT2 (DI2)	DI2 Input terminal

1-phase 2-wire

No	Signal	Description
1	POWER (FG)	Power Supply
2	POWER V(-)	
3	POWER U(+)	
4	D-OUTPUT 2 (DO2+)	DO2 output
5	D-OUTPUT COM (DO1•2-)	DO1/2 common
6	D-OUTPUT 1 (DO1+)	DO1 output
7	-	No connection
8	-	
9	I (1L)	
10	k (1S)	Current input terminal
11	-	No connection
12	N (P2)	Voltage input terminal
13	1 (P1)	Network terminal
14	NETWORK (X)	
15	NETWORK (X)	
16	NETWORK (Y)	No connection
17	NETWORK (Y)	
18	NC	
19	NC	No connection
20	NC	
21	NC	
22	NC	
23	NC	
24	NC	
25	NC	DI External power supply
26	INPUT(24V) (DI-24V)	
27	INPUT-COM (DI-GND)	
28	INPUT1 (DI1)	
29	INPUT2 (DI2)	DI2 Input terminal

Display pattern

Pattern	Display	Display 1	Display 2	Display 3	Display 4	Display 5	Display 6 (Wh)	Display 7 (varh)	Display 8 (varh)	Display 9 (varh)	Display 10 (DI 1ch(1))	Display 11 (DI 1ch(2))	Display 12 (DI 2ch(1))	Display 13 (DI 2ch(2))
1	Top Low	A	A	A							-	-	-	-
	Middle Low	W	W	cosφ							DI	Pulse Counter	DI	Pulse Counter
	Bottom Low	V	cosφ	V							On time	Pulse Counter	On time	Pulse Counter
2	Top Low	A	A	A			-				-	-	-	-
	Middle Low	V	W	cosφ			-				DI	Pulse Counter	DI	Pulse Counter
	Bottom Low	Wh	Wh	Wh			Wh				On time	Pulse Counter	On time	Pulse Counter
3	Top Low	A	A	A	A						-	-	-	-
	Middle Low	cosφ	cosφ	cosφ	cosφ						DI	Pulse Counter	DI	Pulse Counter
	Bottom Low	V	W	var	Hz						On time	Pulse Counter	On time	Pulse Counter
4	Top Low	A	A	A	A	A	-	-	-	-	-	-	-	-
	Middle Low	V	W	var	cosφ	Hz	-	-	-	-	DI	Pulse Counter	DI	Pulse Counter
	Bottom Low	Wh	Wh	varh	Wh	Wh	Wh	varh	varh	varh	On time	Pulse Counter	On time	Pulse Counter
5	Top Low	cosφ	Hz								-	-	-	-
	Middle Low	W	W								DI	Pulse Counter	DI	Pulse Counter
	Bottom Low	var	var								On time	Pulse Counter	On time	Pulse Counter
6	Top Low	A	V	A							-	-	-	-
	Middle Low	A (phase +1)	V (phase +1)	None							DI	Pulse Counter	DI	Pulse Counter
	Bottom Low	A (phase +2)	V (phase +2)	V							On time	Pulse Counter	On time	Pulse Counter
7	Top Low	A	A	V							-	-	-	-
	Middle Low	V	A (phase +1)	A (phase +1)							DI	Pulse Counter	DI	Pulse Counter
	Bottom Low	W	A (phase +2)	A (phase +2)							On time	Pulse Counter	On time	Pulse Counter
A	Top Low	optional	optional	optional	optional	optional					-	-	-	-
	Middle Low	optional	optional	optional	optional	optional					DI	Pulse Counter	DI	Pulse Counter
	Bottom Low	optional	optional	optional	optional	optional	Wh	varh	varh	varh	On time	Pulse Counter	On time	Pulse Counter
B	Top Low	optional	optional	optional	optional	optional					-	-	-	-
	Middle Low	optional	optional	optional	optional	optional					DI	Pulse Counter	DI	Pulse Counter
	Bottom Low	optional	optional	optional	optional	optional	Wh	varh	varh	varh	On time	Pulse Counter	On time	Pulse Counter

- 1) '-' is no display.
- 2) '(Phase + ?)' displays phase number +? .
- 3) 'A phase +1', 'A phase +2', 'V phase +1', 'V phase +2' displays nothing when 1-phase 2-wire
- 4) 'Wh', 'varh' displays only measuring elements of electric power.
- 5) In case pattern is A, B, if no element to show, upper/middle/bottom row shows nothing.
- 6) Press SELECT switch on operating mode to change Display 1 to 13.
- 7) Display 10 to 13 is only for with option model.

* Specification is subject to change without notice