

## a) DC voltmetry t.p.0,5% nebo 1%



### MOVING COIL DC INSTRUMENTS

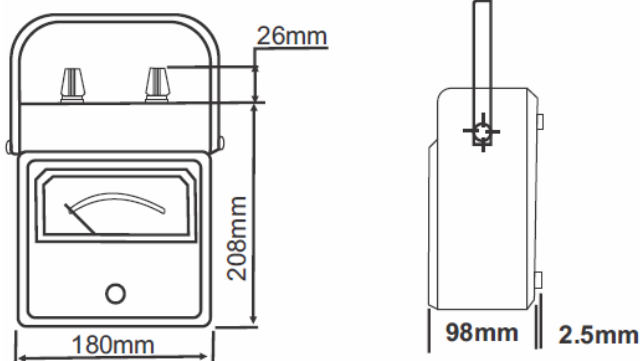
\* Rated Accuracy : Class 0.5% or 1.0% of Full Scale value as per IS 1248/84, between 10% - 100% of scale.

STANDARD RANGES	
D.C. VOLTMETERS	
1 Range :	0-50mV, 75mV, 100mV, 150mV, 250mV, 500mV, 750mV, 1V, 3V, 7.5V, 10V, 15V, 30V, 60V, 75V, 100V, 150V, 250V, 300V, 500V, 600V
2 Range :	0-50/100mV, 75/150mV, 125/250mV, 150/300mV, 250/500mV, 300/600mV, 500/1000mV, 1.5/3V, 5/10V, 7.5/15V, 15/30V, 30/60V, 75/150V, 125/250V, 150/300V, 250/500V, 300/600V
3 Range :	0-50/100/200mV, 75/150/300mV, 125/250/500mV, 150/300/600mV, 250/500/1000mV, 1.5/3/7.5V, 3/7.5/15V, 7.5/15/30V, 15/30/75V, 30/75/150V, 75/150/300V, 125/250/500V, 150/300/600V
4 Range :	0-50/100/250/500mV, 75/150/300/600mV, 125/250/500/1000mV, 1.5/3/7.5/15V, 3/7.5/15/30V, 7.5/15/30/60V, 15/30/75/50V, 30/75/150/300V, 75/150/300/600V, 0.3/1/3/10V, 3/10/30/100V, 30/100/300/600V

Délka stupnice: cca 140mm  
ISO 9001-2015 Certified

Portable Voltmeters are designed for the use in laboratories, field & test room where precision measurement is required. These portable instruments can be used in precision research laboratories where carefully controlled atmospheric conditions are secured, in educational institutions where possible misuses exist and in factories where these instruments are important for making calibration check on switchboard and panel instruments.

### DIMENSIONS




Plastové pouzdro-plášť přístroje:

## b) DC voltmetry t.p.0.5%

These are Moving Coil or Moving Iron type instruments or dynamometric type instruments, specially designed to be operated in horizontal position (also in inclined position upto 45°) & can be carried along safely.

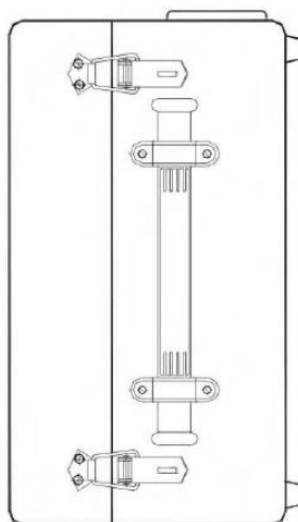
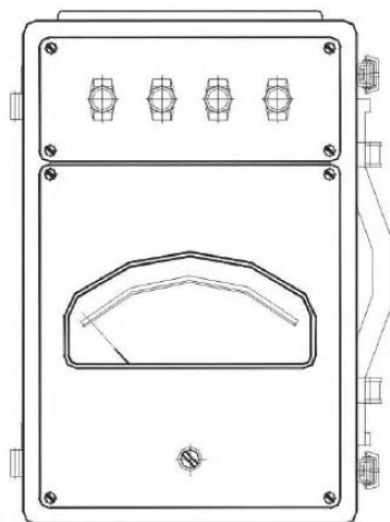
### FEATURES / ADVANTAGES:

- ◆ Instruments with 0.5% accuracy class.
- ◆ Instruments with multiple scale available (refer table).
- ◆ Robust housing suitable for schools, workshops, field operations for continuous use.
- ◆ Precision instruments suitable for standard laboratories (Size: 1).

MODEL	TYPE	SCALE	RANGE	ACCURACY
 <b>PORT LSPW - 1</b>	<b>D.C. MILLIVOLTMETER</b>	Single	25mV, 50mV, 75mV, 100mV, 150mV, 300mV, 500mV, 1000mV	<b>0.5%</b>
		Dual	25/50mV, 50/100mV, 75/150mV, 100/200mV, 125/250mV, 150/300mV, 250/500mV, 500/1000mV.	
		Triple	25/50/100mV, 50/100/200mV, 75/150/300mV, 125/250/500mV, 150/300/600mV, 250/500/1000mV	
		Quadruple	25/50/62.5/75/100/125/150/200/250/300/500/600/1000mV	
	<b>D.C. VOLTMETER</b>	Single	1V, 2.5V, 3V, 5V, 7.5V, 10V, 15V, 20V, 25V, 30V, 50V, 75V, 100V, 150V, 200V, 250V, 300V, 500V, 600V, 1000V	
		Dual	1/2V, 2.5/5V, 5/10V, 15/30V, 30/60V, 50/100V, 75/150V, 100/200V, 125/250V, 150/300V, 250/500V, 300/600V, 500/1000V	
		Tripple	1.5/3/7.5V, 3/7.5/15V, 7.5/15/30V, 15/30/75V, 25/50/100V, 75/150/300V, 125/250/500V, 150/300/600V	
		Quadruple	1.5/3/7.5/15V, 3/7.5/15/30V, 7.5/15/30/60V, 15/30/75/150V, 30/75/150/300V, 75/150/300/600V	

Dřevěný pouzdro-plášť přístroje:

### MECHANICAL SPECIFICATIONS



SIZE 1


SIZE	LENGTH mm	WIDTH mm	HEIGHT mm	HOUSING MATERIAL	MODEL IDENTIFICATION	SCALE		WEIGHT kg. (Approx.)
						LENGTH mm (Approx.)	DIVISION nos.	
1	300	200	155	Wooden Box	LSPW —	150	100 ~ 150	4
2	300	200	190	Wooden Box	LSPW —	150	100 ~ 150	5

### c) DC voltmetry t.p.1%

These are Moving Coil DC, Moving Coil rectifier type AC, Moving Iron AC ammeters & voltmeters which are suitable for use in school, laboratories, workshops & for field operation. Specially designed to be operated in horizontal position (also in inclined position upto 45°) & can be carried along safely.

#### FEATURES / ADVANTAGES

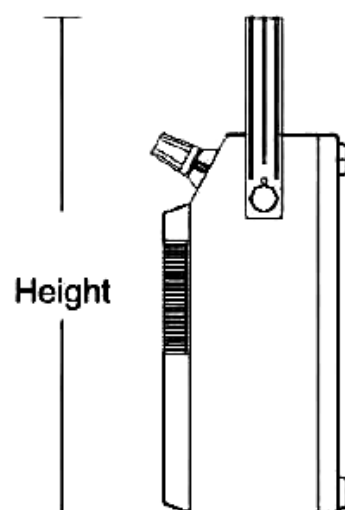
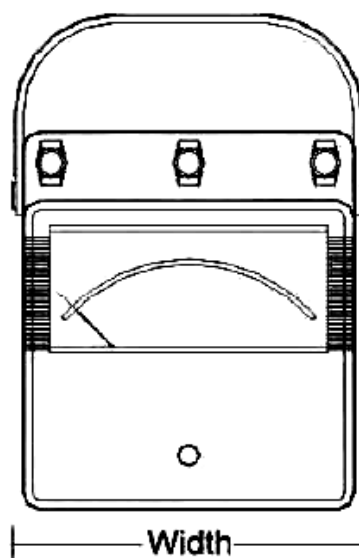
- ◆ Instruments with accuracy class 1.0% for DC/AC, 1.5% for Rectifier type AC.
- ◆ Instruments with multiple scale (refer table).
- ◆ Robust housing.

MODEL	TYPE	SCALE	RANGE	ACCURACY
 <b>PORT MSSB-1</b>	D.C.MILLIVOLTMETER	Single	10mV, 25mV, 50mV, 75mV, 100mV, 150mV, 300mV, 500mV, 1000mV	1.0%
		Dual	10/20mV, 25/50mV, 50/100mV, 75/150mV, 100/200mV, 150/300mV, 250/500mV, 500/1000mV	
		Triple	25/50/100mV, 50/100/200mV, 75/150/300mV, 150/300/600mV, 250/500/1000mV	
		Quadruple	25/50/100/200mV, 125/250/500/1000mV, 75/150/300/600mV	
	D.C. VOLTMETER	Single	1V, 2.5V, 3V, 5V, 7.5V, 10V, 15V, 20V, 25V, 30V, 50V, 75V, 100V, 150V, 200V, 250V, 300V, 500V, 600V, 1000V	
		Dual	1/2V, 2.5/5, 5/10V, 30/60V, 50/100V, 75/150V, 100/200V, 150/300V, 250/500V, 300/600V, 500/1000V.	
		Triple	1.5/3/7.5V, 3/7.5/15V, 7.5/15/30V, 15/30/75V, 25/50/100V, 75/150/300V, 125/250/500V, 150/300/600V, 250/500/1000V	
		Quadruple	1.5/3/7.5/15V, 3/7.5/15/30V, 7.5/15/30/60V, 15/30/75/150V, 30/75/150/300V, 75/150/300/600V, 125/250/500/1000V.	

#### MECHANICAL SPECIFICATIONS

Size	length	width	height	housing	model	Scale length	division	weight
1	250 mm	190 mm	80 mm	Black Engineering Plastic	MSSB	145 mm (approx)	60-150	1Kg (approx)

Plastové pouzdro-plášť přístroje:



d) DC voltmetry t.p.0,5%

Name	Range		No.
DC Voltmeter	1 Range	50mV	1601
	2 Ranges	5/10V	1602
		1/3V	1603
		10/30V	1604
		30/100V	1605
		30/150V	1606
		100/300V	1607
		300/1000V	1608
	3 Ranges	1/3/10V	1610
		3/10/30V	1611
		30/100/300V	1612
	4 Ranges	3/10/30/100V	1614
		1/3/10/30V	1615
		10/30/100/300V	1616
		30/100/300/1000V	1617



- **Principle :** Moving coil type
- **Accuracy :**  $\pm 0.5\%$  F.S.
- **Scale Length :** Approx. 135mm(5-3/8")
- **Weight :** Approx. 1.7kg
- **Dimension :** 196(L)  $\times$  170(W)  $\times$  87(D)mm
- **Case Material :** Bakelite with glass window





e) DC/AC voltmetry t.p.1,5% / 2%

## MS 300 SERIES

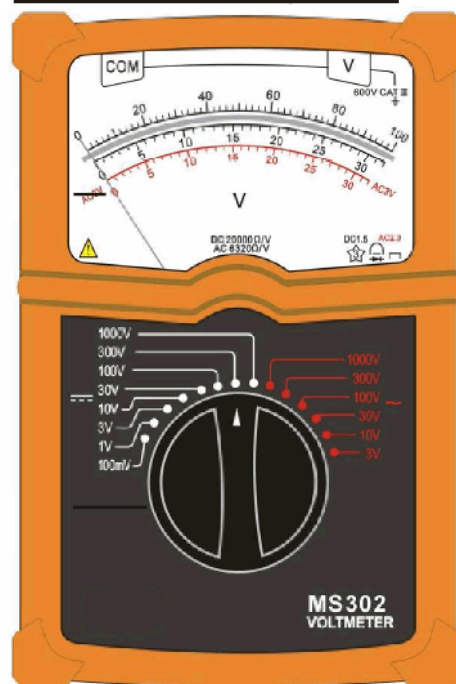
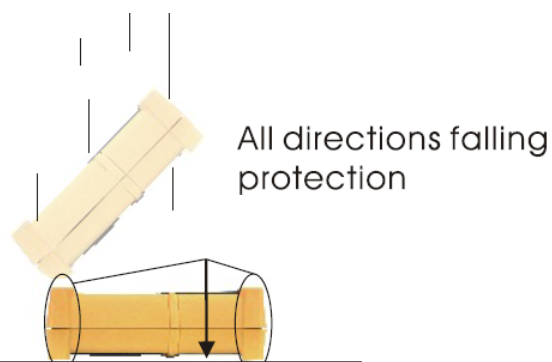
### Feature

- .Sturdy, simple and extremely safe to use
- .High accuracy and reliability
- .Combination of electronic and mechanical advantage
- .Single switch for range selection
- .Safety sockets and dual insulation
- .Moulded, water-resistant casing

Technical data	MS-302
Function	AC/DC Voltage meter
Range	AC 3V~1000V(6Steps) DC 100mV~1000V(8Steps)
Accuracy	1.5%(DC), 2%(AC)
Operating frequency	20~400Hz
Fuse	Electronic Protection
Accessories	NA

Dimensions: 170×165×55 mm

Weight: 200g



f) DC voltmetry t.p.1,5%

- Precision meters for plant maintenance, field servicing and educational purposes.
- Taut Band movement with rectifier type.
- Multi terminals (4mm socket) for range selection.
- Carbon pointer, mirror scale to eliminate parallax error.
- High resistance to shock and vibration.
- Accuracy:  $\pm 1.5\%$  F.S.
- Scale length : 80mm.
- Dimension : 107(L)  $\times$  117(W)  $\times$  53(D)mm.
- Weight : Approx. 300g.
- Meets CE  
EN 61010-1 CAT II 600V  
EN 61326-1 (for 0~600V)



Name		Range	No.
DC Voltmeter Accuracy : $\pm 1.5\%$ F.S.	3 Ranges	10/30/100V	305DCV 301
		3/15/300V	305DCV 302
	4 Ranges	300mV/1V/3V/30V	305DCV 400
		1/3/10/30V	305DCV 401
		10/30/100/300V	305DCV 402
		15/30/150/450V	305DCV 403
		3/30/100/300V	305DCV 404

## g) DC voltmetry t.p.0,5% nebo 1%



Portable Ammeters & Voltmeters are designed for use in the field, test rooms and laboratories where precision measurement is required. These Portable Instruments can be used equally well in precision research laboratories where carefully controlled atmosphere conditions are secured, in educational institutions where possible misuses exist and in factories where these instruments are important for making calibration check on switchboard and panel instruments.

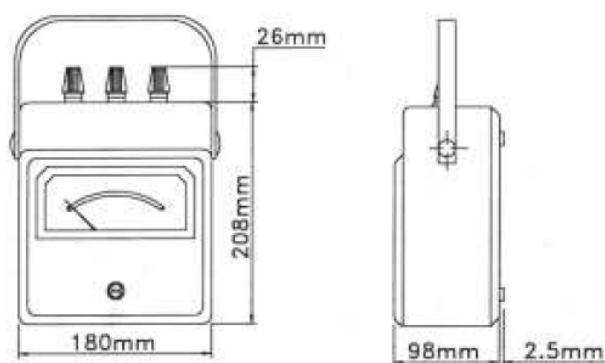
### Features:

- **Knife edge Pointer & Anti-parallax mirror scale.**
- **Tough Bakelite Case :** The complete body of the instrument is made from superior grade of bakelite. Unique design makes it very strong in construction and at the same time provides very high insulation.
- **Shock resistant Pivot jewel movements :** The pivots are made from Carbon Steel hard chrome plated and are mounted in spring loaded sapphire jewels. This ensures shock resistance due to vibrations in transit and minimum friction during use.
- **Dust Proof :** The Movement is placed in a separate compartment making it completely dust proof, thus ensuring long life and years of trouble free service.
- **Minimised Heating of Voltmeters or less internal heating due to low VA-loss :** The resistance of voltmeters are housed separately in a ventilated compartment making heating problems negligible
- **Quick Response** due to unique damping.
- **Confirming to BS 89, IEC 51 & ISS 1248.**

### Specifications:

- Scale Length** : 140mm approx
- Test Voltage** : 200VAC (rms) for 1 minute
- Insulation Resistance** : Over 20 Megohms at 500VDC
- Sensitivity** : 1000 ohms/V for DC Meters.

### Dimensions:



### Moving Coil / DC Voltmeters

Order Code	Accuracy	Range (Choose Any One)
20041	Class 0.5 as per ISS 1248/83 Sensitivity 1000Ohms/V	0-1/3/10/30, 0-3/10/30/100, 0-30/100/300/600V
20042	Class 1.0 as per ISS 1248/83 Sensitivity 1000Ohms/V	0-50, 75, 100, 150, 250, 300, 500, 750mV 0-1, 3.5, 7.5, 15, 30, 60, 75, 125, 150, 250, 300, 500, 600V
20043	Class 1.0 as per ISS 1248/83 Sensitivity 1000Ohms/V	0-50/100, 75/150, 125/250, 150/300, 300/600, 500/1000mV 0-1.5/3, 7.5/15, 15/30, 30/60, 75/150, 125/250, 150/300, 250/500, 300/600V
20044	Class 1.0 as per ISS 1248/83 Sensitivity 1000Ohms/V	0-50/100/200, 75/150/300, 125/250/500, 150/300/600, 250/500/1000mV 0-1.5/3/7.5, 3/7.5/15, 7.5/15/30, 15/30/75, 30/75/150, 125/250/500, 75/150/300, 150/300/600V
20045	Class 1.0 as per ISS 1248/83 Sensitivity 1000Ohms/V	0-50/100/250/500, 75/150/300/600, 125/250/500/1000mV 0-1.5/3/7.5/15, 3/7.5/15/30, 15/30/75/150, 7.5/15/30/60, 75/150/300/600V
20046	Class 1.0 as per ISS 1248/83	0-0.3/1/3/10, 3/10/30/100, 30/100/300/600V