

File E63492
Project 90ME13437

October 1, 1990

REPORT

on

COMPONENT - TERMINAL BLOCKS

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D E S C R I P T I O NPRODUCT COVERED:

Component terminal blocks, Cat. Nos. GSK followed by Suffix 840, 845, or 850 with or without Suffix H, V, followed by one or two digit number may be *followed by -1 or -2, may be followed by additional suffixes. Cat. No. GSK852 followed by a one or two digit number, may be followed by -1 or -2, may be followed by additional suffixes.

GENERAL CHARACTER AND USE:

The terminal blocks covered by this Report are intended for use in the following applications and within the ratings specified.

Application -

Commercial appliances (such as business and EDP equipment, etc.)

Industrial control devices having limited ratings (see Par. 6.7 of the Standard).

Terminal Type -

Top

Bottom

Pressure wire connector

Soldering post

Type Wiring - Factory and field wiring.

RATINGS:

<u>Cat. No.</u>	<u>Max Voltage, V</u>	<u>Max Current, A</u>	<u>Wire Range (AWG) Copper</u>	<u>Torque, lb-in.</u>
GSK840	300	20	No. 12-22 SOL, No. 12 STR	7
GSK850, GSK852	300	20	Nos. 12-26 SOL, No. 12 STR	7
GSK845	300	15	Nos. 14-22 SOL/STR#	7

/ See Spacings Table for Current Rating Requirements.

For factory-wiring, range is extended to No. 28 AWG.

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CAT. NO. NOMENCLATURE CODE:

*Example: $\frac{\text{GSK840}}{\text{A}}$ $\frac{\text{H}}{\text{B}}$ $\frac{/2}{\text{C}}$ $\frac{-1}{\text{D}}$ $\frac{\text{XX}}{\text{E}}$

A - Basic Cat. No. Designation

GSK840 - Vertical or horizontal solder pins, standard profile.
GSK845 - Angled solder pins.
GSK850 - Vertical or horizontal solder pins, low profile.
GSK852 - Vertical solder pins provided with two levels.

B - Soldering Post Orientation (not for Cat. No. GSK852).

H - Horizontal (GSK840, GSK850)
V - Vertical (GSK840, GSK850)
No Suffix - 45° (GSK845)

C - Number of Poles - Single digit Number

D - Solder Pin Spacing (Center-to-Center)

None - 5.0 mm
-1 or -2 - 10.0 mm

*E - Optional Suffixes (Commercial Purposes Only)
Additional suffixes may be provided.

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE USE):

Use - For use only in or with products where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Conditions of Acceptability -

1. The soldering post terminals are to be factory wired only and the suitability of the connection including spacings between factory connectors shall be determined in the end use.

2. The insulating bodies are molded of polymeric materials, as specified in the following tabulation. The use of these materials shall be judged in the end use application.

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<u>Manufacturer</u>	<u>Material Designation</u>	<u>Base Material Temp Rating</u>
[REDACTED]	[REDACTED]	130°C
[REDACTED]	[REDACTED]	130°C

These materials may be interchangeable at 130°C.

3. The tightening torque for field wiring pressure wire connector terminals is recorded in the Ratings section of this Report. This torque value shall be marked on the end-use product for those categories which require torque markings for field terminated conductors.

4. The pressure wire connectors for Cat. Nos. GSK840, GSK850, GSK852 are acceptable for field-wiring applications in accordance with the field wiring requirements in UL486E, Standard for Equipment Wiring Terminals, Second Edition. The pressure wire connectors for Cat. No. GSK845 are acceptable for field-wiring applications in accordance with UL486A, the Standard for Wire Connectors and Soldering Lugs for Use with Copper Conductors, Seventh Edition.

5. These devices have been investigated for use with copper conductors only.

6. The suitability of Cat. No. GSK852 for field-wiring of the lower level terminals should be determined in the end-use equipment due to limited accessibility to the terminal screws after the upper level terminals are wired.

7. For Cat. Nos. without insulating base (cover) spacings between live parts and the printed circuit board surface shall be evaluated in the end-use equipment.

CONSTRUCTION DETAILS:

The product shall be constructed in accordance with the following description.

Marking - The marking of a terminal block shall include:

1. The manufacturer's name or trade name or trademark on the terminal block.
2. The catalog numbers which may be marked on the terminal block, shipping carton, or stuffer sheet placed in the shipping carton.
3. Wire range, tightening torque, ampere and voltage rating are optional.

Corrosion Protection - All parts are of corrosion resistant material or are suitably plated to resist corrosion.

Spacings - The following minimum spacings in inches (millimeters) shall be maintained between uninsulated live parts of opposite polarity, uninsulated live parts, and uninsulated grounded parts other than the enclosure or exposed metal parts.

	<u>Max V</u>	<u>Through Air</u>	<u>Over Surface</u>
Commercial appliance, including business equipment, electronic data processing equipment, etc.	250	3/32 (2.4) ^b	3/32 (2.4) ^b
General industrial +	300	1/16 (1.6) ^b	1/8 (3.2) ^b

^b The spacing between wiring terminals of opposite polarity and the spacing between a wiring terminal and a grounded dead metal part shall not be less than 1/4 in (6.4 mm) if short-circuiting or grounding of such terminals may result from projecting strands of wire.

+ - These spacings are applicable to a terminal block for use only in or with industrial control equipment where the load on any single circuit of the terminal block does not exceed 15 A at 51-150 V, 10 A at 151-300 V, 5 A at 301-600 V, or the maximum ampere rating for the terminal block, whichever is less.

- A. GSK840H/2 (REPRESENTS GSK850H/2)
- B. GSK845/3
- C. GSK840V/2 (REPRESENTS GSK850V/2)

FIG. 1 (M90-17611)

General - The general design, shape, and arrangement shall be as illustrated except where variations are specifically described. Cat. nos. with or without Suffix V or H are similar except for solder post orientation as detailed in Nomenclature portion of this report.

Cat. Nos. GSK850 with suffixes are the same as Cat. Nos. GSK840 with suffixes except with a lower profile insulating body (12 mm high instead of 19 mm).

* 1. Base - Optionally provided for GSK840 Cat. Nos. Recognized Component plastic (QMFZ2) as outlined in Engineering Considerations, 1 mm min thick by 10.2 mm wide. Length varies with number of poles. Provided with integrally molded tabs for securement onto terminal block body.

2. Body - Recognized Component plastic (QMFZ2) as outlined in Engineering Considerations, min 0.45 mm end wall thickness. Refer to Ills. 1 through 4 for overall dimensions.

3. Connector Body - Plated copper alloy. Overall dimensions as follows:

Cat. Nos. GSK840, GSK850 - 9 mm by 5 mm by 4 mm, 0.8 mm min thick side wall. Wire entry opening 4.7 mm by 2.7 mm. Provided with a tapped hole, min 3 threads, for M3 terminal screw.

Cat. No. GSK845 - 7.5 mm by 3.8 mm by 3.8 mm, 0.6 mm min thick side wall. Wire entry opening 3.5 mm by 2.6 mm. Provided with a tapped hole, min 2 threads, for M2.6 terminal screw.

4. Soldering Post Terminal - Plated copper alloy, overall dimensions as follows:

Cat. Nos. GSK840, GSK850 - Center is 4.2 mm wide and provided with a 1.4 mm by 1.8 mm opening. Wire contact portion is 2.4 mm wide and provided with 11 sections. Refer to Ills. 1 and 2 for additional dimensions.

Cat. No. GSK845 - Wire contact portion is 2.4 mm wide and is provided with 7 serrations. Refer to Ills. 3 and 4 for additional dimensions.

5. Terminal Screw - Plated steel. Overall dimensions as follows:

Cat. Nos. GSK840, GSK850 - Size M3, 4 mm screw head dia, 5.3 mm thread length.

Cat. No. GSK845 - Size M2.6, 3.5 mm screw head dia, 4.3 mm thread length.

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CAT. NO. GSK852

FIG. 2 (M93-23117)

General -

Cat. No. GSK852 is similar to Cat. No. GSK850 except the former is a two level terminal block and the latter is a single level terminal block.

Housing - Recognized Component Plastic (QMFZ2) as outlined in Engineering Considerations, min 0.45 mm thick. Refer to Ills. 5, 6 for overall dimensions.

Terminal Screw - Same as Fig. 1, Item 5.

Connector Body - Same as Fig. 1, Item 3.

Soldering Post Terminals - Plated copper alloy, refer to Ills. 7 and 8 for overall dimensions.

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