

C&K 3 Series Thumbwheel Switches



Features/Benefits

- **Most complete product offering in the industry**
- **Spacers available to fit most panel cutouts**
- **Front or rear mounting options**

Typical Applications

- **Test & measurement equipment**
- **Industrial equipment**
- **Computer devices**

Specifications

CONTACT RATING:

CARRY: 1 AMP continuous.

SWITCH: 100 mA max.

OPERATING VOLTAGE: 50 mV to 28 V DC or 120 V AC.

ELECTRICAL LIFE: 100.000 actuations.

CONTACT RESISTANCE: Below 100 m Ω typ. initial @
2-4 V DC, 100 mA.

INSULATION RESISTANCE: $10^9 \Omega \text{ min.}$

DIELECTRIC STRENGTH: 500 Vrms min. @ sea level
between common terminal and any output.

OPERATING TEMPERATURE: -10°C to 65°C.

Materials

HOUSING: ABS plastic.

THUMBWHEEL: ABS plastic.

ROTOR CONTACTS: Precious metal on copper alloy.

STATOR CONTACTS: Hard gold over nickel over copper on epoxy fiberglass.

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

* Note: All models listed are RoHS compliant. See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

Build-A-Switch

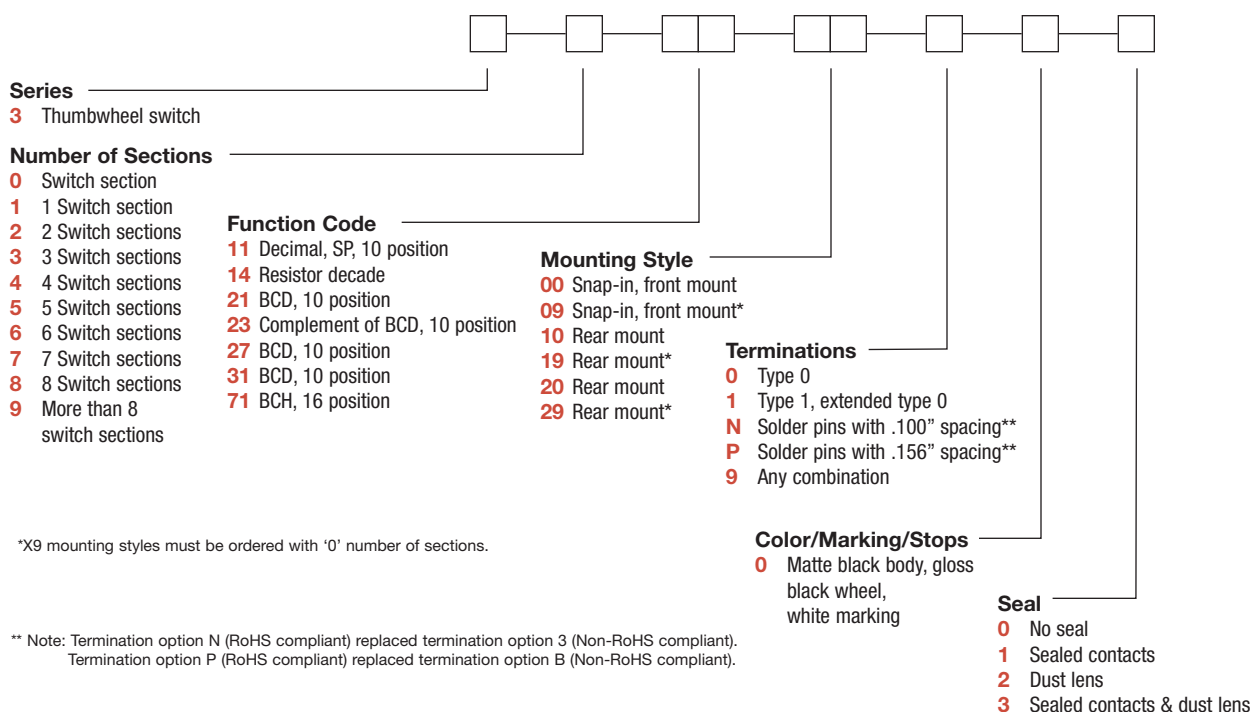
To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages N-9 thru N-12. For additional options not shown in catalog, consult Customer Service Center.

Consult factory for illumination availability.

Thumbwheel & Pushwheel



N



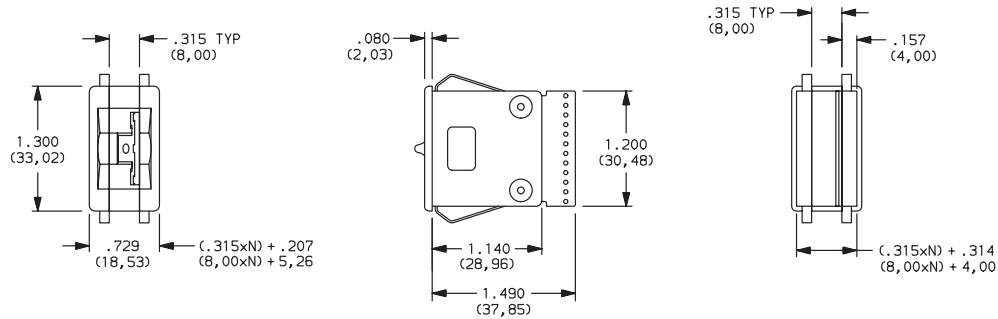
** Note: Termination option N (RoHS compliant) replaced termination option 3 (Non-RoHS compliant).
Termination option P (RoHS compliant) replaced termination option B (Non-RoHS compliant).



C&K 3 Series Thumbwheel Switches

SERIES

3 THUMBWHEEL SWITCHES



NUMBER OF SECTIONS

- 0** Switch section only, no assembly. Blank bodies are considered sections; endplates are not sections. Must be ordered with 09 or 19 mounting style options, see pages N-10 and N-11.
- 1-8** Number of switch sections in assembly, includes endplates.
- 9** More than 8 switch sections, specify on CONFIGURATION FORM, page N-15 and consult Customer Service Center.

NOTE: Endplates and blank sections available separately, see pages N-13 and N-14.

FUNCTION CODE

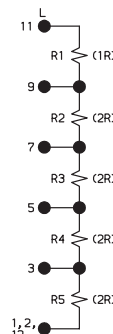
- 11** DECIMAL-1 POLE; 10 POSITION
- 14** RESISTOR DECADE; 1-2-2-2-2 CODE (RESISTORS NOT SUPPLIED)
- 21** BCD 1-2-4-8; 10 POSITION

WHEEL	SIGNALS CONNECTED TO COMMON SIGNAL C										C
	0	1	2	3	4	5	6	7	8	9	
0	●										●
1		●									●
2			●								●
3				●							●
4					●						●
5						●					●
6							●				●
7								●			●
8									●		●
9										●	●
	2	3	4	5	6	7	8	9	10	11	12
TERM. LOCATION											

Available Terminations: 0, 1, N
See fig. 1, page N-12.

WHEEL	SWITCH CIRCUIT										
	0	1	2	3	4	5	6	7	8	9	
0	●	●	●	●	●	●	●	●	●	●	●
1	●	●	●	●	●	●	●	●	●	●	●
2	●	●	●	●	●	●	●	●	●	●	●
3	●	●	●	●	●	●	●	●	●	●	●
4	●	●	●	●	●	●	●	●	●	●	●
5	●	●	●	●	●	●	●	●	●	●	●
6	●	●	●	●	●	●	●	●	●	●	●
7	●	●	●	●	●	●	●	●	●	●	●
8	●	●	●	●	●	●	●	●	●	●	●
9	●	●	●	●	●	●	●	●	●	●	●
	11	9	7	5	3	1	12				
TERM. LOCATION											

Available Terminations: 1
See fig. 1, page N-12.



WHEEL	SIGNALS CONN. TO COMM. SIG. C					C
	1	2	4	8		
0	●					●
1	●					●
2		●				●
3	●					●
4			●			●
5	●			●		●
6					●	●
7	●					●
8		●				●
9	●					●
	3	5	7	11	9	
TERM. LOCATION						

Available Terminations: 0, 1, N
See fig. 1, page N-12.

NOTE: For terminal location diagram, see page N-12.



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

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C&K 3 Series Thumbwheel Switches

FUNCTION CODE

23 COMPLEMENT OF BCD 1-2-4-8;
10 POSITION

W H E E L	SIGNALS CONN. TO COMM. SIG. C				
	1	2	4	8	C
0	●	●	●	●	●
1	●	●	●	●	●
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●
6	●	●	●	●	●
7	●	●	●	●	●
8	●	●	●	●	●
9	●	●	●	●	●
TERM. LOCATION					
	3	9	11	5	7

Available Terminations: 0, 1, N
See fig. 1, page N-12.

27 BCD 1-2-4-8; 10 POSITION

W H E E L	SIGNALS CONN. TO COMM. SIG. C				
	1	2	4	8	C
0	●	●	●	●	●
1	●	●	●	●	●
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●
6	●	●	●	●	●
7	●	●	●	●	●
8	●	●	●	●	●
9	●	●	●	●	●
TERM. LOCATION					
	4	5	1	2	3

Available Terminations: P
See fig. 2, page N-12.

31 BCD 1-2-4-8; 10 POSITION

W H E E L	SIGNALS CONN. TO COMM. SIG. C				
	1	2	4	8	C
0	●	●	●	●	●
1	●	●	●	●	●
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●
6	●	●	●	●	●
7	●	●	●	●	●
8	●	●	●	●	●
9	●	●	●	●	●
TERM. LOCATION					
	2	3	11	9	8

Available Terminations: 0, 1, N
See fig. 1, page N-12.

71 BINARY CODED HEXADECIMAL,
16 POSITION

W H E E L	SIGNALS CONN. TO COMM. SIG. C				
	1	2	4	8	C
0	●	●	●	●	●
1	●	●	●	●	●
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●
6	●	●	●	●	●
7	●	●	●	●	●
8	●	●	●	●	●
9	●	●	●	●	●
A	●	●	●	●	●
B	●	●	●	●	●
C	●	●	●	●	●
D	●	●	●	●	●
E	●	●	●	●	●
F	●	●	●	●	●
TERM. LOCATION					
	3	5	7	11	9

Available Terminations: 0, 1, N
See fig. 1, page N-12.

NOTE: For terminal location diagram, see page N-12.

MOUNTING STYLE

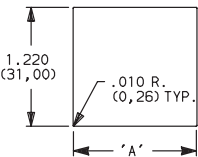
Type 0 Snap-In Front Mount

MOUNTING STYLE	DIM. 'A'
00	$(.315 \times N) + .326$ $(8.00 \times N) + (8.28)$

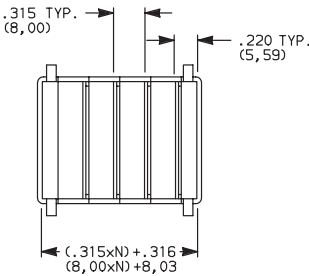
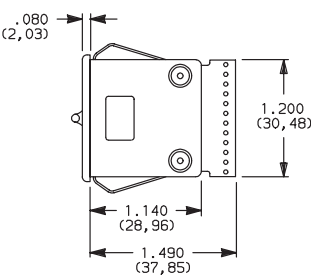
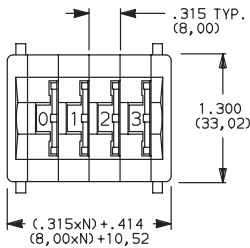
N = Number of sections.

Recommended panel thickness:
0.46-.125
(1.16-3.18)

PANEL MOUNTING



00 SWITCH ASSEMBLY W/ ENDPLATES-- $.315 (8.00)$ SECTION PITCH



N = Number of sections.

09 SWITCH SECTION ONLY--UNASSEMBLED WITHOUT ENDPLATES OR SPACERS
(Must be ordered with number of sections option "0", see Page N-9.)

NOTE: Endplates, blank sections, spacers
and assembly hardware available separately, see pages N-13 and N-14.



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

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C&K 3 Series Thumbwheel Switches

MOUNTING STYLE

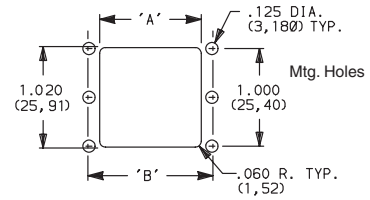
Type 1 Rear Mount

MOUNTING STYLE	DIM. 'A'	DIM. 'B'
10	$(.350 \times N) + .340$ (8,89 x N) + (8,64)	$(.350 \times N) + .560$ (8,89 x N) + (14,22)

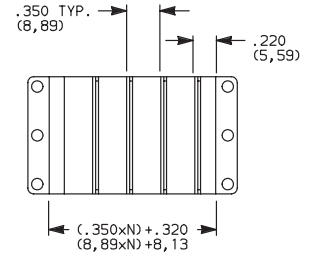
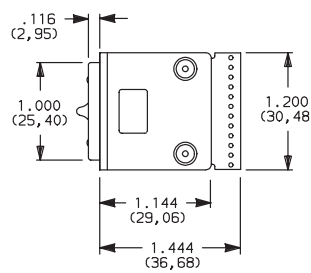
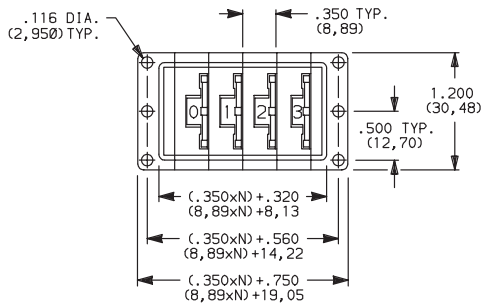
N = Number of sections.

Recommended panel thickness:
0.46-.125
(1,16-3,18)

PANEL MOUNTING



10 SWITCH ASSEMBLY W/ ENDPLATES--.350 (8,89) SECTION PITCH

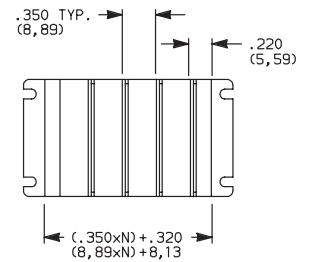
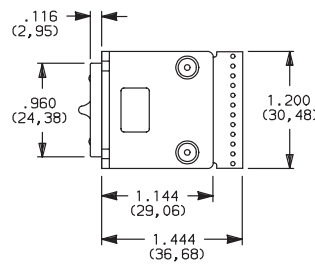
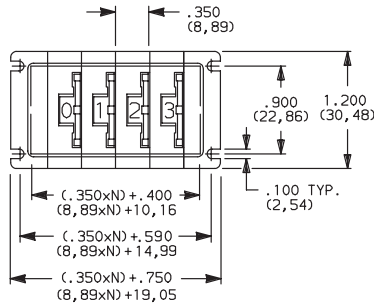


N = Number of sections.

19 SWITCH SECTION ONLY--UNASSEMBLED WITHOUT ENDPLATES OR SPACERS (Must be ordered with number of sections option "0", see Page N-9.)

Type 2 Rear Mount

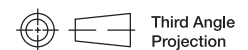
20 SWITCH ASSEMBLY W/ ENDPLATES--.350 (8,89) SECTION PITCH



N = Number of sections.

29 SWITCH SECTION ONLY--UNASSEMBLED WITHOUT ENDPLATES OR SPACERS (Must be ordered with number of sections option "0", see Page N-9.)

NOTE: Endplates, blank sections, spacers and assembly hardware available separately, see pages N-13 and N-14.



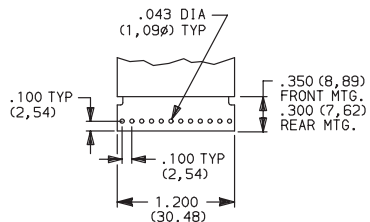
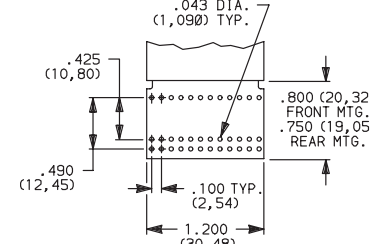
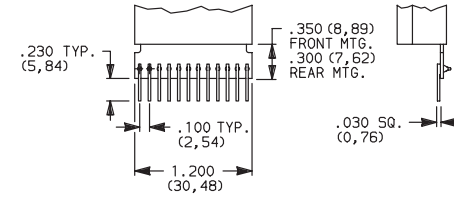
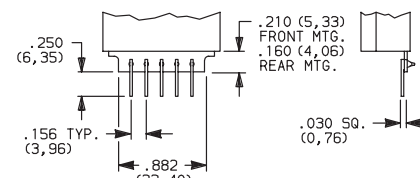
Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change

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C&K 3 Series Thumbwheel Switches

TERMINATIONS

- 0** TYPE 0
- 
- 1** TYPE 1, EXTENDED TYPE 0
- 
- Signal traces cut except for common(s).
- N** SOLDER PINS WITH .100" SPACING
- 
- 9** ANY COMBINATION OF TERMINATION CONFIGURATIONS OR SPECIAL TERMINATIONS.
- Specify on configuration form, page N-15 and consult Customer Service Center.
- P** SOLDER PINS WITH .156" SPACING
- 
- PC Board 1/32" (0,79) thick.
- NOTE:** All terminal holes shown may not be present for all function codes, consult Customer Service Center. Terminal connector available for termination options 0 & 1, see page N-14.
- NOTE:** Termination option N (RoHS compliant) replaced termination option 3 (Non-RoHS compliant). Termination option P (RoHS compliant) replaced termination option B (Non-RoHS compliant).

Terminal Location Numbers

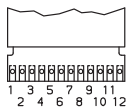


FIG. 1

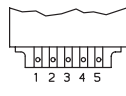
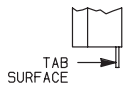


FIG. 2



NOTE: See function codes, pages N-9 and N-10, for signal locations.

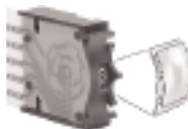
COLOR/MARKING/STOPS

- 0** MATTE BLACK HOUSING (Gloss black wheel with white characters; no stops.)

NOTE: Stop pins are available separately, see page N-14.

SEAL

- 0** UNSEALED SWITCHING CONTACTS.
- 1** SEALED SWITCHING CONTACTS. (Sealing is by means of an o-ring rotary seal and a cured-in-place elastomer gasket. Switching contact area is protected from moisture, oil, and airborne contaminants.)
- 2** DUST LENS. (Protects the character face of the wheel from abrasion and dirt.)
- 3** SEALED SWITCHING CONTACTS AND DUST LENS



Dust Lens



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

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C&K 3 Series Thumbwheel Switches

AVAILABLE HARDWARE

Blank sections, Type 0, .315 THK.  PART NO. 413602000 W/RIB-BLACK 400502000 W/RIB & W/OUT SPRINGS-BLACK	Blank sections, Front mount, Type 0, .315 THK.  PART NO. 413502000 PLAIN-BLACK 400702000 PLAIN & W/OUT SPRINGS-BLACK	Blank sections, Rear mount, Type 1, .350 THK.  4006 4008 PART NO. 400602000 W/RIB-BLACK 400802000 PLAIN-BLACK
Blank sections, Rear mount, Type 2, .350 THK.  4734 4733 PART NO. 473402000 W/RIB-BLACK 473302000 PLAIN-BLACK	End plates, Front mount, Type 0  PART NO. 413402000 BLACK Two required for complete assembly.	End plates, Rear mount, Type 1  PART NO. 400402000 BLACK Two required for complete assembly.
End plates, Rear mount, Type 2  PART NO. 473202000 BLACK Two required for complete assembly.	Spacers, Front mount, Type 0 & 3, .078 THK. (Makes section pitch 10mm)  PART NO. 410802000 BLACK	Stop pins  PART NO. 402900000

Thumbwheel & Pushwheel

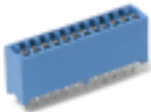


N

C&K 3 Series Thumbwheel Switches

AVAILABLE HARDWARE

Terminal connector



605A00000



605A02000

PART NO.
605A00000 PC
605A02000 SOLDER LUG

Fits 0 & 1 terminations only.

Screws for field assembly of thumbwheel switches
(2 screws needed per assembly + 403500000 nuts)

SCREW PART NUMBER (0-80 UNF THD. SIZE)	NUMBER OF SECTIONS IN ASSEMBLY	
	FRONT MOUNTING	REAR MOUNTING
	MTG. STYLE - 00	MTG. STYLE - 10
412700000	1-2	1-2
412701000	3-4	3
412702000	5-7	4-6

Nut



Two nuts required per assembly and screws.

PART NO.
403500000

Nut driver (For 403500000 nut)



PART NO.
406100652

Thumbwheel & Pushwheel



N

C&K 3 Series Thumbwheel Switches

Configuration Form

GRAY SHADED AREAS TO BE FILLED IN BY CUSTOMER SERVICE.

CATALOG PART NO.

3

C&K PART NUMBER

C&K PART NUMBER

COMPANY NAME

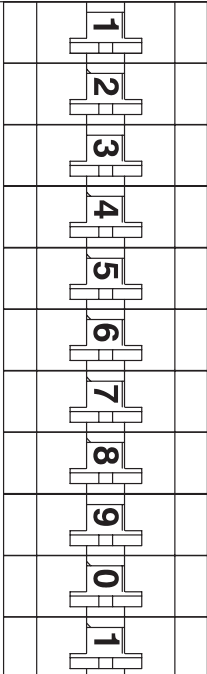
ADDRESS TEL.#

CUSTOMER CONTACT DATE

ORIGINATED BY SALES REP.

CUSTOMER
PRINT
REVISION:

DETAILS:

THUMBWHEEL SECTIONS	NO. OF SEC.	FUNCTION CODE – TERMINATIONS – COLOR/MARKING/STOPS/SEAL – ILLUMINATION ENTER OPTION CODES IN APPROPRIATE BOXES. FUNCTION CODES INCLUDE BLANK SECTIONS (SEE PAGES M-9 & M-10).	DESCRIBE IN APPROPRIATE ROW
	1	3 - -	
	2	3 - -	
	3	3 - -	
	4	3 - -	
	5	3 - -	
	6	3 - -	
	7	3 - -	
	8	3 - -	
	9	3 - -	
	10	3 - -	
	11	3 - -	

QUALITY CONTROL INSTRUCTIONS

PRODUCTION APPROVAL

DATE

Q.C. APPROVAL

DATE

REV.

INITIALS

DATE

FOR SWITCHES WITH MORE THAN 11 SECTIONS, CONTINUE ON ADDITIONAL SHEETS.

SPECIAL INSTRUCTIONS OR SPECIFICATIONS:

SHEET ____ OF ____



Thumbwheel & Pushwheel



Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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