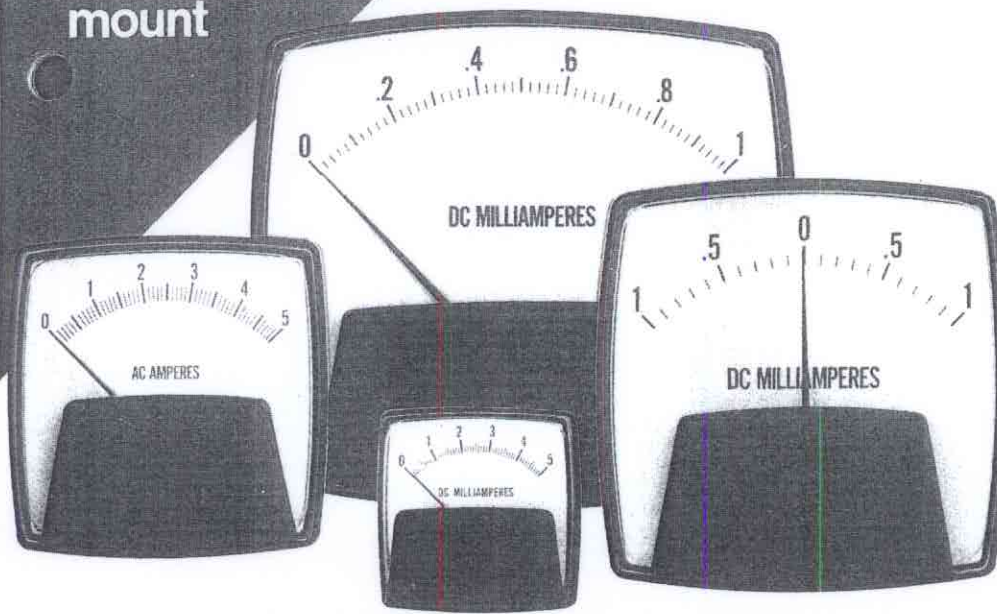


# 'PB' series

surface mount

# INDUSTRIAL PANEL BOARD METERS

— 1½", 2½", 3½", 4½" sizes



The Modutec PB Series was designed to meet the expressed need of many customers for meters with a hard-hitting, big-dial-area "industrial" look.

PB Series meters are available in the sizes shown above, and in all the types and ranges. Mounting stud configuration complies with ANSI standards: number of studs is as follows: 1½" meters - 2 studs; 2½" and 3½" meters - 3 studs; 4½" meters - 4 studs. Meters in sizes 1½", 2½", and 3½" will be supplied in 4-stud version at no extra cost - see note below.

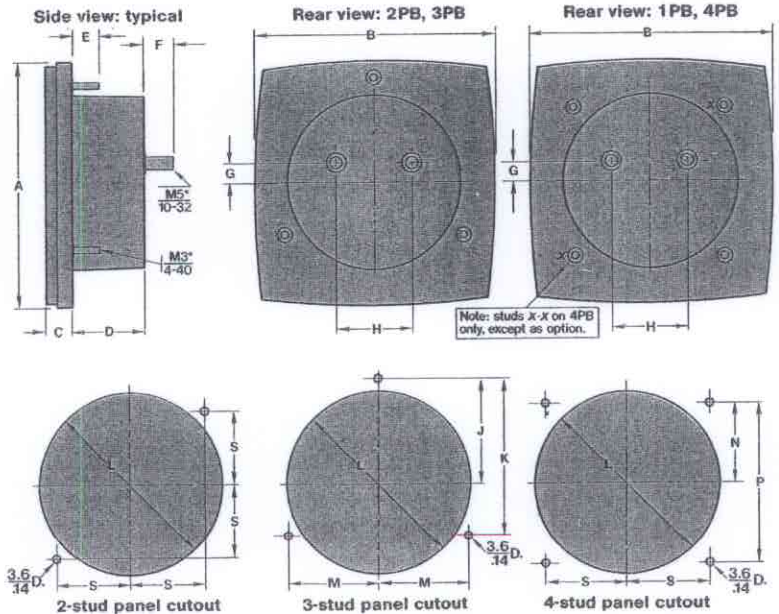
AC meters in this series are offered in both d'Arsonval (rectifier type) and iron-vane versions. The latter have the virtue of greater standard accuracy and relative insensitivity to input distortion, while the rectifier type is less affected by frequency variations.

**Options:** Many desirable options are available at modest additional cost. These are described on pages 39-43.

## DIMENSIONAL DATA

		A	B	C	D	E	F	G	H
1PB	mm.	44.5	44.5	12.7	29.0	12.7	6.35	4.06	22.4
	in.	1.75	1.75	.50	1.14	.50	.25	.16	.95
2PB	mm.	68.6	68.6	12.7	28.6	12.7	16.3	9.40	28.4
	in.	2.70	2.70	.50	1.124	.50	.64	.37	1.12
3PB	mm.	88.9	88.9	12.7	24.5	12.7	16.3	1.3	28.4
	in.	3.50	3.50	.50	1.124	.50	.64	.05	1.12
4PB	mm.	112.0	123.2	12.7	30.5	12.7	16.3	0.38	28.4
	in.	4.41	4.85	.50	1.20	.50	.64	.015	1.12

		J	K	L	M	N	P	S
1PB	mm.			38.3		16.7	33.4	16.7
	in.			1.53		.656	1.31	.656
2PB	mm.	31.0	46.5	55.9	26.8	23.9	47.8	23.9
	in.	1.22	1.83	2.20	1.06	.94	1.88	.94
3PB	mm.	40.1	60.2	69.9	34.8	28.6	57.2	28.6
	in.	1.58	2.37	2.75	1.37	1.125	2.25	1.125
4PB	mm.			70.9		51.6	90.4	50.8
	in.			2.79		2.03	3.56	2.00



## SPECIFICATIONS

PB Series meters meet or exceed the performance requirements of ANSI C39.1. Their specifications are identical with those of the S Series (page 3) except:

Scale arc: 90°

Scale lengths:

1½" meters - 1.26"

2½" meters - 2.10"

3½" meters - 2.90"

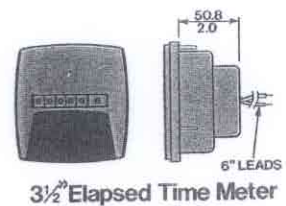
4½" meters - 4.00"

## TYPES AVAILABLE (UL recognition optional)

- DC:** Microammeters  
 Microammeters, logarithmic  
 Microammeters, suppressed zero  
 Milliammeters  
 Milliammeters, suppressed zero  
 Ammeters  
 Millivoltmeters  
 Voltmeters  
 Voltmeters, expanded scale  
 Null meters
- AC:** Iron-vane type, rectifier type:  
 Milliammeters  
 Ammeters  
 Voltmeters  
 Voltmeters, expanded scale

Pyrometers  
 Elapsed Time meters

Frequency meters



## NOTE ON MOUNTING CONFIGURATION

PB series meters are normally furnished for mounting as shown above. If 4-stud mounting of 1½", 2½", or 3½" meters is required, add the suffix letter "B" to the catalog number. There is no added charge for this option.



# PB SERIES

Surface mount

# RANGES, RESISTANCES, TYPE



Range	Resist	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code
<b>DC AMMETERS — Taut band, moving coil: Zero center, 50mV, shunt-rated (for shunts see page 53)</b>									
75-0-75	10	1PBS-DAA-75U75	FEL	2PBS-DAA-75U75	FEL	3PBS-DAA-75U75	FCL	4PBS-DAA-75U75	FEM
100-0-100	10	1PBS-DAA-1H1	FEL	2PBS-DAA-1H1	FEL	3PBS-DAA-1H1	FCL	4PBS-DAA-1H1	FEM
200-0-200	10	1PBS-DAA-2H2	FEL	2PBS-DAA-2H2	FEL	3PBS-DAA-2H2	FCL	4PBS-DAA-2H2	FEM
300-0-300	10	1PBS-DAA-3H3	FEL	2PBS-DAA-3H3	FEL	3PBS-DAA-3H3	FCL	4PBS-DAA-3H3	FEM
400-0-400	10	1PBS-DAA-4H4	FEL	2PBS-DAA-4H4	FEL	3PBS-DAA-4H4	FCL	4PBS-DAA-4H4	FEM
500-0-500	10	1PBS-DAA-5H5	FEL	2PBS-DAA-5H5	FEL	3PBS-DAA-5H5	FCL	4PBS-DAA-5H5	FEM

Range	Resist	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code
<b>DC MILLIVOLTMETERS — Taut band, moving coil: Zero left</b>									
0-50	10Ω	1PB-DMV-050	FEZ	2PB-DMV-050	FEZ	3PB-DMV-050	FEL	4PB-DMV-050	FAD
0-100	20Ω	1PB-DMV-100	FEZ	2PB-DMV-100	FEZ	3PB-DMV-100	FEL	4PB-DMV-100	FAD

Range	Resist	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code
<b>DC MILLIVOLTMETERS — Taut band, moving coil: Zero center</b>									
50-0-50	10Ω	1PB-DMV-50U50	FEK	2PB-DMV-50U50	FEK	3PB-DMV-50U50	FAE	4PB-DMV-50U50	FEM
100-0-100	20Ω	1PB-DMV-1H1	FEK	2PB-DMV-1H1	FEK	3PB-DMV-1H1	FAE	4PB-DMV-1H1	FEM

Range	Resist	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code
<b>DC VOLTMETERS — Taut band, moving coil: Zero left</b>									
0-1	1000Ω/V	1PB-DV-001	FEZ	2PB-DV-001	FEZ	3PB-DV-001	FEL	4PB-DV-001	FAD
0-1.5	1000Ω/V	1PB-DV-0015	FEZ	2PB-DV-0015	FEZ	3PB-DV-0015	FEL	4PB-DV-0015	FAD
0-2	1000Ω/V	1PB-DV-002	FEZ	2PB-DV-002	FEZ	3PB-DV-002	FEL	4PB-DV-002	FAD
0-3	1000Ω/V	1PB-DV-003	FEZ	2PB-DV-003	FEZ	3PB-DV-003	FEL	4PB-DV-003	FAD
0-5	1000Ω/V	1PB-DV-005	FEZ	2PB-DV-005	FEZ	3PB-DV-005	FEL	4PB-DV-005	FAD
0-10	1000Ω/V	1PB-DV-010	FEZ	2PB-DV-010	FEZ	3PB-DV-010	FEL	4PB-DV-010	FAD
0-15	1000Ω/V	1PB-DV-015	FEZ	2PB-DV-015	FEZ	3PB-DV-015	FEL	4PB-DV-015	FAD
0-20	1000Ω/V	1PB-DV-020	FEZ	2PB-DV-020	FEZ	3PB-DV-020	FEL	4PB-DV-020	FAD
0-25	1000Ω/V	1PB-DV-025	FEZ	2PB-DV-025	FEZ	3PB-DV-025	FEL	4PB-DV-025	FAD
0-30	1000Ω/V	1PB-DV-030	FEZ	2PB-DV-030	FEZ	3PB-DV-030	FEL	4PB-DV-030	FAD
0-40	1000Ω/V	1PB-DV-040	FEZ	2PB-DV-040	FEZ	3PB-DV-040	FEL	4PB-DV-040	FAD
0-50	1000Ω/V	1PB-DV-050	FEZ	2PB-DV-050	FEZ	3PB-DV-050	FEL	4PB-DV-050	FAD
0-75	1000Ω/V	1PB-DV-075	FEZ	2PB-DV-075	FEZ	3PB-DV-075	FEL	4PB-DV-075	FAD
0-80	1000Ω/V	1PB-DV-080	FEZ	2PB-DV-080	FEZ	3PB-DV-080	FEL	4PB-DV-080	FAD
0-100	1000Ω/V	1PB-DV-100	FEZ	2PB-DV-100	FEZ	3PB-DV-100	FEL	4PB-DV-100	FAD
0-150	1000Ω/V	1PB-DV-150	FEZ	2PB-DV-150	FEZ	3PB-DV-150	FEL	4PB-DV-150	FAD
0-200	1000Ω/V	1PB-DV-200	FEZ	2PB-DV-200	FEZ	3PB-DV-200	FEL	4PB-DV-200	FAD
0-250	1000Ω/V	1PB-DV-250	FEZ	2PB-DV-250	FEZ	3PB-DV-250	FEL	4PB-DV-250	FAD
0-300	1000Ω/V	1PB-DV-300	FEL	2PB-DV-300	FEL	3PB-DV-300	FAR	4PB-DV-300	FAD
0-500	1000Ω/V	1PB-DV-500	FEL	2PB-DV-500	FEL	3PB-DV-500	FAR	4PB-DV-500	FAD
0-600	10KΩ/V	1PB-DV-600	FEL	2PB-DV-600	FEL	3PB-DV-600	FAR	4PB-DV-600	FAD
0-750	10KΩ/V	1PB-DV-750	FEL	2PB-DV-750	FEL	3PB-DV-750	FAR	4PB-DV-750	FAD
0-1000	10KΩ/V	1PB-DV-1000	FAW	2PB-DV-1000	FAW	3PB-DV-1000	FBT	4PB-DV-1000	FAD

Range	Resist	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code
<b>DC VOLTMETERS — Taut band, moving coil: Zero center</b>									
5-0-5	1000Ω/V	1PB-DV-5U5	FES	2PB-DV-5U5	FES	3PB-DV-5U5	FAL	4PB-DV-5U5	FBK
10-0-10	1000Ω/V	1PB-DV-10U10	FES	2PB-DV-10U10	FES	3PB-DV-10U10	FAL	4PB-DV-10U10	FBK
15-0-15	1000Ω/V	1PB-DV-15U15	FES	2PB-DV-15U15	FES	3PB-DV-15U15	FAL	4PB-DV-15U15	FBK
25-0-25	1000Ω/V	1PB-DV-25U25	FES	2PB-DV-25U25	FES	3PB-DV-25U25	FAL	4PB-DV-25U25	FBK
50-0-50	1000Ω/V	1PB-DV-50U50	FES	2PB-DV-50U50	FES	3PB-DV-50U50	FAL	4PB-DV-50U50	FBK
100-0-100	1000Ω/V	1PB-DV-1H1	FES	2PB-DV-1H1	FES	3PB-DV-1H1	FAL	4PB-DV-1H1	FBK
150-0-150	1000Ω/V	1PB-DV-1.5H1.5	FES	2PB-DV-1.5H1.5	FES	3PB-DV-1.5H1.5	FAL	4PB-DV-1.5H1.5	FBK
300-0-300	1000Ω/V	1PB-DV-3H3	FAL	2PB-DV-3H3	FAL	3PB-DV-3H3	FBK	4PB-DV-3H3	FBM
500-0-500	1000Ω/V	1PB-DV-5H5	FAL	2PB-DV-5H5	FAL	3PB-DV-5H5	FBK	4PB-DV-5H5	FBM
600-0-600	10KΩ/V	1PB-DV-6H6	FAL	2PB-DV-6H6	FAL	3PB-DV-6H6	FBK	4PB-DV-6H6	FBM

**DC VOLTMETERS — Taut band, moving coil: High torque, ruggedized movements**  
 All DC voltmeters, zero left or center, are available in high torque versions with identical range and terminal resistance. To order add the prefix letter "T" to the model number and add 10% to the price.

Range	Resist	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code
<b>DC VOLTMETERS — Taut band, moving coil: Expanded scale — Accuracy ±0.5%*</b>									
5±10%	250Ω/V			2PB-DVX-005-10	FDX	3PB-DVX-005-10	FFH	4PB-DVX-005-10	FEG
12±10%	250Ω/V			2PB-DVX-012-10	FDX	3PB-DVX-012-10	FFH	4PB-DVX-012-10	FEG
15±10%	250Ω/V			2PB-DVX-015-10	FDX	3PB-DVX-015-10	FFH	4PB-DVX-015-10	FEG
28±10%	250Ω/V			2PB-DVX-028-10	FDX	3PB-DVX-028-10	FFH	4PB-DVX-028-10	FEG
48±10%	250Ω/V			2PB-DVX-048-10	FDX	3PB-DVX-048-10	FFH	4PB-DVX-048-10	FEG
120±10%	250Ω/V			2PB-DVX-120-10	FDX	3PB-DVX-120-10	FFH	4PB-DVX-120-10	FEG
150±10%	250Ω/V			2PB-DVX-150-10	FDX	3PB-DVX-150-10	FFH	4PB-DVX-150-10	FEG
300±10%	250Ω/V			2PB-DVX-300-10	FDX	3PB-DVX-300-10	FFH	4PB-DVX-300-10	FEG

\*Other input ranges can be supplied on special order. In addition, the ranges shown above can be restricted to ±5% around the nominal so as to obtain increased accuracy (±0.25%), or range tolerance can be widened to ±20% with a reduction in accuracy to ±1.0%.



# PB SERIES

Surface mount

# RANGES, RESISTANCES, TYPES



Range Resist.

Catalog No.

Price Code

Catalog No.

Price Code

Catalog No.

Price Code

Catalog No.

Price Code

## AC MILLIAMMETERS & AMMETERS — Taut band, moving coil: High torque, ruggedized movements

All AC milliammeters and AC ammeters are available in high torque versions with identical ranges and terminal resistance. To order add the prefix letter "T" to the model number and add 10% to the price.

### AC AMMETERS — Iron vane: Self-contained, 60Hz nominal input [50-400Hz range]

0-1	0.20			2PB-AAC-001	RAC	3PB-AAC-001	RAD	4PB-AAC-001	FAB
0-1.5	0.012			2PB-AAC-0015	RAC	3PB-AAC-0015	RAD	4PB-AAC-0015	FAB
0-2	0.07			2PB-AAC-002	RAC	3PB-AAC-002	RAD	4PB-AAC-002	FAB
0-3	0.048			2PB-AAC-003	RAC	3PB-AAC-003	RAD	4PB-AAC-003	FAB
0-5	0.022			2PB-AAC-005	RAC	3PB-AAC-005	RAD	4PB-AAC-005	FAB
0-10	0.005			2PB-AAC-010	RAC	3PB-AAC-010	RAD	4PB-AAC-010	FAB
0-15	0.003			2PB-AAC-015	RAC	3PB-AAC-015	RAD	4PB-AAC-015	FAB
0-20	0.002			2PB-AAC-020	RAD	3PB-AAC-020	RAE	4PB-AAC-020	RAJ
0-25	0.002			2PB-AAC-025	RAD	3PB-AAC-025	RAE	4PB-AAC-025	RAJ
0-30	0.0015			2PB-AAC-030	RAD	3PB-AAC-030	RAE	4PB-AAC-030	RAJ
0-50	0.001			2PB-AAC-050	RAD	3PB-AAC-050	RAE	4PB-AAC-050	RAJ

### AC AMMETERS — Iron vane: Transformer rated, 0-5A, 60Hz nominal input [50-400Hz range]\*

0-60	0.022			2PB-AACX-060	RAC	3PB-AACX-060	RAD	4PB-AACX-060	RAB
0-75	0.022			2PB-AACX-075	RAC	3PB-AACX-075	RAD	4PB-AACX-075	RAB
0-100	0.022			2PB-AACX-100	RAC	3PB-AACX-100	RAD	4PB-AACX-100	RAB
0-150	0.022			2PB-AACX-150	RAC	3PB-AACX-150	RAD	4PB-AACX-150	RAB
0-200	0.022			2PB-AACX-200	RAC				
0-300	0.022			2PB-AACX-300	RAC	3PB-AACX-300	RAD	4PB-AACX-300	RAB
0-500	0.022			2PB-AACX-500	RAC	3PB-AACX-500	RAD	4PB-AACX-500	RAB
0-600	0.022			2PB-AACX-600	RAC	3PB-AACX-600	RAD	4PB-AACX-600	RAB
0-800	0.022			2PB-AACX-800	RAC	3PB-AACX-800	RAD	4PB-AACX-800	RAB
0-1000	0.022			2PB-AACX-1000	RAC	3PB-AACX-1000	RAD	4PB-AACX-1000	RAB
0-1500	0.022			2PB-AACX-1500	RAC	3PB-AACX-1500	RAD	4PB-AACX-1500	RAB
0-2000	0.022			2PB-AACX-2000	RAC	3PB-AACX-2000	RAD	4PB-AACX-2000	RAB

\*0-5A AC ammeter with scale as indicated, for use with external current transformer

### AC VOLTMETERS — Taut band, moving coil: Self-contained, rectifier type

0-3	900Ω/V	1PB-AV-003	FBE	2PB-AV-003	FBE	3PB-AV-003	FEN	4PB-AV-003	FAM
0-5	900Ω/V	1PB-AV-005	FBE	2PB-AV-005	FBE	3PB-AV-005	FEN	4PB-AV-005	FAM
0-10	900Ω/V	1PB-AV-010	FBE	2PB-AV-010	FBE	3PB-AV-010	FEN	4PB-AV-010	FAM
0-15	900Ω/V	1PB-AV-015	FBE	2PB-AV-015	FBE	3PB-AV-015	FEN	4PB-AV-015	FAM
0-25	900Ω/V	1PB-AV-025	FBE	2PB-AV-025	FBE	3PB-AV-025	FEN	4PB-AV-025	FAM
0-50	900Ω/V	1PB-AV-050	FBE	2PB-AV-050	FBE	3PB-AV-050	FEN	4PB-AV-050	FAM
0-100	900Ω/V	1PB-AV-100	FBE	2PB-AV-100	FBE	3PB-AV-100	FEN	4PB-AV-100	FAM
0-150	900Ω/V	1PB-AV-150	FBE	2PB-AV-150	FBE	3PB-AV-150	FEN	4PB-AV-150	FAM
0-300	900Ω/V	1PB-AV-300	FEN	2PB-AV-300	FEN	3PB-AV-300	FAM	4PB-AV-300	FFB
0-500	900Ω/V	1PB-AV-500	FEN	2PB-AV-500	FEN	3PB-AV-500	FAM	4PB-AV-500	FFB
0-600	900Ω/V	1PB-AV-600	FEN	2PB-AV-600	FEN	3PB-AV-600	FAM	4PB-AV-600	FFB

### AC VOLTMETERS — Taut band, moving coil: Transformer rated, 0-150V, rectifier type\*

0-750		1PB-AVXX-750	FFM	2PB-AVXX-750	FFM	3PB-AVXX-750	FAN	4PB-AVXX-750	FAM
0-1500		1PB-AVXX-1500	FFM	2PB-AVXX-1500	FFM	3PB-AVXX-1500	FAN	4PB-AVXX-1500	FAM
0-3000		1PB-AVXX-3000	FFM	2PB-AVXX-3000	FFM	3PB-AVXX-3000	FAN	4PB-AVXX-3000	FAM

\*0-150V AC voltmeter with scale as indicated, for use with external potential transformer (furnished by user)

### AC VOLTMETERS — Taut band, moving coil: Expanded scale

Range	Resist.	Accuracy	Catalog No.	Price Code	Catalog No.	Price Code	Catalog No.	Price Code
105-125	250Ω/V	±0.5%	2PB-AVX-115-10	FEJ	3PB-AVX-115-10	FEH	4PB-AVX-115-10	FFH
210-150	250Ω/V	±0.5%	2PB-AVX-230-10	FEJ	3PB-AVX-230-10	FEH	4PB-AVX-230-10	FFH
95-135	250Ω/V	±1.0%	2PB-AVX-115-20	FEJ	3PB-AVX-115-20	FEH	4PB-AVX-115-20	FFH
190-270	250Ω/V	±0.1%	2PB-AVX-230-20	FEJ	3PB-AVX-230-20	FEH	4PB-AVX-230-20	FFH

### AC VOLTMETERS — Taut band, moving coil: High torque ruggedized movements

AC voltmeters in high torque versions with identical range and terminal resistance. To order add the prefix "T" to the model number and add 10% to the price.

### AC VOLTMETERS — Iron vane: Self-contained, 60Hz nominal input [50Hz with slightly reduced accuracy]

0-3	11.1			2PB-AVC-003	RAA	3PB-AVC-003	RAG	4PB-AVC-003	RAP
0-5	25			2PB-AVC-005	RAA	3PB-AVC-005	RAG	4PB-AVC-005	RAP
0-10	100			2PB-AVC-010	RAA	3PB-AVC-010	RAG	4PB-AVC-010	RAP
0-15	225			2PB-AVC-015	RAA	3PB-AVC-015	RAG	4PB-AVC-015	RAP
0-30	900			2PB-AVC-030	RAA	3PB-AVC-030	RAG	4PB-AVC-030	RAP