



Type 250 and 254  
New Big Look

## Specifications

**Accuracy:** All DC and AC iron-vane;  $\pm 2\%$  of full-scale AC rectifier type;  $\pm 3\%$  of full scale (with 60 Hz sine wave at 25° C). When standard 60 Hz iron vane ammeters are used at the extreme limits of 25 or 400 Hz, additional error (approx. .75%) may be experienced. Expanded-scale voltmeters:  $\pm .5\%$  of full scale value.

**ANSI Specification:** All meters meet ANSI Specifications C-39.1

**Overload:** Voltmeters (AC and DC) - 50% momentary, 20% sustained. Ammeters (AC and DC) momentary; 10 times the rated current for 10 consecutive intervals of .5 second with a 1 minute interval between successive applications; sustained: 20% for six hours.

**Scale Data:** 90 degree rotation.

### Scale Length:

Size	New Big Look
1½"	1.40"
2½"	2.06"
3½"	2.88"
4½"	3.93"

**Insulation Level:** All meters (except 1½"), 2600 Vrms Hi-pot, 1½"-1500 Vrms Hi-pot.

**Burden Data:** AC ammeter-5 amps, 0.5 va, Max. 0.5 power-factor lagging @ 60 Hz. AC voltmeter - unity power factor.

### Response Time and Overshoot:

Response time: 3 seconds (max.) for 2½", 3½", 4½" size for microammeters; 2 seconds (max.) for all other DC ratings, and 2.5 seconds (max) for AC ratings. Maximum of 40% overshoot.

**Dimensions:** See page 34-35

## How To Order

To order New Big Look panel meters use the appropriate catalog numbers provided in the tables. Taut band & AC I/V instruments have a 250 prefix number. Pivot & Jewel instruments have a prefix of 254.

### Ordering Examples:

- 2½", 300 V DC Voltmeter, zero left, taut band - 250 220 RXRX
- 2½", 300 V DC Voltmeter, zero left, pivot & jewel, 254 style - 254 220 RXRX
- 2½", 300 V AC (Iron Vane), pivot & jewel - 250244 RXRX

### Notes:

Pivot & jewel instruments are not available in 1½" size.

Meter with flame retardant window and base in 2½", 3½" and 4½" sizes are available that conform to UL1437. Include /CUL or /UL at the end of the catalog number or contact factory.

Sealed meters for outdoor use can be ordered in 2½", 3½" and 4½" sizes by including /IEC at the end of the catalog number, or contact factory.

For ratings and scales not listed contact the factory.

## DC Voltmeters

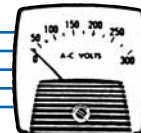
Size	1½"	2½"		3½"		4½"	
Rating & Scale	Type	Taut Band	Pivot and Jewel	Taut Band	Pivot and Jewel	Taut Band	Pivot and Jewel

### DC VOLTMETERS — ZERO-LEFT

1.0 Volts	250 120 LALA	250 220 LALA	254 220 LALA	250 320 LALA	254 320 LALA	250 420 LALA	254 420 LALA
1.5 Volts	250 120 LCLC	250 220 LCLC	254 220 LCLC	250 320 LCLC	254 320 LCLC	250 420 LCLC	254 420 LCLC
3 Volts	250 120 LJLJ	250 220 LJLJ	254 220 LJLJ	250 320 LJLJ	254 320 LJLJ	250 420 LJLJ	254 420 LJLJ
5 Volts	250 120 LSLS	250 220 LSLS	254 220 LSLS	250 320 LSLS	254 320 LSLS	250 420 LSLS	254 420 LSLS
8 Volts	250 120 MJMJ	250 220 MJMJ	254 220 MJMJ	250 320 MJMJ	254 320 MJMJ	250 420 MJMJ	254 420 MJMJ
10 Volts	250 120 MTMT	250 220 MTMT	254 220 MTMT	250 320 MTMT	254 320 MTMT	250 420 MTMT	254 420 MTMT
15 Volts	250 120 NDND	250 220 NDND	254 220 NDND	250 320 NDND	254 320 NDND	250 420 NDND	254 420 NDND
30 Volts	250 120 NLNL	250 220 NLNL	254 220 NLNL	250 320 NLNL	254 320 NLNL	250 420 NLNL	254 420 NLNL
40 Volts	250 120 NPNP	250 220 NPNP	.....	250 320 NPNP	.....	250 420 NPNP	.....
50 Volts	250 120 NTNT	250 220 NTNT	254 220 NTNT	250 320 NTNT	254 320 NTNT	250 420 NTNT	254 420 NTNT
80 Volts	250 120 PDPD	250 220 PDPD	254 220 PDPD	250 320 PDPD	254 320 PDPD	250 420 PDPD	254 420 PDPD
100 Volts	250 120 PKPK	250 220 PKPK	254 220 PKPK	250 320 PKPK	254 320 PKPK	250 420 PKPK	254 420 PKPK
150 Volts	250 120 PZPZ	250 220 PZPZ	254 220 PZPZ	250 320 PZPZ	254 320 PZPZ	250 420 PZPZ	254 420 PZPZ
200 Volts	250 120 RLRL	250 220 RLRL	254 220 RLRL	250 320 RLRL	254 320 RLRL	250 420 RLRL	254 420 RLRL
250 Volts	250 120 RSRS	250 220 RSRS	254 220 RSRS	250 320 RSRS	254 320 RSRS	250 420 RSRS	254 420 RSRS
300 Volts	250 120 RXRX	250 220 RXRX	254 220 RXRX	250 320 RXRX	254 320 RXRX	250 420 RXRX	254 420 RXRX
500 Volts	.....	.....	.....	250 320 SFSF	254 320 SFSF	250 420 SFSF	254 420 SFSF
600 Volts	.....	.....	.....	250 320 SJSJ	254 320 SJSJ	250 420 SJSJ	254 420 SJSJ

### DC VOLTMETERS — ZERO-LEFT, RATED 0-1 mA DC, FOR USE WITH EXTERNAL RESISTORS. RESISTORS NOT INCLUDED (SEE PAGE 29 FOR RESISTORS)

500 Volts	250 104 FASF	250 204 FASF	254 204 FASF	.....	.....	.....	.....
600 Volts	250 104 FASJ	250 204 FASJ	254 204 FASJ	.....	.....	.....	.....
750 Volts	250 104 FASM	250 204 FASM	254 204 FASM	250 304 FASM	254 304 FASM	250 404 FASM	254 404 FASM



# DC Voltmeters Cont'd

Size	1½	2½		3½		4½		
Rating & Scale	Type	Taut Band	Taut Band	Pivot and Jewel	Taut Band	Pivot and Jewel	Taut Band	Pivot and Jewel

## DC VOLTMETERS — ZERO-CENTER

5-0-5 Volts	250 121 LSLS	250 221 LSLS	254 221 LSLS	250 321 LSLS	254 321 LSLS	250 421 LSLS	254 421 LSLS
10-0-10 Volts	250 121 MTMT	250 221 MTMT	254 221 MTMT	250 321 MTMT	254 321 MTMT	250 421 MTMT	254 421 MTMT
30-0-30 Volts	250 121 NLNL	250 221 NLNL	254 221 NLNL	250 321 NLNL	254 321 NLNL	250 421 NLNL	254 421 NLNL
50-0-50 Volts	250 121 NTNT	250 221 NTNT	254 221 NTNT	250 321 NTNT	254 321 NTNT	250 421 NTNT	254 421 NTNT
80-0-80 Volts	250 121 PDPD	250 221 PDPD	254 221 PDPD	250 321 PDPD	254 321 PDPD	250 421 PDPD	254 421 PDPD
150-0-150 Volts	250 121 PZPZ	250 221 PZPZ	254 221 PZPZ	250 321 PZPZ	254 321 PZPZ	250 421 PZPZ	254 421 PZPZ
300-0-300 Volts	250 121 RXRX	250 221 RXRX	254 221 RXRX	250 321 RXRX	254 321 RXRX	250 421 RXRX	254 421 RXRX
500-0-500 Volts	.....	.....	.....	250 321 SF SF	254 321 SF SF	250 421 SF SF	254 421 SF SF
600-0-600 Volts	.....	.....	.....	250 321 SJSJ	254 321 SJSJ	250 421 SJSJ	254 421 SJSJ

## DC VOLTMETERS — EXPANDED SCALE

24-30 Volts	.....	.....	.....	250 338 NNNN	254 338 NNNN	250 438 NNNN	254 438 NNNN
110-130 Volts	.....	.....	.....	250 338 PNP	254 338 PNP	250 438 PNP	254 438 PNP
220-260 Volts	.....	.....	.....	250 338 RTRT	254 338 RTRT	250 438 RTRT	254 438 RTRT

## DC VOLTMETERS — ZERO-CENTER, RATED 1-0-1 mA DC, FOR USE WITH EXTERNAL RESISTORS, RESISTORS NOT INCLUDED (SEE PAGE 29 FOR RESISTORS)

SCALY

500-0-500 Volts	250 105 FASF	250 205 FASF	254 205 FASF	.....	.....	.....	.....
600-0-600 Volts	250 105 FASJ	250 205 FASJ	254 205 FASJ	.....	.....	.....	.....
750-0-750 Volts	250 105 FASM	250 205 FASM	254 205 FASM	250 305 FASM	254 305 FASM	250 405 FASM	254 405 FASM

# DC Ammeters

## DC MICROAMMETERS — ZERO-LEFT

20 µA	250 100 CFCF	250 200 CFCF	.....	250 300 CFCF	.....	.....	.....
50 µA	250 100 CYCY	250 200 CYCY	.....	250 300 CYCY	.....	250 400 CYCY	.....
100 µA	250 100 DRDR	250 200 DRDR	.....	250 300 DRDR	.....	250 400 DRDR	.....
200 µA	250 100 EAEA	250 200 EAEA	254 200 EAEA	250 300 EAEA	254 300 EAEA	250 400 EAEA	254 400 EAEA
500 µA	250 100 EMEM	250 200 EMEM	254 200 EMEM	250 300 EMEM	254 300 EMEM	250 400 EMEM	254 400 EMEM

## DC MICROAMMETERS — ZERO-CENTER

20-0-20 µA	250 101 CFCF	250 201 CFCF	.....	250 301 CFCF	.....	.....	.....
50-0-50 µA	250 101 CYCY	250 201 CYCY	.....	250 301 CYCY	.....	250 401 CYCY	.....
100-0-100 µA	250 101 DRDR	250 201 DRDR	254 201 DRDR	250 301 DRDR	254 301 DRDR	250 401 DRDR	254 401 DRDR
200-0-200 µA	250 101 EAEA	250 201 EAEA	254 201 EAEA	250 301 EAEA	254 301 EAEA	250 401 EAEA	254 401 EAEA
500-0-500 µA	250 101 EMEM	250 201 EMEM	254 201 EMEM	250 301 EMEM	254 301 EMEM	250 401 EMEM	254 401 EMEM

## DC MILLIAMMETERS — ZERO-LEFT

1 mA	250 100 FAFA	250 200 FAFA	254 200 FAFA	250 300 FAFA	254 300 FAFA	250 400 FAFA	254 400 FAFA
5 mA	250 100 FXFX	250 200 FXFZ	254 200 FXFX	250 300 FXFX	254 300 FXFX	250 400 FXFX	254 400 FXFX
10 mA	250 100 GZGZ	250 200 GZGZ	254 200 GZGZ	250 300 GZGZ	254 300 GZGZ	250 400 GZGZ	254 400 GZGZ
20 mA	250 100 HFHF	250 200 HFHF	254 200 HFHF	250 300 HFHF	254 300 HFHF	250 400 HFHF	254 400 HFHF
25 mA	250 100 HJHJ	250 200 HJHJ	254 200 HJHJ	250 300 HJHJ	254 300 HJHJ	250 400 HJHJ	254 400 HJHJ
30 mA	250 100 HMHM	250 200 HMHM	254 200 HMHM	250 300 HMHM	254 300 HMHM	250 400 HMHM	254 400 HMHM
50 mA	250 100 HYHY	250 200 HYHY	254 200 HYHY	250 300 HYHY	254 300 HYHY	250 400 HYHY	254 400 HYHY
80 mA	250 100 JJJJ	250 200 JJJJ	254 200 JJJJ	250 300 JJJJ	254 300 JJJJ	250 400 JJJJ	254 400 JJJJ
100 mA	250 100 JRJR	250 200 JRJR	254 200 JRJR	250 300 JRJR	254 300 JRJR	250 400 JRJR	254 400 JRJR
150 mA	250 100 JXJX	254 200 JXJX	254 200 JXJX	250 300 JXJX	254 300 JXJX	250 400 JXJX	254 400 JXJX
200 mA	250 100 KAKA	250 200 KAKA	254 200 KAKA	250 300 KAKA	254 300 KAKA	250 400 KAKA	254 400 KAKA
250 mA	250 100 KDKD	250 200 KDKD	254 200 KDKD	250 300 KDKD	254 300 KDKD	250 400 KDKD	254 400 KDKD
300 mA	250 100 KGKG	250 200 KGKG	254 200 KGKG	250 300 KGKG	254 300 KGKG	250 400 KGKG	254 400 KGKG
500 mA	250 100 KMKM	250 200 KMKM	254 200 KMKM	250 300 KMKM	254 300 KMKM	250 400 KMKM	254 400 KMKM
800 mA	250 100 KWKW	250 200 KWKW	254 200 KWKW	250 300 KWKW	254 300 KWKW	250 400 KWKW	254 400 KWKW

## DC Ammeters Cont'd

Size	1½	2½		3½		4½		
Rating & Scale	Type	Taut Band	Taut Band	Pivot and Jewel	Taut Band	Pivot and Jewel	Taut Band	Pivot and Jewel

### DC MILLIAMMETERS — ZERO-CENTER

1-0-1 mA	250 101 FAFA	250 201 FAFA	254 201 FAFA	250 301 FAFA	254 301 FAFA	250 401 FAFA	254 401 FAFA
5-0-5 mA	250 101 FFX	250 201 FFX	254 201 FFX	250 301 FFXGX	254 301 FFX	250 401 FFX	254 401 FFX
10-0-10 mA	250 101 GZGZ	250 201 GZGZ	254 201 GZGZ	250 301 GZGZ	254 301 GZGZ	250 401 GZGZ	254 401 GZGZ
20-0-20 mA	250 101 HFHF	250 201 HFHF	254 201 HFHF	250 301 HFHF	254 301 HFHF	250 401 HFHF	254 401 HFHF
25-0-25 mA	250 101 HJHJ	250 201 HJHJ	254 201 HJHJ	250 301 HJHJ	254 301 HJHJ	250 401 HJHJ	254 401 HJHJ
30-0-30 mA	250 101 HMHM	250 201 HMHM	254 201 HMHM	250 301 HMHM	254 301 HMHM	250 401 HMHM	254 401 HMHM
50-0-50 mA	250 101 HYHY	250 201 HYHY	254 201 HYHY	250 301 HYHY	254 301 HYHY	250 401 HYHY	254 401 HYHY
100-0-100 mA	250 101 JRJR	250 201 JRJR	254 201 JRJR	250 301 JRJR	254 301 JRJR	250 401 JRJR	254 401 JRJR
150-0-150 mA	250 101 JXJX	250 201 JXJX	254 201 JXJX	250 301 JXJX	254 301 JXJX	250 401 JXJX	254 401 JXJX
200-0-200 mA	250 101 KAKA	250 201 KAKA	254 201 KAKA	250 301 KAKA	254 301 KAKA	250 401 KAKA	254 401 KAKA
250-0-250 mA	250 101 KDKD	250 201 KDKD	254 201 KDKD	250 301 KDKD	254 301 KDKD	250 401 KDKD	254 401 KDKD
300-0-300 mA	250 101 KGKG	250 201 KGKG	254 201 KGKG	250 301 KGKG	254 301 KGKG	250 401 KGKG	254 401 KGKG
500-0-500 mA	250 101 KMKM	250 201 KMKM	254 201 KMKM	250 301 KMKM	254 301 KMKM	250 401 KMKM	254 401 KMKM

### DC AMMETERS — ZERO-LEFT

1 Amp	250 100 LALA	250 200 LALA	254 200 LALA	250 300 LALA	254 300 LALA	250 400 LALA	254 400 LALA
1.5 Amp	250 100 LCLC	250 200 LCLC	254 200 LCLC	250 300 LCLC	254 300 LCLC	250 400 LCLC	254 400 LCLC
2 Amp	250 100 LELE	250 200 LELE	254 200 LELE	250 300 LELE	254 300 LELE	250 400 LELE	254 200 LELE
3 Amp	250 100 LJLJ	250 200 LJLJ	254 200 LJLJ	250 300 LJLJ	254 300 LJLJ	250 400 LJLJ	254 400 LJLJ
5 Amp	250 100 LSL SLS	250 200 LSL SLS	254 200 LSL SLS	250 300 LSL SLS	254 300 LSL SLS	250 400 LSL SLS	254 400 LSL SLS
10 Amp	250 100 MTMT	250 200 MTMT	254 200 MTMT	250 300 MTMT	254 300 MTMT	250 400 MTMT	254 400 MTMT
15 Amp	250 100 NDND	250 200 NDND	254 200 NDND	250 300 NDND	254 300 NDND	250 400 NDND	254 400 NDND
20 Amp	.....	250 200 NGNG	254 200 NGNG	250 300 NGNG	254 300 NGNG	250 400 NGNG	254 400 NGNG
30 Amp	.....	250 200 NLNL	254 200 NLNL	250 300 NLNL	254 300 NLNL	250 400 NLNL	254 400 NLNL
50 Amp	.....	.....	.....	250 300 NTNT	254 300 NTNT	250 400 NTNT	254 400 NTNT

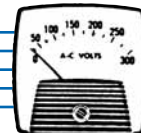
### DC AMMETERS — ZERO-LEFT, 50 mV, SHUNT RATED (LEAD RES. RANGE: .05-.07Ω)\*

SCALE	20 Amp	250 124 ECNG	250 224 ECNG	254 224 ECNG	250 324 ECNG	254 324 ECNG	250 424 ECNG	254 424 ECNG
	30 Amp	250 124 ECNL	250 224 ECNL	254 224 ECNL	250 324 ECNL	254 324 ECNL	250 424 ECNL	254 424 ECNL
	50 Amp	250 124 ECNT	250 224 ECNT	254 224 ECNT	250 324 ECNT	254 324 ECNT	250 424 ECNT	254 424 ECNT
	75 Amp	250 124 ECPB	250 224 ECPB	254 224 ECPB	250 324 ECPB	254 324 ECPB	250 424 ECPB	254 424 ECPB
	100 Amp	250 124 ECPK	250 224 ECPK	254 224 ECPK	250 324 ECPK	254 324 ECPK	250 424 ECPK	254 424 ECPK
	150 Amp	250 124 ECPZ	250 224 ECPZ	254 224 ECPZ	250 324 ECPZ	254 324 ECPZ	250 424 ECPZ	254 424 ECPZ
	200 Amp	250 124 ECRL	250 224 ECRL	254 224 ECRL	250 324 ECRL	254 324 ECRL	250 424 ECRL	254 424 ECRL
	250 Amp	250 124 ECRS	250 224 ECRS	254 224 ECRS	250 324 ECRS	254 324 ECRS	250 424 ECRS	254 424 ECRS
	300 Amp	250 124 ECRX	250 224 ECRX	254 224 ECRX	250 324 ECRX	254 324 ECRX	250 424 ECRX	254 424 ECRX
	400 Amp	250 124 ECSC	250 224 ECSC	254 224 ECSC	250 324 ECSC	254 324 ECSC	250 424 ECSC	254 424 ECSC
	500 Amp	250 124 ECSF	250 224 ECSF	254 224 ECSF	250 324 ECSF	254 324 ECSF	250 424 ECSF	254 424 ECSF
	600 Amp	250 124 ECSJ	250 224 ECSJ	254 224 ECSJ	250 324 ECSJ	254 324 ECSJ	250 424 ECSJ	254 424 ECSJ
	800 Amp	250 124 ECSN	250 224 ECSN	254 224 ECSN	250 324 ECSN	254 324 ECSN	250 424 ECSN	254 424 ECSN
	1 Kiloamp	250 124 ECVA	250 224 ECVA	254 224 ECVA	250 324 ECVA	254 324 ECVA	250 424 ECVA	254 424 ECVA
	1.5 Kiloamp	250 124 ECVC	250 224 ECVC	254 224 ECVC	250 324 ECVC	254 324 ECVC	250 424 ECVC	254 424 ECVC
2 Kiloamp	250 124 ECVE	250 224 ECVE	254 224 ECVE	250 324 ECVE	254 324 ECVE	250 424 ECVE	254 424 ECVE	

### DC AMMETERS — ZERO-LEFT, 100 mV, SHUNT RATED (LEAD RES. RANGE: .04-.08Ω)\*

SCALE	20 Amp	250 124 GBNG	250 224 GBNG	254 224 GBNG	250 324 GBNG	254 324 GBNG	250 424 GBNG	254 424 GBNG
	40 Amp	250 124 GBNP	250 224 GBNP	254 224 GBNP	250 324 GBNP	254 324 GBNP	250 424 GBNP	254 424 GBNP
	50 Amp	250 124 GBNT	250 224 GBNT	254 224 GBNT	250 324 GBNT	254 324 GBNT	250 424 GBNT	254 424 GBNT
	75 Amp	250 124 GBPB	250 224 GBPB	254 224 GBPB	250 324 GBPB	254 324 GBPB	250 424 GBPB	254 424 GBPB
	100 Amp	250 124 GBPK	250 224 GBPK	254 224 GBPK	250 324 GBPK	254 324 GBPK	250 424 GBPK	254 424 GBPK
	150 Amp	250 124 GBPZ	250 224 GBPZ	254 224 GBPZ	250 324 GBPZ	254 324 GBPZ	250 424 GBPZ	254 424 GBPZ
	200 Amp	250 124 GBRL	250 224 GBRL	254 224 GBRL	250 324 GBRL	254 324 GBRL	250 424 GBRL	254 424 GBRL
	250 Amp	250 124 GBRS	250 224 GBRS	254 224 GBRS	250 324 GBRS	254 324 GBRS	250 424 GBRS	254 424 GBRS
	300 Amp	250 124 GBRX	250 224 GBRX	254 224 GBRX	250 324 GBRX	254 324 GBRX	250 424 GBRX	254 424 GBRX
	400 Amp	250 124 GBSC	250 224 GBSC	254 224 GBSC	250 324 GBSC	254 324 GBSC	250 424 GBSC	254 424 GBSC
	500 Amp	250 124 GBSF	250 224 GBSF	254 224 GBSF	250 324 GBSF	254 324 GBSF	250 424 GBSF	254 424 GBSF
	600 Amp	250 124 GBSJ	250 224 GBSJ	254 224 GBSJ	250 324 GBSJ	254 324 GBSJ	250 424 GBSJ	254 424 GBSJ
	800 Amp	250 124 GBSN	250 224 GBSN	254 224 GBSN	250 324 GBSN	254 324 GBSN	250 424 GBSN	254 424 GBSN
	1 Kiloamp	250 124 GBVA	250 224 GBVA	254 224 GBVA	250 324 GBVA	254 324 GBVA	250 424 GBVA	254 424 GBVA
	2 Kiloamp	250 124 GBVE	250 224 GBVE	254 224 GBVE	250 324 GBVE	254 324 GBVE	250 424 GBVE	254 424 GBVE

\*Shunts are not included: For 50mV shunts, see page 31



# DC Ammeters Cont'd

Size	1½	2½		3½		4½		
Rating & Scale	Type	Taut Band	Taut Band	Pivot and Jewel	Taut Band	Pivot and Jewel	Taut Band	Pivot and Jewel

## DC AMMETERS — ZERO-CENTER

1-0-1 Amp	250 101 LALA	250 201 LALA	254 201 LALA	250 301 LALA	254 301 LALA	250 401 LALA	254 401 LALA
2-0-2 Amp	250 101 LELE	250 201 LELE	254 201 LELE	250 301 LELE	254 301 LELE	250 401 LELE	254 401 LELE
5-0-5 Amp	250 101 LSLS	250 201 LSLS	254 201 LSLS	250 301 LSLS	254 301 LSLS	250 401 LSLS	254 401 LSLS
10-0-10 Amp	250 101 MTMT	250 201 MTMT	254 201 MTMT	250 301 MTMT	254 301 MTMT	250 401 MTMT	254 401 MTMT
15-0-15 Amp	.....	250 201 NDND	254 201 NDND	250 301 NDND	254 301 NDND	250 401 NDND	254 401 NDND
20-0-20 Amp	.....	250 201 NGNG	254 201 NGNG	250 301 NGNG	254 301 NGNG	250 401 NGNG	254 401 NGNG
30-0-30 Amp	.....	250 201 NLNL	254 201 NLNL	250 301 NLNL	254 301 NLNL	250 401 NLNL	254 401 NLNL
50-0-50 Amp	.....	.....	.....	250 301 NTNT	254 301 NTNT	250 401 NTNT	254 401 NTNT

## DC AMMETERS — ZERO-CENTER, 50 mV, SHUNT RATED (LEAD RES. RANGE: .05-.07Ω)\*

S  
C  
A  
L  
E

20-0-20 Amp	250 125 ECNG	250 225 ECNG	.....	250 325 ECNG	.....	.....	.....
40-0-40 Amp	250 125 ECNP	250 225 ECNP	254 225 ECNP	250 325 ECNP	254 325 ECNP	250 425 ECNP	254 425 ECNP
50-0-50 Amp	250 125 ECNT	250 225 ECNT	254 225 ECNT	250 325 ECNT	254 325 ECNT	250 425 ECNT	254 425 ECNT
75-0-75 Amp	250 125 ECPB	250 225 ECPB	254 225 ECPB	250 325 ECPB	254 325 ECPB	250 425 ECPB	254 425 ECPB
100-0-100 Amp	250 125 ECPK	250 225 ECPK	254 225 ECPK	250 325 ECPK	254 325 ECPK	250 425 ECPK	254 425 ECPK

\*Shunts are not included: For 50mV shunts, see page 31

# AC Voltmeters

Size	1½	2½	3½	4½
Rating & Scale	Type	200 Series	200 Series	200 Series

## AC VOLTMETERS — SELF-CONTAINED, IRON VANE TYPE, PIVOT AND JEWEL 60 Hz

3 Volts	.....	250 244 LJLJ	250 344 LJLJ	250 444 LJLJ
5 Volts	.....	250 244 LSLS	250 344 LSLS	250 444 LSLS
10 Volts	.....	250 244 MTMT	250 344 MTMT	250 444 MTMT
15 Volts	.....	250 244 NDND	250 344 NDND	250 444 NDND
30 Volts	.....	250 244 NLNL	250 344 NLNL	250 444 NLNL
50 Volts	.....	250 244 NTNT	250 344 NTNT	250 444 NTNT
100 Volts	.....	250 244 PKPK	250 344 PKPK	250 444 PKPK
150 Volts	.....	250 244 PZPZ	250 344 PZPZ	250 444 PZPZ
300 Volts	.....	250 244 RXRX	250 344 RXRX	250 444 RXRX
500 Volts	.....	.....	250 344 SFSF	250 444 SFSF
600 Volts	.....	.....	250 344 SJSJ	250 444 SJSJ

## AC VOLTMETERS — SELF-CONTAINED, IRON VANE TYPE, PIVOT AND JEWEL 400 Hz

150 Volts	.....	250 245 PZPZ	250 345 PZPZ	250 445 PZPZ
300 Volts	.....	250 245 RXRX	250 345 RXRX	250 445 RXRX

## AC VOLTMETERS — TRANSFORMER RATED, 0-150 VOLTS, PIVOT AND JEWEL, IRON VANE TYPE, 60 Hz. (See page 29 for Transformers)

S  
C  
A  
L  
E

600 Volts	.....	250 244 PZSJ	250 344 PZSJ	250 444 PZSJ
750 Volts	.....	250 244 PZSM	250 344 PZSM	250 444 PZSM
3 kV	.....	250 244 PZVJ	250 344 PZVJ	250 444 PZVJ

## AC VOLTMETERS — EXPANDED SCALE, RECTIFIER TYPE

Size	1½	2½		3½		4½		
Rating & Scale	Type	Taut Band	Taut Band	Pivot and Jewel	Taut Band	Pivot and Jewel	Taut Band	Pivot and Jewel
110-130 Volts	.....	.....	.....	.....	250 337 PNPB	254 337 PNPB	250 437 PNPB	254 437 PNPB
105-125 Volts	.....	.....	.....	.....	250 337 PTPT	254 337 PTPT	250 437 PTPT	254 437 PTPT

## AC Voltmeters Cont'd

Size	1½	2½		3½		4½	
Rating & Scale \ Type	Taut Band	Taut Band	Pivot and Jewel	Taut Band	Pivot and Jewel	Taut Band	Pivot and Jewel

### AC VOLTMETERS — SELF-CONTAINED, RECTIFIER TYPE

10 Volts	250 130 MTMT	250 230 MTMT	254 230 MTMT	250 330 MTMT	254 330 MTMT	250 430 MTMT	254 430 MTMT
15 Volts	250 130 NDND	250 230 NDND	254 230 NDND	250 330 NDND	254 330 NDND	250 430 NDND	254 430 NDND
20 Volts	250 130 NGNG	250 230 NGNG	254 230 NGNG	250 330 NGNG	254 330 NGNG	250 430 NGNG	254 430 NGNG
25 Volts	250 130 NJNJ	250 230 NJNJ	254 230 NJNJ	250 330 NJNJ	254 330 NJNJ	250 430 NJNJ	254 430 NJNJ
30 Volts	250 130 NLNL	250 230 NLNL	254 230 NLNL	250 330 NLNL	254 330 NLNL	250 430 NLNL	254 430 NLNL
50 Volts	250 130 NTNT	250 230 NTNT	254 230 NTNT	250 330 NTNT	254 330 NTNT	250 430 NTNT	254 430 NTNT
80 Volts	250 130 PDPD	250 230 PDPD	254 230 PDPD	250 330 PDPD	254 330 PDPD	250 430 PDPD	254 430 PDPD
100 Volts	250 130 PKPK	250 230 PKPK	254 230 PKPK	250 330 PKPK	254 330 PKPK	250 430 PKPK	254 430 PKPK
150 Volts	250 130 PZPZ	250 230 PZPZ	254 230 PZPZ	250 330 PZPZ	254 330 PZPZ	250 430 PZPZ	254 430 PZPZ
200 Volts	.....	.....	.....	250 330 RLRL	254 330 RLRL	250 430 RLRL	254 430 RLRL
250 Volts	.....	.....	.....	250 330 RSRS	254 330 RSRS	250 430 RSRS	254 430 RSRS
300 Volts	.....	.....	.....	250 330 RXRX	254 330 RXRX	250 430 RXRX	254 430 RXRX

## AC Ammeters

### AC MICROAMMETERS AND MILLIAMMETERS — RECTIFIER TYPE

500 µA	250 110 EMEM	250 210 EMEM	254 210 EMEM	250 310 EMEM	254 310 EMEM	250 410 EMEM	254 410 EMEM
800 µA	250 110 EWEW	250 210 EWEW	254 210 EWEW	250 310 EWEW	254 310 EWEW	250 410 EWEW	254 410 EWEW
1 mA	250 110 FAFA	250 210 FAFA	254 210 FAFA	250 310 FAFA	254 310 FAFA	250 410 FAFA	254 410 FAFA
1.5 mA	250 110 FDFD	250 210 FDFD	254 210 FDFD	250 310 FDFD	254 310 FDFD	250 410 FDFD	254 410 FDFD
2 mA	250 110 FGFG	250 210 FGFG	254 210 FGFG	250 310 FGFG	254 310 FGFG	250 410 FGFG	254 410 FGFG
3 mA	250 110 FNFN	250 210 FNFN	254 210 FNFN	250 310 FNFN	254 310 FNFN	250 410 FNFN	254 410 FNFN
5 mA	250 110 FFXF	250 210 FFXF	254 210 FFXF	250 310 FFXF	254 310 FFXF	250 410 FFXF	254 410 FFXF
10 mA	250 110 GZGZ	250 210 GZGZ	254 210 GZGZ	250 310 GZGZ	254 310 GZGZ	250 410 GZGZ	254 410 GZGZ
20 mA	250 110 HFHF	250 210 HFHF	254 210 HFHF	250 310 HFHF	254 310 HFHF	250 410 HFHF	254 410 HFHF

Size	1½	2½	3½	4½
Rating & Scale \ Type	200 Series		200 Series	200 Series

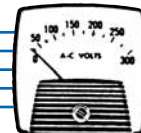
### AC MILLIAMMETERS — SELF-CONTAINED, 25-400 Hz, IRON VANE, PIVOT AND JEWEL

10 mA	.....	250 240 GZGZ	250 340 GZGZ	250 440 GZGZ
25 mA	.....	250 240 HJHJ	250 340 HJHJ	250 440 HJHJ
50 mA	.....	250 240 HYHY	250 340 HYHY	250 440 HYHY
100 mA	.....	250 240 JRJR	250 340 JRJR	250 440 JRJR
200 mA	.....	250 240 KAKA	250 340 KAKA	250 440 KAKA
500 mA	.....	250 240 KMKM	250 340 KMKM	250 440 KMKM

### AC AMMETERS — SELF-CONTAINED, 25-400 Hz, IRON VANE, PIVOT AND JEWEL

1 Amp	.....	250 240 LALA	250 340 LALA	250 440 LALA
3 Amp	.....	250 240 LJLJ	250 340 LJLJ	250 440 LJLJ
5 Amp	.....	250 240 LSLS	250 340 LSLS	250 440 LSLS
8 Amp	.....	250 240 MJMJ	250 340 MJMJ	250 440 MJMJ
10 Amp	.....	250 240 MTMT	250 340 MTMT	250 440 MTMT
15 Amp	.....	250 240 NDND	250 340 NDND	250 440 NDND
20 Amp	.....	250 240 NGNG*	250 340 NGNG*	250 440 NGNG*
30 Amp	.....	250 240 NLNL*	250 340 NLNL*	250 440 NLNL*
50 Amp	.....	.....	250 340 NTNT*	250 440 NTNT*
80 Amp	.....	.....	250 340 PDPD*	250 440 PDPD*

\* External Magnetic shield included



# AC Ammeters Cont'd

Size	1½	2½	3½	4½
Rating & Scale	Type	200 Series	200 Series	200 Series

## AC AMMETERS — TRANSFORMER-RATED, 0-5 AMPERES, 25-500 Hz, PIVOT AND JEWEL, IRON VANE

(See page 29 for Transformers)

SCALE

10 Amp	.....	250 240 LSMT	250 340 LSMT	250 440 LSMT
15 Amp	.....	250 240 LSND	250 340 LSND	250 440 LSND
20 Amp	.....	250 240 LSNG	250 340 LSNG	250 440 LSNG
30 Amp	.....	250 240 LSNL	250 340 LSNL	250 440 LSNL
40 Amp	.....	250 240 LSNP	250 340 LSNP	250 440 LSNP
50 Amp	.....	250 240 LSNT	250 340 LSNT	250 440 LSNT
75 Amp	.....	250 240 LSPB	250 340 LSPB	250 440 LSPB
80 Amp	.....	250 240 LSPD	250 340 LSPD	250 440 LSPD
100 Amp	.....	250 240 LSPK	250 340 LSPK	250 440 LSPK
150 Amp	.....	250 240 LSPZ	250 340 LSPZ	250 440 LSPZ
200 Amp	.....	250 240 LSRL	250 340 LSRL	250 440 LSRL
300 Amp	.....	250 240 LSRX	250 340 LSRX	250 440 LSRX
400 Amp	.....	250 240 LSSC	250 340 LSSC	250 440 LSSC
500 Amp	.....	250 240 LSSF	250 340 LSSF	250 440 LSSF
600 Amp	.....	250 240 LSSJ	250 340 LSSJ	250 440 LSSJ
800 Amp	.....	250 240 LSSN	250 340 LSSN	250 440 LSSN
1 Kiloamp	.....	250 240 LSV A	250 340 LSV A	250 440 LSV A
1.2 Kiloamp	.....	250 240 LSV B	250 340 LSV B	250 440 LSV B
1.5 Kiloamp	.....	250 240 LSV C	250 340 LSV C	250 440 LSV C
2.0 Kiloamp	.....	250 240 LSV E	250 340 LSV E	250 440 LSV E
3.0 Kiloamp	.....	250 240 LSV J	250 340 LSV J	250 440 LSV J

# YOKOGAWA ◆ Horizon Line



Type 251 and 255  
Horizon Line

### Specifications

**Accuracy:** All DC and AC iron-vane; ±2% of full-scale, AC rectifier type; ±3% of full scale (with 60 Hz sine wave at 25° C). When standard 60 Hz iron vane ammeters are used at the extreme limits of 20 or 400 Hz, additional error (approx. .75%) may be experienced. Expanded-scale voltmeters; ±.5% of full scale value.

**ANSI Specification:** All meters meet ANSI Specifications C-39.1.

**Overload:** Voltmeters (AC and DC) - 50% momentary, 20% sustained. Ammeters (AC and DC) momentary: 10 times the rated current for 10 consecutive intervals of .5 second with a 1 minute interval between successive applications; sustained: 20% for six hours.

**Scale Data:** 90 degree rotation.

#### Scale Length:

Size	Horizon Line
1½"	1.50"
2½"	2.06"
3½"	2.88"
4½"	3.93"

**Insulation Level:** All meters (except 1½"), 2600 VRMS Hi-pot, 1½"-1500 VRMS Hi-pot.

**Burden Data:** AC ammeter-5 amps, 0.5 va max. 0.5 power-factor lagging, @60 Hz. AC Voltmeter-unity power factor.

#### Response Time and Overshoot:

Response time: 3 seconds (max.) for 2½",

3½", 4½" size for microammeters: 2 seconds (max.) for all other DC ratings, and 2.5 seconds (max.) for AC ratings. Maximum of 40% overshoot.

**Dimensions:** See page 36-37.

#### How To Order

To Order Horizon Line panel meters use the appropriate catalog numbers provided in the tables. Taut band instruments have a 251 prefix number, Pivot & jewel instruments have a 255 prefix number, except AC Iron Vane prefix which is 251.

#### Ordering Examples:

- 21/2", 300 V DC Voltmeter, zero left, taut band - 251 220 RXRX
- 21/2", 300 V DC Voltmeter, zero left, pivot & jewel - 255 220 RXRX
- 21/2", 300 VAC (Iron Vane) pivot & jewel - 251 244 RXRX

Severe-duty meters are available to meet UL 1437 requirements. UL version, with flame retardant window and base, is not offered in 11/2". To order, add /UL or /CUL after catalog number, or contact factory. For ratings and scales not listed contact factory.