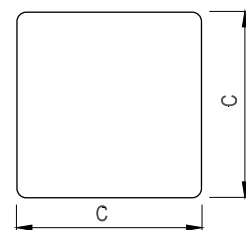
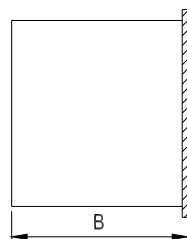
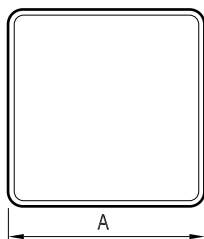
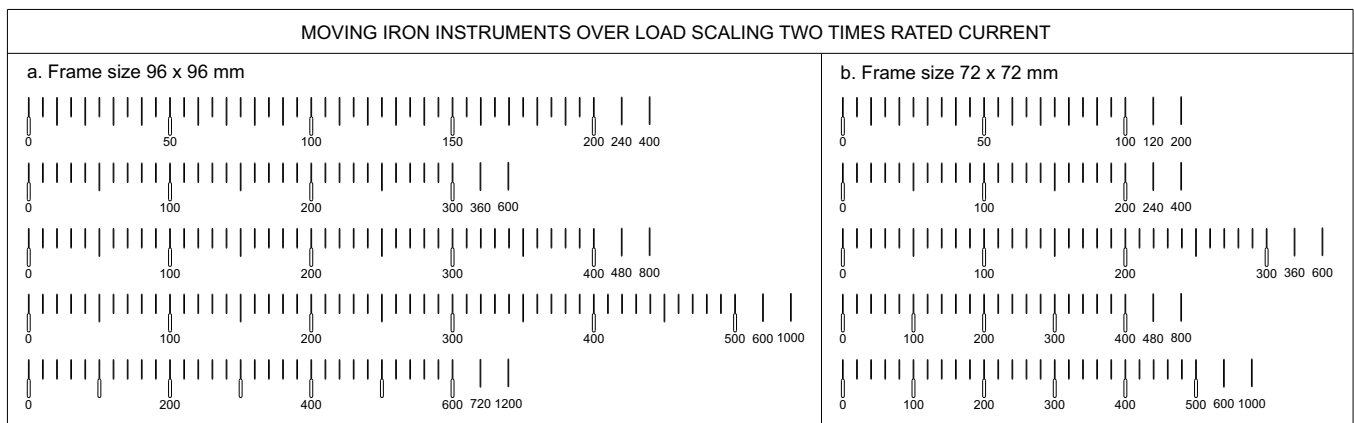


GENERAL SPECIFICATIONS

Standard:	All instruments comply with IEC 60051 for performance, accuracy and overloads
Casing:	Case and frame using material thermoplastic (ABS V0) white, with IP50 Ingress Protection.
Moving element:	Moving Iron, Moving Coil or Bimetal
Installation position:	All Instruments are calibrated for mounting on a vertical panel
Test Voltage:	3 kV, 50 Hz during 1 minute
Temperature:	Operation temperature range between 0 ... 50 °C Storage temperature range between 0 ... 15 °C



PANEL CUT-OUT

Dimension Table (mm)

Description	A	B	C*
Ammeter (72 x 72 mm)	72	55	68
Ammeter (96 x 96 mm)	96	67	92
Maximum Demand Ammeter	96	65	92
Max. Demand Amm. + Ammeter	96	65	92
Voltmeter (72 x 72 mm)	72	55	68
Voltmeter (96 x 96 mm)	96	67	92
Double Voltmeter	96	65	92
Zero Voltmeter	96	67	92
Frequency Meter LED	96	67	92
Double Frequency Meter LED	96	77.5	92
Frequency Meter - pointer type	96	67	92
Cos j Meter	96	67	92
Wattmeter	96	67	92

* tolerance +0.6 mm

Ammeter (with CT .../5A, or 1A Special order)



Measuring range DIRECT CONNECTION : 0 ... 10 A, 0 ... 25 A, 0 ... 40 A
 CONNECTION WITH CT : ... /5 A, ... /1 A
Accuracy class 1.5 *
Scale design overload scale i.e. upper scale value = 2x the measuring range
System moving iron strip core system with oil dumping
Frequency 50 ... 100 Hz
Internal consumption 0.5 VA
Frame size 96x96 mm and 72x72 mm
Weight 210 gr (96x96 mm) and 150 gr (72x72 mm)

Scale (A)	Frame size	
	72x72 mm Code no.	96x96 mm Code no.
0 - 50	00063	0008Z
0 - 60	00064	00090
0 - 75	00065	00091
0 - 100	00067	00093
0 - 150	0006A	00096
0 - 200	0006C	00098
0 - 250	0006D	00099
0 - 300	0006E	0009A
0 - 400	0006F	0009B
0 - 500	0006G	0009C
0 - 600	0006H	0009D
0 - 800	0006J	0009F
0 - 1000	0006K	0009G
0 - 1200	0006L	0009H
0 - 1500	0006N	0009J
0 - 1600	0006O	0009K
0 - 2000	0006P	0009L
0 - 2500	0006Q	0009M
0 - 3000	0006R	0009N
0 - 4000	0006S	0009O
0 - 5000	0006T	0009P
0 - 6000	0006U	0009Q
0 - 8000	0006V	0009R
0 - 10000	0006W	0009S

Ammeter (direct connection)



Scale (A)	Frame size	
	72x72 mm Code no.	96x96 mm Code no.
0 - 10	000BT	000C8
0 - 25	000BX	000CC
0 - 40	000C0	000CF

DC Ammeter

Measuring range

Using shunt ... A/60 mV (shunt is not included)

Accuracy class

1.5

System

moving coil

Frame size

96 x 96 mm and 72 x 72 mm

Weight

200 gr

Scale (A)	Frame size	
	72x72 mm Code no.	96x96 mm Code no.
0 ... 5	00115	00135
0 ... 6	00116	00136
0 ... 10	00117	00137
0 ... 15	00118	00138
0 ... 20	00119	00139
0 ... 25	0011A	0013A
0 ... 30	0011B	0013B
0 ... 40	0011C	0013C
0 ... 50	0011D	0013D
0 ... 60	0011E	0013E
0 ... 75	0011F	0013F
0 ... 100	0011G	0013G
0 ... 150	0011H	0013H
0 ... 200	0011I	0013I
0 ... 250	0011J	0013J
0 ... 300	0011K	0013K
0 ... 400	0011L	0013L
0 ... 500	0011M	0013M
0 ... 600	0011N	0013N
0 ... 800	0011O	0013O
0 ... 1000	0011P	0013P
0 ... 1200	0011Q	0013Q
0 ... 1500	0011R	0013R
0 ... 1600	0011S	0013S
0 ... 2000	0011T	0013T
0 ... 2500	0011U	0013U
0 ... 3000	0011V	0013V
0 ... 4000	0011W	0013W
0 ... 5000	0011X	0013X
0 ... 6000	0011Y	0013Y

Voltmeter



Measuring range DIRECT CONNECTION : 0 ... 250 V, 0 ... 500 V
 CONNECTION WITH PT : ... /100 V, ... /110 V

Accuracy class 1.5

Scale design Upper scale value = 1.2 x the measuring range for .../100 V or .../110 V

System Moving iron strip core system with oil dumping

Frequency 50/60 Hz

Internal consumption 2.5 VA

Frame size 96 x 96 mm and 72 x 72 mm

Weight 220 gr (96 x 96 mm) and 160 gr (72 x 72 mm)

Scale (V)	Frame size	
	72x72 mm Code no.	96x96 mm Code no.
0 - 250 V	00208	0020M
0 - 500 V	0020B	0020P

Double Voltmeter



Measuring range 0 ... 250 V ~ 0 ... 500 V or for connection to .../100 V or ... /110 V transformers

Accuracy class 1.5

Scale design Upper scale value = 1.2 x the measuring range for .../100 V or .../110 V

System Moving iron strip core system with oil dumping

Frequency 50/60 Hz

Internal consumption 2 x 2.5 VA

Frame size 96 x 96 mm

Weight 300 gr

Scale (V)	Code no.
2 x 500V	0020W
2 x 250V	0020U

Zero Voltmeter



Measuring range 0 ... 800 V, for 380 ~ 400 V parallel operation

Accuracy class 1.5

System Moving iron strip core system with oil dumping

Frequency 50/60 Hz

Internal consumption 4.5 VA

Frame size 96 x 96 mm

Weight 210 gr

Scale (V)	Code no.
0 - 800V	00222

DC Voltmeter



Measuring range	0 - 500 V
Accuracy class	1.5
System	moving coil
Frame size	96 x 96 mm and 72 x 72 mm
Weight	200 gr

Scale (V)	Frame size	
	72x72 mm Code no.	96x96 mm Code no.
010	0031B	0033D
012	0031C	0033E
015	0031D	0033F
020	0031E	0033G
025	0031F	0033I
030	0031G	0033J
040	0031H	0033K
050	0031J	0033M
060	0031K	0033N
075	0031L	0033O
080	0031M	0033P
0 ... 100	0031N	0033Q
0 ... 120	0031P	0033S
0 ... 150	0031S	0033V
0 ... 200	0031U	0033X
0 ... 250	0031W	0033Y
0 ... 300	0031X	0033Z
0 ... 400	0031Y	00340
0 ... 500	0031Z	00341

Frequency Meter (Pointer Type)



Measuring range	48 ... 50 ... 52 Hz, 45 ... 50 ... 55 Hz
Rated voltage	100, 110 or 220 V 20%
Accuracy class	1.5
System	Moving coil electronic frequency measurement
Internal consumption	1.75 W/22 VA
Frame size	96 x 96 mm
Weight	230 gr

Scale (Hz)	Rated voltage		
	100 V Code no.	110 V Code no.	220 V Code no.
45 .. 50 .. 55	40509	40506	40503
46 .. 50 .. 54	4050A	40507	40504
48 .. 50 .. 52	4050B	40508	40505

Frequency (LED Type)



Measuring range	48 ... 50 ... 52 Hz, 45 ... 50 ... 55 Hz
Rated voltage	100, 110 or 220 V 20%
Accuracy class	3
System	Electronic with LED display
Number of LED	9
Internal consumption	0.58 W/13 VA
Frame size	96 x 96 mm
Weight	225 gr

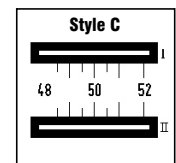
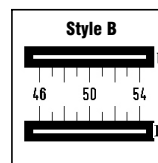
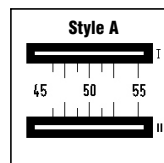
Scale (Hz)	Rated voltage		
	100 V Code no.	110 V Code no.	220 V Code no.
45 .. 50 .. 55	40309	40306	40303
46 .. 50 .. 54	4030A	40307	40304
48 .. 50 .. 52	4030B	40308	40305

Double Frequency Meter



Measuring Range	45...55Hz, 46...54Hz, 48...52Hz
Rated voltage	380V+20%, 220V+20%, 110V+20%, 100V+ 20%
Accuracy Class	3
Display	2 x 9 dots Bar Graph LED, Red
Burden	2 x 5VA / 4W (max)
Operating temperature	0° C ... +50° C
Storage temperature	-10° C ... +70° C
Relative humidity	95% (non condensing)
Cable Size	max 4 mm ²
Weight	403 gr

Scale (Hz)	Scale Style	Rated voltage			
		100 V Code no.	110 V Code no.	220 V Code no.	380 V Code no.
45...55	A	40409	40406	40403	40400
46...54	B	4040A	40407	40404	40401
48...52	C	4040B	40408	40405	40402



Wattmeter (Unbalance load, 3 x 380 V; .../5 A, 3p 3w/3p 4w)



Measuring range	50 Hz
Rated voltage	380 V, 100, 110 V ±20%
Rated current	.../5 A
Connexion	3 phase 4 wire
Accuracy class	1.5
System	Moving coil electronic frequency measurement
Internal consumption	Voltage path 1.75 W/22 VA, current path 0.5 w /0.5 VA
Frame size	96 x 96 mm
Weight	230 gr

for CT	Maximum scale (kW)	Code no.
CT 50/5 A	40	4000E
CT 60/5 A	40	4000F
CT 75/5 A	50	4000G
CT 100/5 A	80	4000J
CT 150/5 A	100	4000M
CT 200/5 A	150	4000O
CT 250/5 A	200	4000P
CT 300/5 A	200	4000Q
CT 400/5 A	300	4000R
CT 500/5 A	400	4000S
CT 600/5 A	400	4000T
CT 800/5 A	600	4000V
CT 1000/5 A	800	4000X
CT 1200/5 A	800	4000Y
CT 1500/5 A	1000	40011
CT 1600/5 A	1200	40013
CT 2000/5 A	1500	40015
CT 2500/5 A	2000	40017
CT 3000/5 A	2000	40019
CT 4000/5 A	3000	4001B
CT 5000/5 A	4000	4001D
CT 6000/5 A	4000	4001F
CT 7500/5 A	5000	4001H
CT 8000/5 A	6000	4001J
CT 10000/5 A	7500	4001L
CT 12000/5 A	8000	4001P
CT 12500/5 A	10000	4001R

Cos φ Meter


Measuring range	0.5 cap. ... 1 ... 0.5 ind
Rated voltage	100, 110 or 380 V 20%
Rated current	... /5 A
Frequency	50 Hz
Accuracy class	1.5
System	Moving coil zero crossing detection
Internal consumption	Voltage path = 1.73 W/22 VA, current path = 0.5 W/0.5 VA
Frame size	96 x 96 mm
Weight	260 gr

Volt/Amp system	Code no.
3 x 100V; .../5A	40202
3 x 110V; .../5A	40201
3 x 380V; .../5A	40200

Electromechanical kWh Meter


Type	Specification	Code no.
WH3 - 252	3p 4w, 5(20) A, 3x220/380 V class 2	40901
WH3 - 252	3p 4w, .../5 A, 3x220/380 V class 2	40900