







### Features:

- Multi-ganged—up to 6 gangs
- Excellent 100,000 cycles life
- **Rotary and Momentary Switch options**
- **Push-lock options**
- Concentric shaft option
- Center tap option
- PCB pins



### **Description:**

9mm Rotary Potentiometer, with metal shaft and bushing. Options include audio and linear tapers; knurled, flatted and slotted shafts.

### **Applications:**

- Audio / video equipment / Amplifiers / Mixers
- TV and multimedia sound systems / Portable electronics

### **Model Styles Available:**

•	Side Adjust, 1 to 6 gangs	P09xN
•	Side Adjust, 1 to 4 gangs, w/Rotary switch	P09xS
•	Side Adjust, 1 to 4 gangs, w/Momentary switch	P09xM
•	Side Adjust, 1 gang, w/ Rotary and	P091B
	Momentary switches	
•	Top Adjust, 1 or 2 gangs	P09x5N
•	Top Adjust, 1 gang w/Rotary switch	P0915S
•	Side Adjust, with Push-Lock, 1 or 2 gangs	P09xP
•	With Concentric shaft, 2 to 4 gangs	P09xC
•	With Center Tap, 2 gangs only	P092T

### **Electrical Characteristics**

### T<sub>A</sub> = 25°C unless otherwise noted

Resistance Range	1KΩ to 1MΩ
Standard Resistance Tolerance	± 20%
Residual Resistance	20 ohms max
Resistance Taper	Audio (10A, 15A, 15C), Linear (1B) - see note 3
Maximum Operating Voltage	50Vac
Rated Power	Linear Taper B: 0.05W
Rated Power	Other Tapers: 0.025W
Dielectric Strength	300 Vac , 1 minute
Rotational Noise	100mV max
Insulation Resistance	>100M ohms at 250 Vdc
Gang Error (Multi-ganged)	-40dB to 0dB, ±3dB

# Model P09x Series



# **Rotary Switch Characteristics**

### T<sub>A</sub> = 25°C unless otherwise noted

Switch Circuit	SPST
Contact Resistance	<100mohms
Rated Power	3.0A at 16Vdc
Switch Torque	100-350 gf.cm
Switch Rotational Angle	50° Max.
Switch Life	15,000 cycles min.

### **Momentary Switch Characteristics**

### T<sub>A</sub> = 25°C unless otherwise noted

Switch Circuit	SPST
Contact Resistance	<100mohms
Rated Power	0.5A at 12Vdc
Switch Torque	250-550 gf.cm
Switch Push Stroke Length	0.5 +0.5/-0.3 mm
Switch Life	15,000 cycles min.

### **Mechanical Characteristics**

### T<sub>A</sub> = 25°C unless otherwise noted

R	
Mechanical Travel (Rotational angle)	300° ± 10°
Rotational Torque	35 to 90 gf.cm
Rotational Stop Strength, Minimum	3.0kgf.cm
Shaft Pull Strength, Minimum	6.0 kgf
Detent Torque	50 to 200 gf.cm
Nut Tightening Strength, Minimum	8.0 kgf
Rotational Life	100,000 cycles

### **Environmental Characteristics**

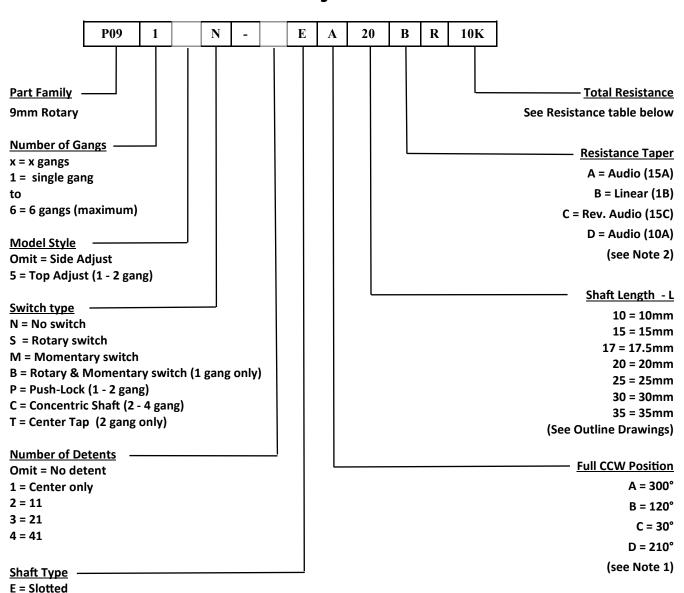
### T<sub>A</sub> = 25°C unless otherwise noted

Operating Temperature	-10°C to 70°C
IP Rating	IP50
	Compatible with Industry standard soldering processes:
Soldering Condition	Manual: SAC 270 °C max. for 3 seconds.
	Wave: SAC 260 °C max. for 5 seconds.
RoHS	Please refer to TT Electronics Website
REACH	Please refer to TT Electronics Website

### Model P09x Series



### **Ordering Information**



Resistance table										
Resistance (Ohms)	1,000	2,000	5,000	10,000	20,000	50,000	100,000	200,000	500,000	1,000,000
Code	1K	2K	5K	10K	20K	50K	100K	200K	500K	1MEG

F = Flatted Q = Split knurled

### Model P09x Series



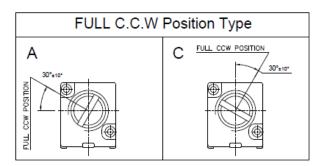
### **Note 1: Shaft Position**

Models: P09xN, P09xS, P09xM, P091B, P09x5N, P0915S, P09xP, P09xT

### F Shaft Type

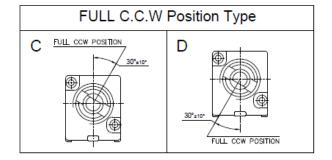
# FULL C.C.W Position Type A B C FULL CCW POSITION D 30°±10° FULL CCW POSITION D 30°±10° FULL CCW POSITION

### E/Q Shaft Type

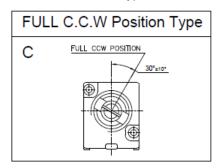


Models: P09xC

### F Shaft Type



### E/Q Shaft Type

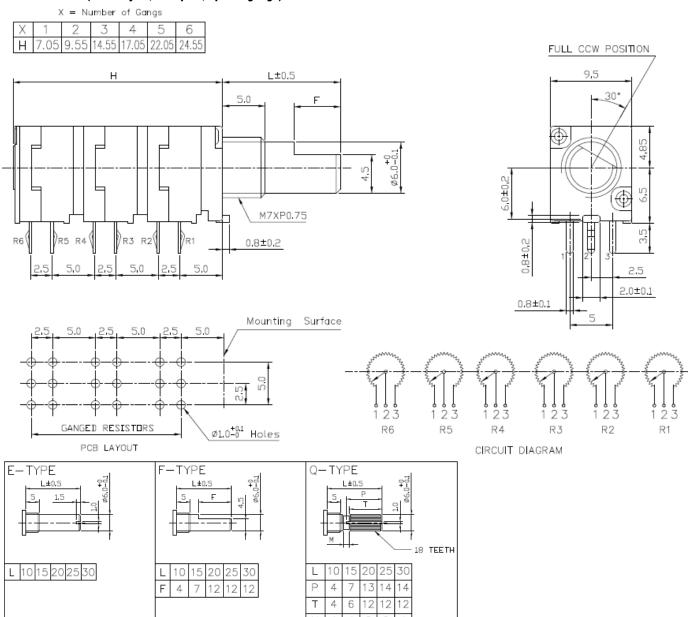


# Model P09x Series



### **Outline Drawings**

### Model P09xN (Side Adjust, PCB pins, up to 6 gangs)

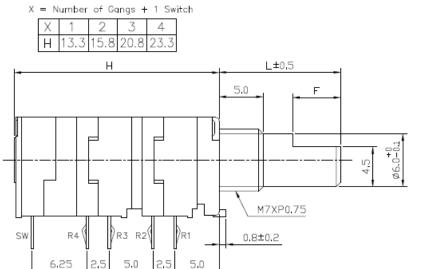


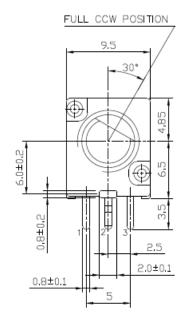
# Model P09x Series

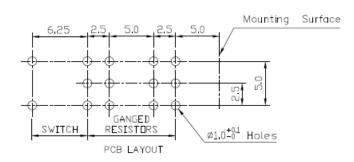


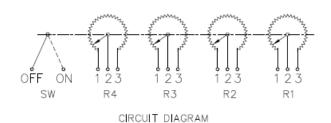
### **Outline Drawings**

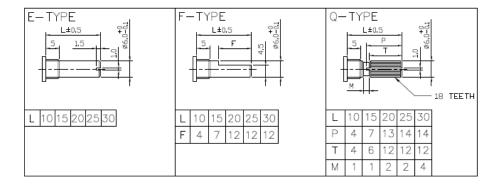
### Model P09xS (Side Adjust, PCB pins, up to 4 gangs with Rotary Switch)









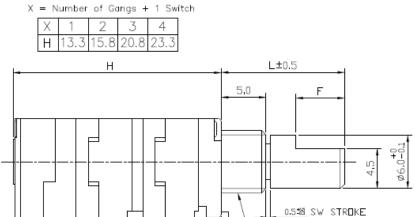


### Model P09x Series



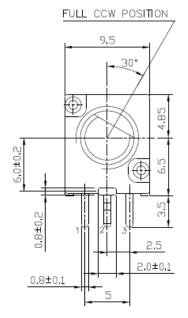
### **Outline Drawings**

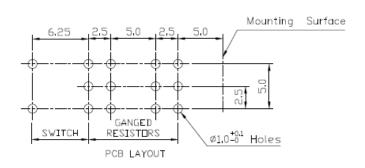
### Model P09xM (Side Adjust, PCB pins, up to 4 gangs with Momentary Switch)



M7XP0.75

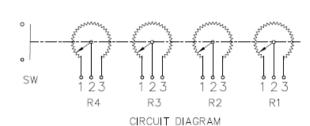
0,8±0,2

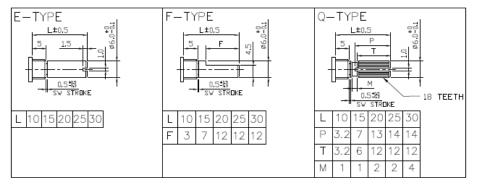




5.0

5.0





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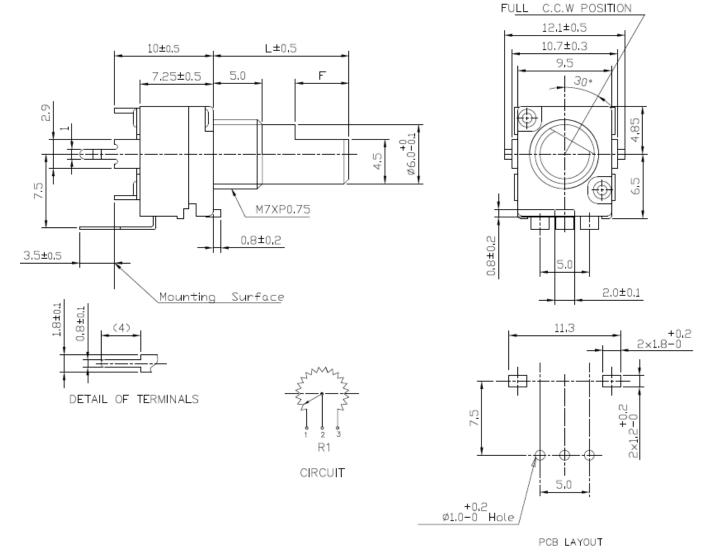
SW

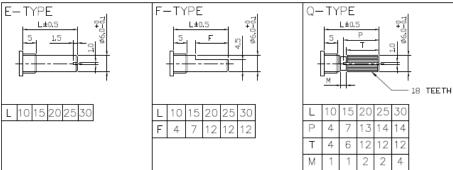
# Model P09x Series



### **Outline Drawings**

### Model P0915N (Top Adjust, PCB pins, 1 gang)





General Note

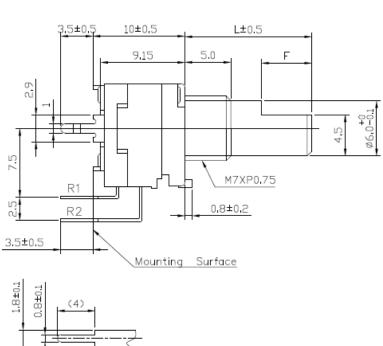
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### Model P09x Series



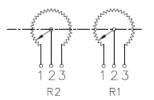
### **Outline Drawings**

### Model P0925N (Top Adjust, PCB pins, 2 gangs)

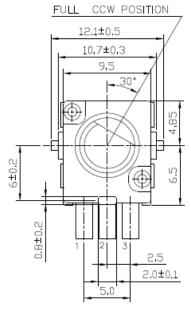


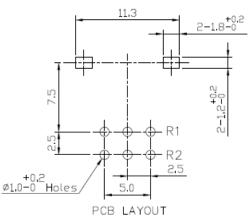


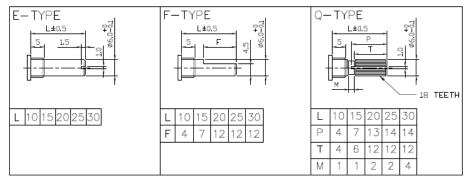




CIRCUIT DIAGRAM





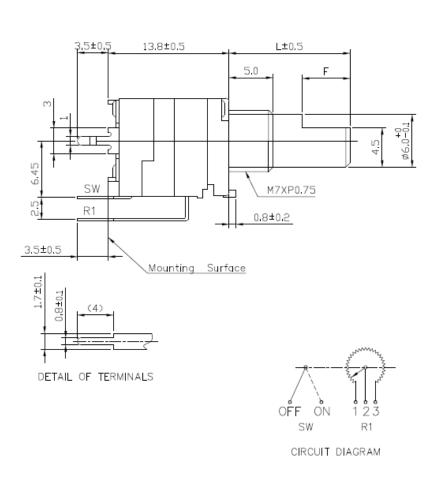


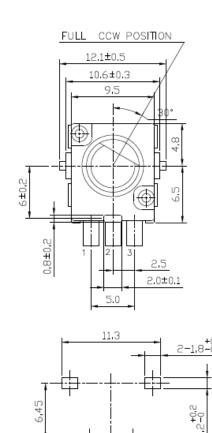
# Model P09x Series

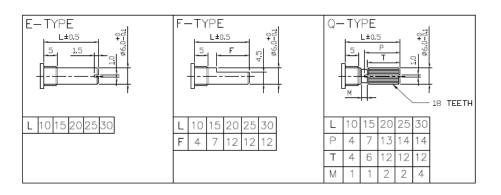


### **Outline Drawings**

### Model P0915S (Top Adjust, PCB pins, with Rotary Switch, 1 gang only)







2,5

PCB LAYOUT

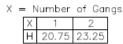
+0,2 ø<u>1.0-0 Holes</u>

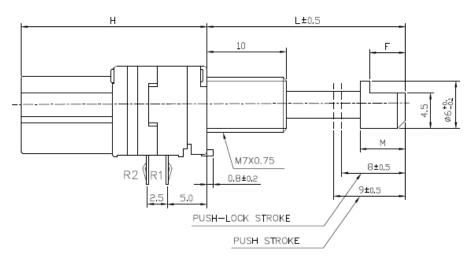
# Model P09x Series

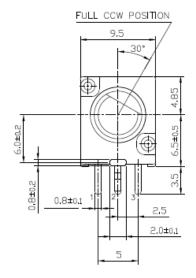


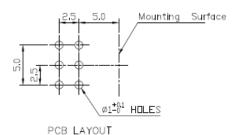
### **Outline Drawings**

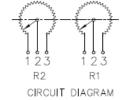
### Model P09xP (Side Adjust, PCB pins, with Push-Lock, up to 2 gangs)

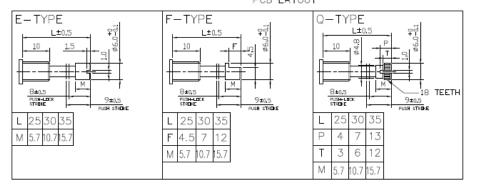










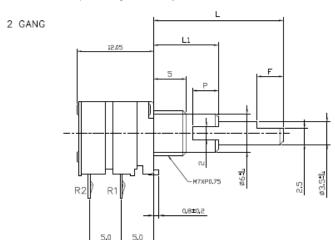


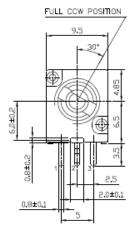
# Model P09x Series



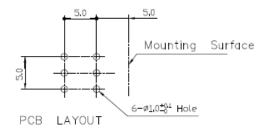
# **Outline Drawings**

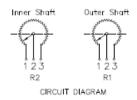
### Model P09xC (Side Adjust, PCB pins with Concentric Shaft, 2 to 4 gangs)



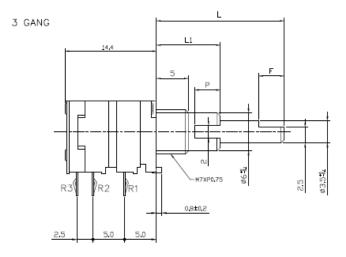


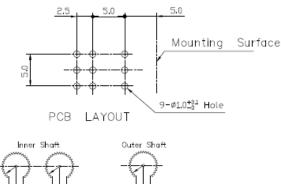






R3



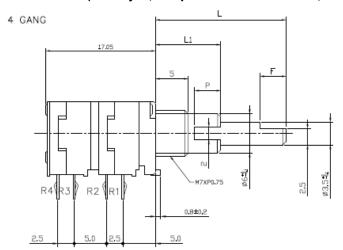


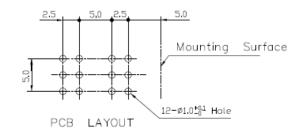
# Model P09x Series

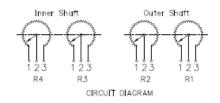


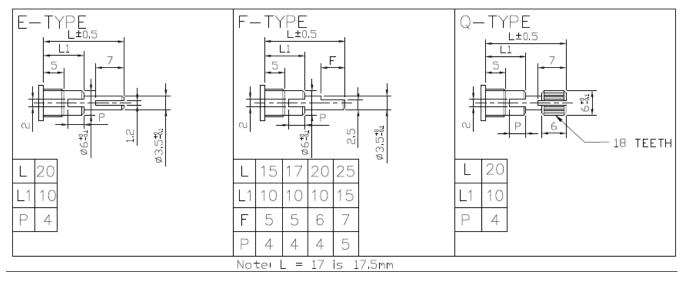
# **Outline Drawings**

### Model P09xC (Side Adjust, PCB pins with Concentric Shaft, 2 to 4 gangs), continued







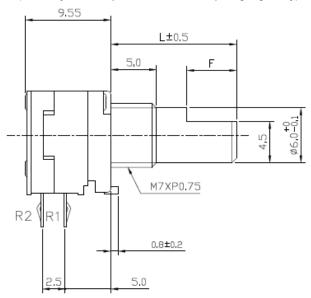


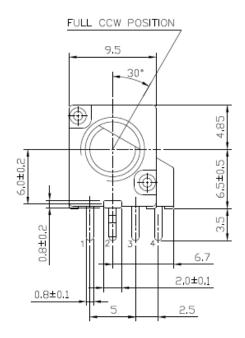
# Model P09x Series

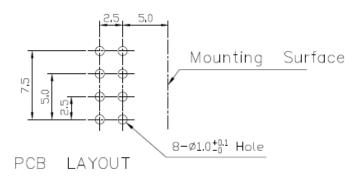


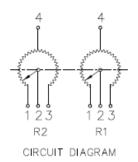
# **Outline Drawings**

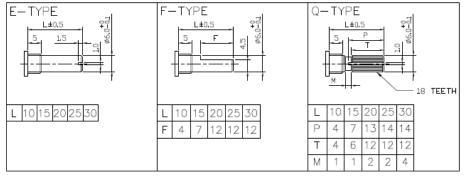
### Model P092T (Side Adjust, PCB pins, with Center Tap, 2 gangs only)









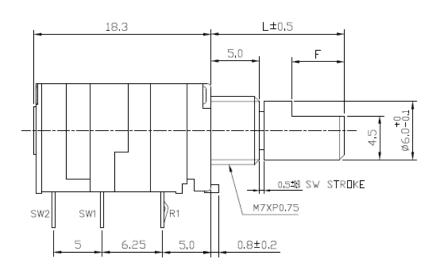


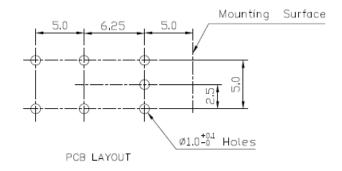
# Model P09x Series

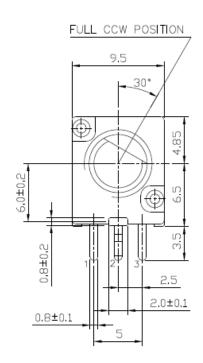


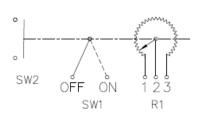
# **Outline Drawings**

Model P091B (Side Adjust, PCB pins, with Rotary and Momentary Switches, 1 gang only)

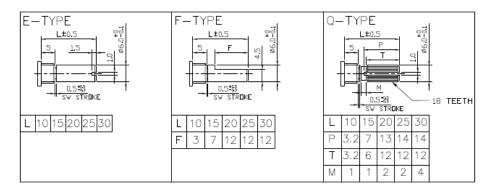








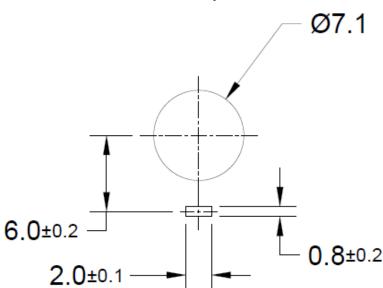
CIRCUIT DIAGRAM



# Model P09x Series



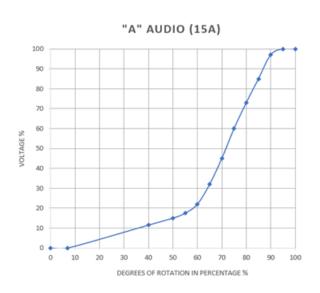
# **Panel Layout**

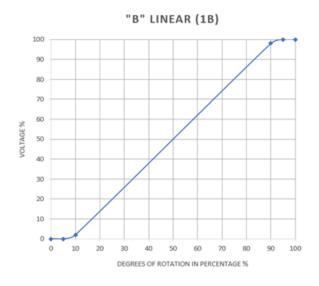


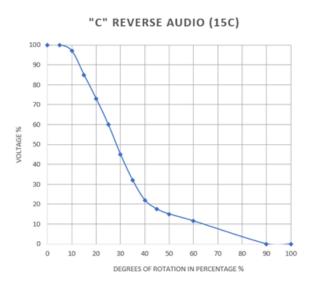
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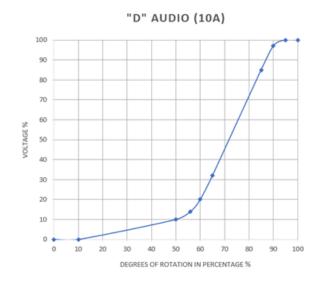


# **Note 2: Standard Tapers**









# **Packaging**

Standard Packaging	Plastic Trays
Hardware	Two flat washers and mounting nut

### **Mouser Electronics**

**Authorized Distributor** 

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

### TT Electronics:

P092N-QC20AR100K P092N-QC20BR100K P091P-EA25BR100K P092N-QC20AR20K P092N-QD15AR10K P091S-EC20BR50K P092N-QC20BR20K P091P-FA25BR100K P092N-QC20AR10K P091P-QA25BR100K P092N-FC20AR20K P091N-FC25BR5K P091N-QC25BR50K P091P-FC25BR10K P091S-FC20BR10K P091S-QC15BR50K P0915N-QC20BR5K P092N-QC15AR20K P0915N-FC20BR10K P0915N-FC20BR5K P0915N-EC15BR2K P0915N-EC15BR100K P0915N-EC15BR10K P091P-FC25CR50K P0915N-FC15AR10K P0915N-FC15BR50K P0915N-FC20BR50K P091P-FC25AR50K P091P-FC30AR50K P0925N-FC15AR10K P0925N-FC15BR50K P0925N-FD15BR50K P092N-EC15BR20K P092N-FC20B500K P092P-FC20AR5K P092P-FC25AR50K P092P-FC25AR5K P092P-FC30AR50K P092S-QC25AR10K P0915NFC15-AR500K P0915NFC15-BR25K P0915N-FC15AR50K P0915N-FC15BR10K P0925N-FC15CR500K P0915N-QC15BR100k P091N-FC25BR10K P091S-FC15BR10K P0915N-QC15AR10K P0915N-EC15BR50K P092N-FC25BR10K P092S-FC15AR10K P092N-QC15AR5K P091N-FC25BR1K P092N-FA15CR50K P092P-FC25AR100K P092N-FC25CR100K P0925N-FC15BR20K P091N-FC25AR500K P091N-FC25AR10K P091N-FC25A500K P092N-FC15AR50K P0915N-QC20BR50K P092N-QC15BR10K P092N-FC25AR20K P091N-QC15BR100K P092N-QC15BR100K P091N-FA15BR10K P092N-FC25AR100K P092N-FC15BR10K P091P-FC25CR2K P0915N-QC15AR100K P0925N-FC20AR100K P091N-FC15AR10K P092N-FC15AR100K P091N-FC25BR100K P092P-FC20AR100K P091N-FC20BR5K P092N-FC25BR100K P092N-FC15AR500K P0915N-QC15AR500K P091N-QC20BR50K P092N-FC15CR20K P094N-FC15AR50K P091N-FA20BR10K P0915N-QC15BR5K P092N-FC15BR20K P091S-FC20BR5K P092N-FA20CR50K P0925N-FA15AR100K P0925N-FC15AR5K P0915N-QC15AR50K P091N-QC15BR10K P092S-QC15BR50K P0925N-FA15AR200K P091N-FC25CR10K P094N-QD15AR20K P0915N-QC15BR50K P092N-FC25AR10K P092N-FC25BR20K P091P-FC25CR5K