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REPORT

on

COMPONENT - TERMINAL BLOCKS

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D E S C R I P T I O N

PRODUCT COVERED:

USR Recognized Component - Terminal Blocks, Cat. No. 503Si/, may be followed by Suffix number 1 thru 5, **may or may not be followed by M**, with or without Suffix DS, **may or may not be followed by SL**, may or may not be followed by GW or HT **and may or may not be followed by XX**.

USR Recognized Component - Terminal Blocks, Cat. No. 1003Si/ followed by 1 through 5, **may or may not be followed by M**, with or without Suffix DS, **may or may not be followed by SL**, may or may not be followed by GW or HT, **and may or may not be followed by XX**.

GENERAL:

The terminal blocks Cat. No. 503Si/.. or 1003Si.. are provided with a fuse holder for fuse carrying.

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

Application - Commercial applications (such as business and EDP equipment, etc.).

General industrial (such as motor controllers, pushbutton stations, etc.).

Industrial control devices having limited ratings (see note A under Ratings).

Terminal Type - Pressure screw terminals line and load sides.

Type Wiring - Field and factory-wiring.

RATINGS:

Cat. No.	Wire Range	Max Amperes	Max Volts	Screw	UG
	AWG - Cu. Sol/str.			Torque In - Lbs	
503Si/(1)	No. 12-22	10	300	7	B, C, D ^A
1003Si..	No. 10-22	16	300	7	B, C, D ^A

(1) May be followed by Numbers 1 to 5, with or without DS.

Note A - These limited ratings are applicable to a terminal block for use in or with industrial control equipment whereby 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, or 5 A at 301-600 V, or the maximum ampere rating, whichever is less.

NOMENCLATURE:

Typical Cat. No.	503Si	5	M	DS	SL	GW	XX
	1	2	3	4	5	6	7

1. Basic Cat. No. 503Si
2. Number of poles - 1 to 5 inclusive.
3. **Suffix M - Provided with wire protector with center stop.
No Suffix - Without wire protector.**
4. Wire Protector Option
Suffix DS - Provided with wire protector.
No Suffix - Without wire protector.
5. **Suffix SL -Insert with center stop**
6. Plastic material
GW - glow wire
HT - high temperature
Blank - standard
7. **Optional Suffixes (Commercial Purposes Only)
Additional suffixes may be provided**

Typical Cat. No.	1003Si	5	M	DS	SL	GW	XX
	1	2	3	4	5	6	7

1. Basic Type No. 1003Si
2. Number of poles
1 through 5
3. **Suffix M - Provided with wire protector with center stop.
No Suffix - Without wire protector.**
4. Wire protection option
DS - provided with wire protection
Blank - without wire protection
5. **Suffix SL - Insert with center stop**
6. Plastic material
GW - glow wire
HT - high temperature
Blank - standard
7. **Optional Suffixes (Commercial Purposes Only)
Additional suffixes may be provided**

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE USE):

Use - For use only with products where the acceptability of the combination has been determined by Underwriters Laboratories Inc.

Conditions of Acceptability -

- 1) The mounting suitability should be determined in the end-use.
- 2) The insulating blocks are molded of Recognized Component plastic (QMFZ2), as specified below. The use of these materials shall be judged in the end-use equipment.

Manufacturer	Material	Base Material Temperature - °C
[REDACTED]	[REDACTED]	105 (Generic)
[REDACTED]	[REDACTED]	105 (generic)
[REDACTED]	[REDACTED]	105 (generic)
[REDACTED]	[REDACTED]	105 (generic)
[REDACTED]	[REDACTED]	105 (generic)

- 3) The pressure screw terminals comply with field-wiring requirements in UL 486E Standard For Equipment Wiring Terminals, Third Edition.
- 4) These terminal blocks are for use with copper conductors only.
- 5) The terminal blocks of Cat. No. 503Si/.. are intended for use with 5 mm by 20 mm miscellaneous fuses. The terminal blocks of Cat. No. 1003Si.. are intended for use with 6.3 mm by 32 mm or 6.3 mm by 25 mm miscellaneous fuses. The suitability of the fuses shall be determined in the end-use. They are not intended for branch circuit protection. Markings concerning fuse replacement and location should be considered in the end-use products.

CONSTRUCTION DETAILS:

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

Applications	Max Volts	Through Air In	(mm)	Over Surface In	(mm)
General Industrial	300	1/4	(6.4)	3/8	(9.5)
* Commercial applications	300	3/32 ⁺	(2.4) ⁺	3/32 ⁺	(2.4) ⁺
Industrial, devices having limited ratings	300	1/16 ⁺	(1.6) ⁺	1/8 ⁺	(3.2) ⁺

+ The spacings of field wiring terminals of opposite polarity and the spacing between field wiring terminals and grounded metal needs to be 1/4 in. (6.4mm) minimum if projecting strands may occur. Change these values to 1/4 in. (6.4mm) when necessary. See Table 8.1 footnote a of UL 1059, the Standard for terminal blocks.

Marking - Company name or trademark on device. Catalog number or type designation on device or shipping carton. Electrical ratings are optional.

Corrosion Protection - All metal parts are of corrosion resistant material or are suitable plated or painted to resist corrosion.

Tolerances - Unless otherwise specified, all dimensions are nominal.

CAT. NO. 503Si/3DS
REPRESENTS ALL CAT. NOS.

FIG. 1 (M96-15304)

General - All Cat. Nos. are identical except for Suffix L (wire protector described below), and number of poles.

1. Base - Recognized Component plastic (QMFZ2) specified under "Engineering Considerations". Overall dimensions 27.1 mm (fused), 21.2 mm (without fuse) by 17.7 mm, length may vary depending on the number of poles, min thickness 0.8 mm.
2. Terminal Part (fuseless) - Plated copper alloy cage 5.8 mm 2.5 mm by 13.9 mm with a 3.2 mm dia wire entrance, Types DS provided with nickel plated 0.3 mm thick wire protector.
3. Terminal Parts (fused) - Plated copper alloy cage two provided 6.0 mm by 4.5 mm by 5.5 mm with a 3.3 mm dia wire entrance, Types DS provided with a nickel plated 0.3 mm wire protector. Fuse clamped between cage and spring steel fuse holder 0.4 mm thick. **Illustration 9 shows alternate construction of fuse holder.**
4. Screw - Plated steel M3 screw, 8.0 mm overall length.

Cat. No. 1003Si 5 DS GW

FIG. 2

General - The general design, shape, and arrangement shall be as illustrated except where variations are specifically described. Figure two shows the 5-pole terminal block Cat. No. 1003Si 5 DS GW, intended for use with fuses, which represents the terminal blocks of Series 1003Si.. .

1. Insulating body - R/C plastic (QMFZ2/8), designated as Polyamide 66 (PA66) [REDACTED]. Measured minimum thickness of 0.95 mm. 1 through 5 poles length varies with number of terminals. For shape and dimensions see Illustration 1 and 2.

Alternative insulating material

R/C plastic (QMFZ2/8), designated as Polyamide 66 (PA66) [REDACTED]

R/C plastic (QMFZ2), designated as Polyamide 66 (PA66), [REDACTED]

R/C plastic (QMFZ2), designated as Polyamide 6 (PA6), [REDACTED]

When the insulation parts are molded or fabricated from regrind materials, blending of material, use of pigment, colorants, flame retardants, or similar means, the parts shall be Recognized Component Fabricated Parts (QMMY2) and meet the following criteria. When a Recognized Component Fabricated Part is involved, the molder's ID should be on the part, on the parts carton or on a specification sheet with the carton. Also, on the part, shipping carton, specification sheet with the carton or invoice should be a parts ID (original equipment manufacturer's part designation), molding date and material ID.

2. Long terminal clamping cage - One provided per terminal block. Plated copper alloy (CnZn). Provided with two M3.5 threading. Types with suffix DS are provided with nickel plated wire protectors, of 0.2 mm thickness. For shape and dimensions see Illustration 3.
3. Short terminal clamping cage - 1 through 3 provided, depending of number of poles. Plated copper alloy (CnZn). Provided with two M3.5 threading. Types with suffix DS are provided with nickel plated wire protectors, of 0.3 mm thickness. For shape and dimensions see Illustration 4.
4. Terminal clamping cage of fuse path - Two provided per terminal block. Plated copper alloy (CnZn). Provided with one M3.5 threading per clamping cage. Types with suffix DS are provided with nickel plated wire protectors, of 0.3 mm thickness. For shape and dimensions see Illustration 5.

5. Fuse clamp - Mounted between terminal clamping cage of fuse path and plated spring steel fuse holder. Two provided per terminal block. Minimum thickness of 0.4 mm. For shape and dimensions see Illustration 6.
6. Fuse holder - R/C plastic (QMFZ2/8), designated as Polyamide 66 (PA66) [REDACTED] Measured minimum thickness of 0.8 mm. One provided per terminal block. For shape and dimensions see Illustration 7. **Alternate construction of the fuse holder is found in Illustration 7A.**

Alternative insulating material

R/C plastic (QMFZ2/8), designated as Polyamide 66 (PA66) [REDACTED]
[REDACTED]

R/C plastic (QMFZ2), designated as Polyamide 66 (PA66), [REDACTED]
[REDACTED]

R/C plastic (QMFZ2), designated as Polyamide 6 (PA6), [REDACTED]
[REDACTED]

7. Terminal screw - Two provided in long- and short terminal clamping cages and one provided in Terminal clamping cage of fuse path. M3.5 threading, made of plated steel. For shape and dimensions see Illustration 8.