

# RTA Series

## 1–4 Poles Coded Rotary Switches



### Features/Benefits

- PCB or hand soldering versions
- Bushing mounting
- Multiple poles
- Decimal and hexadecimal codes
- Screwdriver slot or extended actuator
- RoHS Compliant

### Typical Applications

- Appliances
- Electronic alarm systems
- Medical
- Building automation
- HVAC air conditioning

### Electrical Data

SWITCHING MODE:

MAX. SWITCHING POWER

MAX. SWITCHING CURRENT:

MAX. CARRYING CURRENT:

NOMINAL VOLTAGE AT 50 Hz

CONTACT RESISTANCE:

DIELECTRIC STRENGTH AT 50 Hz

BETWEEN CONTACTS AND

GROUND TERMINALS:

INSULATION RESISTANCE BETWEEN

CONTACTS OR CONTACTS

AND FRAME (500 V ⇒):

NO. OF OPERATIONS:

BOUNCE:

### Silver

BBM

5 VA

150 mA

5 A

60 V

< 150 mΩ

500 V r

10<sup>9</sup> Ω

10,000

< 5 ms

### Gold

BBM

0.5 VA

20 mA

1 A

25 V

< 150 mΩ

500 V r

10<sup>9</sup> Ω

10,000

< 5 ms

### Mechanical Data

MAX. NO. OF BANKS: 1.

OPERATING TORQUE: 5 Ncm±20%.

END STOP TORQUE: < 60 Ncm.

STOP: With/without or adjustable

MOUNTING: By fixed index 9.5 mm (0.374) of center, for bushing mount only

### Materials

BUSHING/HOUSING: PETP Thermoplastic

STATIONARY CONTACTS & TERMINALS: Nickel Plated Brass with additional plating of Gold or Silver.

ROTOR: Gold or Silver plated Brass or PCB.

CODING PLATE: PA thermoplastic

ACTUATOR: Polysulfon thermoplastic

HARDWARE: Stop pin: Aluminum. Ball & Spring: Stainless steel.

Washer: PA. Nut: Brass.

### Environmental Data

OPERATING TEMPERATURE: -20°C to + 70°C -20°C to + 70°C

STORAGE TEMPERATURE: -40°C to + 85°C -40°C to + 85°C

**NOTE:** Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

### Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages K-9 thru K-12. For additional options not shown in catalog, consult Customer Service Center.

**Designation** \_\_\_\_\_

**RTA**

**Termination** \_\_\_\_\_

**P** With PC Thru-hole

**C** With Solder Lugs

**H** Horizontal with PC Thru-hole

**Indexing** \_\_\_\_\_

**2** 22.5 index (coded only)

**3** 30° index (12 positions max.)

**4** 36° index (10 positions max.)

**Switch Function** \_\_\_\_\_

**1W12** SP, 30° Index, 12 pos. no stop

**1W10** SP, 36° Index, 10 pos. no stop

**1S02** SP, 30° /36° Index, 2 pos.

**1S03** SP, 30° /36° Index, 3 pos.

**1S04** SP, 30° /36° Index, 4 pos.

**1S05** SP, 30° /36° Index, 5 pos.

**1S06** SP, 30° /36° Index, 6 pos.

**1S07** SP, 30° /36° Index, 7 pos.

**1S08** SP, 30° /36° Index, 8 pos.

**1S09** SP, 30° /36° Index, 9 pos.

**1S10** SP, 30° /36° Index, 10 pos.

**1S11** SP, 30° Index, 11 pos.

**1S12** SP, 30° Index, 12 pos.

**2S02** DP, 30° /36° Index, 2 pos.

**2S03** DP, 30° /36° Index, 3 pos.

**2S04** DP, 30° /36° Index, 4 pos.

**2S05** DP, 30° /36° Index, 5 pos.

**2S06** DP, 30° Index, 6 pos.

**3S02** 3P, 30° /36° Index, 2 pos.

**3S03** 3P, 30° /36° Index, 3 pos.

**4S02** 4P, 30° /36° Index, 2 pos.

**EW10** Direct + complement, 36° Index, no stop

**EW12** Direct + complement, 30° Index, no stop

**DW16** Direct, 22.5° Index, no stop

**ES \_ \_** Direct + complement, 30°/36° Index, with stop (specify stop position)

**DS \_ \_** Direct, 22.5° Index, with stop (specify stop position)

**Contact Material** \_\_\_\_\_

**S** Silver plated, matte-tin terminal

**P** Gold plated, matte-tin terminal

**Mounting Style** \_\_\_\_\_

**W** Without bushing

**R** 3/8-32 Threaded Bushing

**M** M10x.75 Metric Threaded Bushing

**A** 3/8-32 Threaded Bushing with Offset Bracket

**B** M10x.75 Metric Threaded Bushing with Offset Bracket

**Actuator (max.)** \_\_\_\_\_

**25N** .984 (25.0) with screwdriver slot

**50N** 1.97 (50.0) with screwdriver slot

**FLS** Flush shaft with screwdriver slot and position indicator

**25F** .984 (25.0) Shaft with flat

**06F** .236 (6.0) Shaft with flat

**C** 3/8-32 Threaded Bushing with Straight Bracket

**D** M10x.75 Metric Threaded Bushing with Straight Bracket



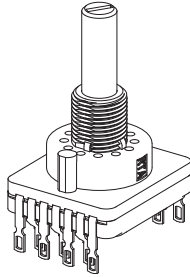
Dimensions are shown: Inch (mm)  
Specifications and dimensions subject to change

# RTA Series 1-4 Poles Coded Rotary Switches

## DESIGNATION



### RTA

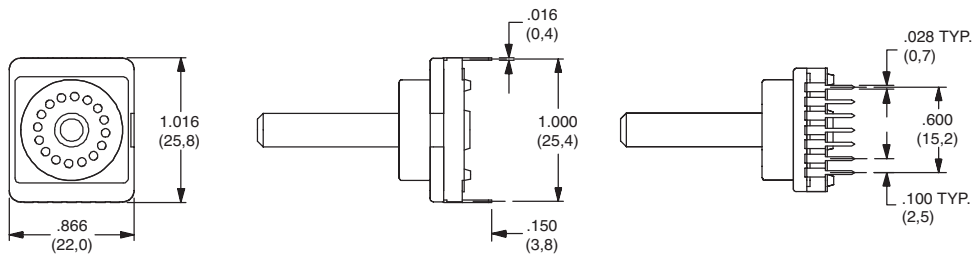


## TERMINATION



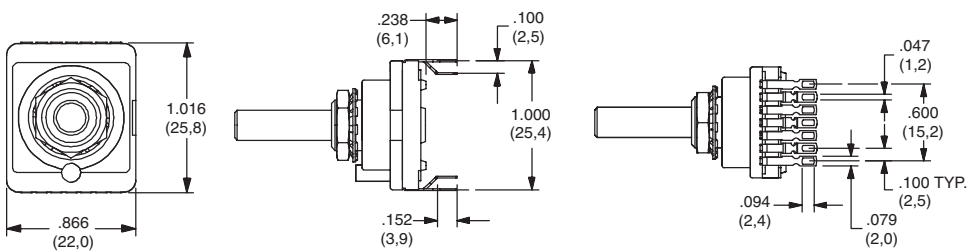
### P

WITH PC PINS



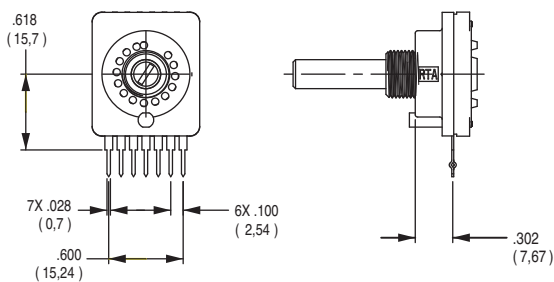
### C

WITH SOLDER LUGS



### H

Horizontal with PC Thru-hole



Note: "H" termination only available with the following options:

1. With A or B mounting styles
2. 36° degree indexing
3. Up to 5 positions max

## INDEXING



**2** 22.5 index, 16 positions max.

**3** 30 index, 12 positions max.

**4** 36 index, 10 positions max.

Both commons must be connected by user to ground.



Third Angle  
Projection

Dimensions are shown: mm  
Specifications and dimensions subject to change



K

Rotary

# RTA Series

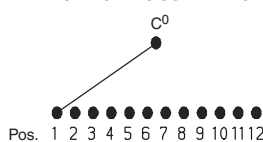
## 1-4 Poles Coded Rotary Switches

### SWITCH FUNCTION

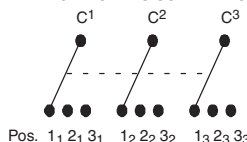


| NO. POLES | MODEL NO.   | SWITCH FUNCTION      | INDEX   |
|-----------|-------------|----------------------|---------|
| SP        | <b>1W12</b> | 12 Positions No Stop | 30°     |
|           | <b>1W10</b> | 10 Positions No Stop | 36°     |
|           | <b>1S02</b> | 2 Positions          | 30°/36° |
|           | <b>1S03</b> | 3 Positions          | 30°/36° |
|           | <b>1S05</b> | 5 Positions          | 30°/36° |
|           | <b>1S06</b> | 6 Positions          | 30°/36° |
|           | <b>1S08</b> | 8 Positions          | 30°/36° |
|           | <b>1S09</b> | 9 Positions          | 30°/36° |
|           | <b>1S10</b> | 10 Positions         | 30°/36° |
|           | <b>1S11</b> | 11 Positions         | 30°     |
|           | <b>1S12</b> | 12 Positions         | 30°     |

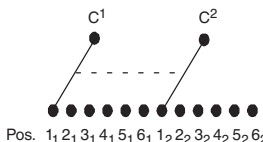
SP MODELS SCHEMATIC



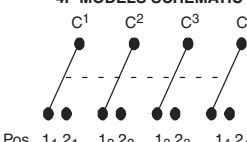
3P MODELS SCHEMATIC



DP MODELS SCHEMATIC



4P MODELS SCHEMATIC

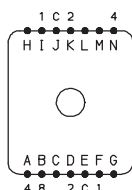


| NO. POLES | MODEL NO.   | SWITCH FUNCTION     | INDEX   |
|-----------|-------------|---------------------|---------|
| DP        | <b>2W05</b> | 5 Positions No Stop | 30°/36° |
|           | <b>2W06</b> | 6 Positions No Stop | 30°     |
|           | <b>2S02</b> | 2 Positions         | 30°/36° |
|           | <b>2S03</b> | 3 Positions         | 30°/36° |
|           | <b>2S04</b> | 4 Positions         | 30°/36° |
|           | <b>2S05</b> | 5 Positions         | 30°/36° |
| 3P        | <b>3S02</b> | 2 Positions         | 30°/36° |
|           | <b>3S03</b> | 3 Positions         | 30°/36° |
| 4P        | <b>4S02</b> | 2 Positions         | 30°/36° |

| MODEL NO.   | SWITCH FUNCTION                                        | INDEX     |
|-------------|--------------------------------------------------------|-----------|
| <b>EW10</b> | Direct + complement, No stop                           | 36°       |
| <b>EW12</b> | Direct + complement, No stop                           | 30°       |
| <b>DW16</b> | Direct, No stop                                        | 22.5°     |
| <b>ES__</b> | Direct + complement, with stop (specify stop position) | 30° & 36° |
| <b>DS__</b> | Direct, with stop (specify stop position)              | 22.5°     |

| 22.5° | 30°   | 36°   |  | Pos. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|-------|-------|-------|--|------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| Term. | Term. | Term. |  |      |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| E,J   | M,N   | L,N   |  | C    | • | • | • | • | • | • | • | • | • | •  | •  | •  | •  | •  | •  | •  |
| F,I   | H     | D     |  | 1    |   | • |   | • |   | • |   | • |   | •  |    | •  |    | •  |    | •  |
| D,K   | D     | B     |  | 2    |   |   | • | • |   |   | • | • |   |    | •  | •  |    |    | •  | •  |
| A,N   | A     | I     |  | 4    |   |   |   |   | • | • | • | • |   |    |    |    | •  | •  | •  | •  |
| B     | J     | J     |  | 8    |   |   |   |   |   |   |   |   | • | •  | •  | •  | •  | •  | •  | •  |
| —     | C     | K     |  | 1    | • |   | • |   | • |   | • |   | • |    | •  |    | •  |    | •  |    |
| —     | K     | H     |  | 2    | • | • |   |   | • | • |   |   | • | •  |    | •  | •  |    |    |    |
| —     | B     | A     |  | 4    | • | • | • | • |   |   |   |   | • | •  | •  |    |    |    |    |    |
| —     | I     | C     |  | 8    | • | • | • | • | • | • | • | • |   |    |    |    |    |    |    |    |

Indexing Option Code 2, 22.5 INDEXING ANGLE PCB LAYOUT

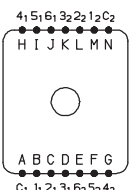


BCD ONLY

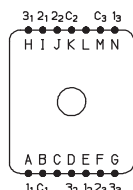
Indexing Option Code 3, 30 INDEXING ANGLE PCB LAYOUT



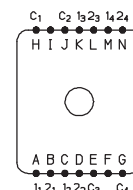
1 POLE



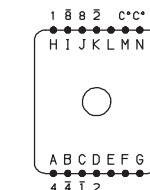
2 POLES



3 POLES



4 POLES

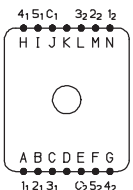


BCD + COMPLEMENTS

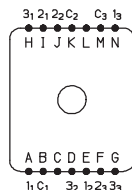
Indexing Option Code 4, 36 INDEXING ANGLE PCB LAYOUT



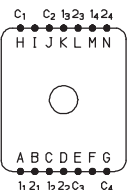
1 POLE



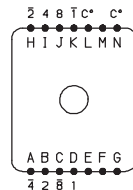
2 POLES



3 POLES



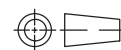
4 POLES



BCD + COMPLEMENTS

**NOTE:** Layout view from component side.

Common terminals that are in locations A-G are not connected to common terminals that are in locations H-N. For 7-12 position output customer must tie these commons together.



Third Angle Projection

Dimensions are shown: Inch (mm)

Specifications and dimensions subject to change

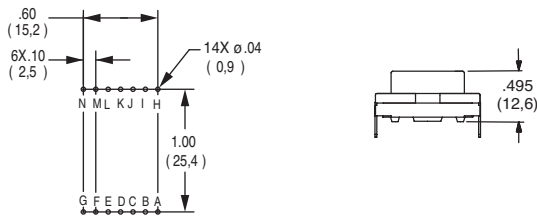


# RTA Series 1-4 Poles Coded Rotary Switches

## MOUNTING STYLE

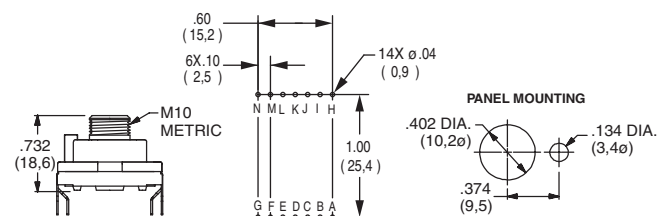


### W WITHOUT BUSHING



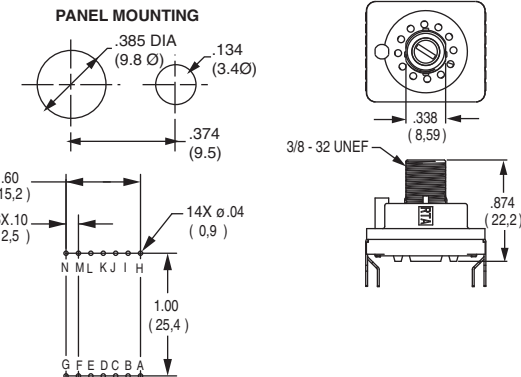
Note: W mounting style not available with H termination.

### M M10 x .75 MERTIC THREADED BUSHING



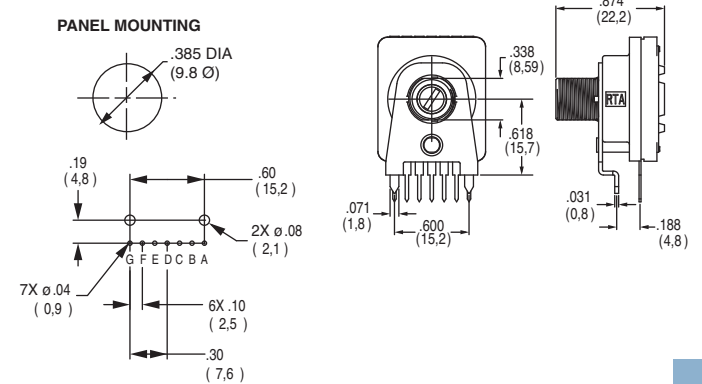
Note: M mounting style not available with H termination.

### R 3/8-32 THREADED BUSHING



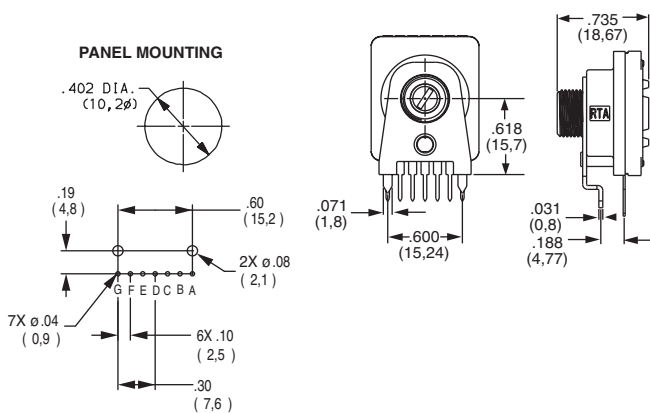
Note: R mounting style not available with H termination.

### A 3/8-32 THREADED BUSHING WITH BRACKET



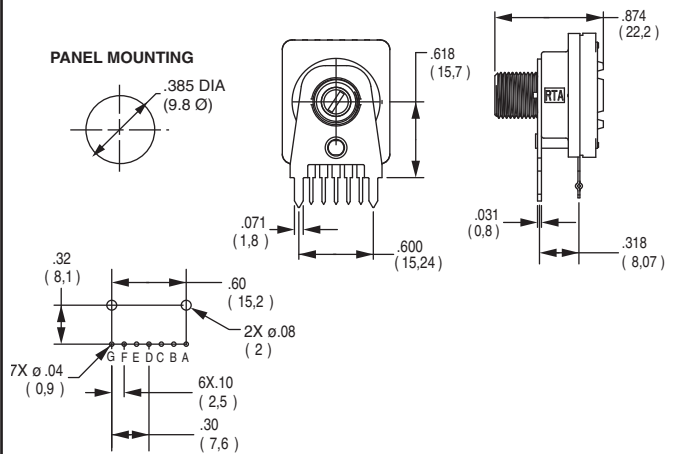
Note: A mounting style only available with H termination.

### B M10 x .75 METRIC THREADED BUSHING WITH BRACKET

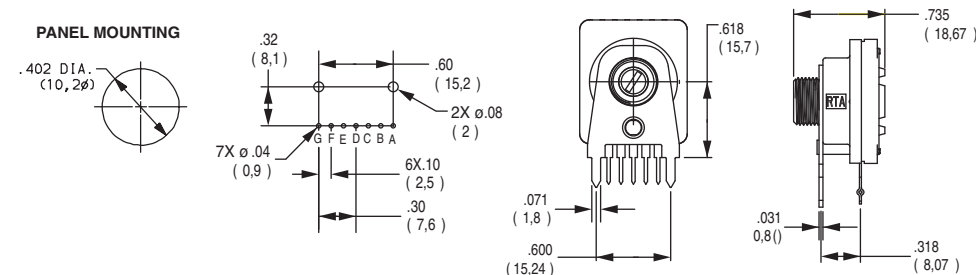


Note: B mounting style only available with H termination.

### C 3/8-32 THREADED BUSHING WITH STRAIGHT BRACKET



### D M10 x .75 METRIC THREADED BUSHING WITH STRAIGHT BRACKET



Third Angle  
Projection

Dimensions are shown: mm  
Specifications and dimensions subject to change



K

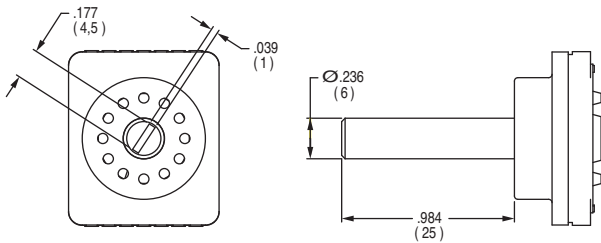
Rotary

# RTA Series

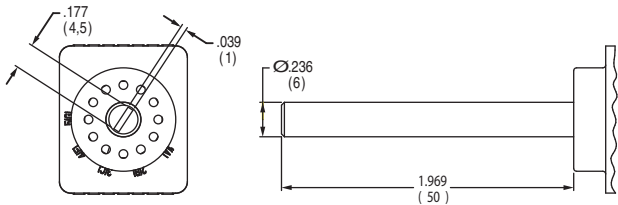
## 1-4 Poles Coded Rotary Switches

### ACTUATOR

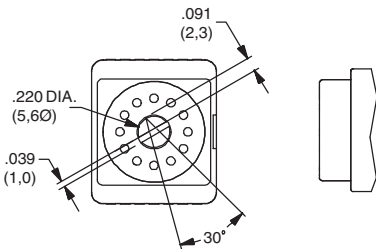
**25N** .984 (25,0) WITH SCREWDRIVER SLOT



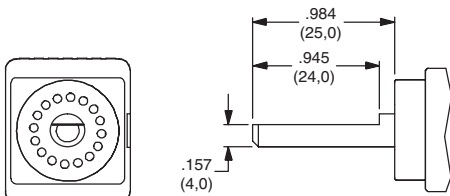
**50N** 1.97 (50,0) WITH SCREWDRIVER SLOT



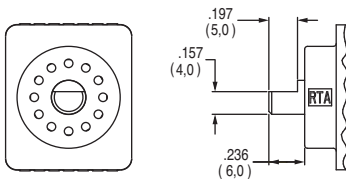
**FLS** FLUSH SHAFT WITH SCREWDRIVER SLOT AND POSITION INDICATOR



**25F** .984 (25,0) SHAFT WITH FLAT



**06F** .236 (6,0) SHAFT WITH FLAT



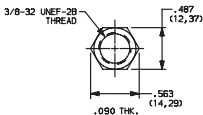
### CONTACT MATERIAL

| OPTION CODE | CONTACT AND TERMINAL MATERIAL | RATING                         |                                                                                      |
|-------------|-------------------------------|--------------------------------|--------------------------------------------------------------------------------------|
| <b>S</b>    | SILVER                        | LOW LEVEL/DRY CIRCUIT          | SWITCH: 150 mA MAXIMUM, 60 V NOMINAL.<br>POWER: 5 VA MAXIMUM. CARRY-5 AMPS MAXIMUM.  |
| <b>P</b>    | GOLD                          | LOW LEVEL/DRY CIRCUIT OR POWER | SWITCH: 20 mA MAXIMUM, 25 V NOMINAL.<br>POWER: 0.5 VA MAXIMUM. CARRY: 1 AMP MAXIMUM. |

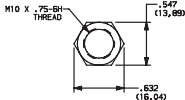
\* Note: See Technical Data section of this catalog for RoHS compliant and compatible definition and specifications.

### AVAILABLE HARDWARE

#### Mounting Nuts



PART NO.  
**472706201**  
Standard



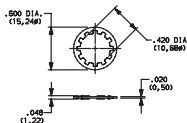
PART NO.  
**495100201**  
Metric

#### Stop pins



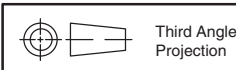
PART NO.  
**Y200300200P**

#### Lockwasher



PART NO.  
**472800202**

NOTE: Additional nuts and lockwashers available separately, see section "Technical Data and Additional Hardware".



Third Angle  
Projection

Dimensions are shown: Inch (mm)  
Specifications and dimensions subject to change



Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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