



PRODUCT SPECIFICATION

.125(3.18) X .020(0.51) FLAT BLADE RECEPTACLE SYSTEM

1.0 SCOPE

This Product Specification covers the .125(3.18) x .020(0.51) Flat Blade Receptacle System for use with customer provided devices such as motors and timers.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

PRODUCT NAME

PART NUMBER

Receptacle Terminal

43374-0001
43374-1001
43374-2001
43374-3001
43374-5001
43374-7001

SERIES

Receptacle Housing
Receptacle Housing
Receptacle Housing
Receptacle Housing
Receptacle Housing

41644
41645
42865
44167
44421

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate sales drawings for information on dimensions, materials, platings and markings.

2.3 SAFETY AGENCY APPROVALS

UL File #E29179
CSA File #LR19980

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

See the appropriate sales drawings for necessary referenced documents and specifications.

REVISION: A1	ECR/ECN INFORMATION: EC No:671498 DATE:2021/07/26	TITLE: PRODUCT SPECIFICATION .125 (3.18) X .020 (0.51) FLAT BLADE RECEPTACLE SYSTEM	SHEET No. 1 of 4
DOCUMENT NUMBER: PS-43374-001	CREATED / REVISED BY: MKIPPER	CHECKED BY: JEHRISMAN	APPROVED BY: FSMITH



PRODUCT SPECIFICATION

4.0 RATINGS

4.1 VOLTAGE

600 Volts AC (RMS)

4.2 CURRENT AND APPLICABLE WIRES

AWG	Amps	Maximum Insulation Thickness
14	18	0.79 mm (.031 inch)
16	TBD	0.79 mm (.031 inch)
18	12	0.79 mm (.031 inch)
22	9.5	0.41 mm (.016 inch)
24	8.25	0.41 mm (.016 inch)

NOTE: The current capacity is based on each circuit position being loaded with the given wire size, and the rated current applied. The capacity for other applications may be higher.

4.3 TEMPERATURE

Operating: - 40°C to + 75°C

Nonoperating: - 40°C to + 100°C

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Contact Resistance (Low Level)	Mate connectors: apply a maximum voltage of 20 mV and a current of 100 mA .	30 milliohms MAXIMUM [initial]
2	Insulation Resistance	Unmate & unmount connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground.	1000 Megohms MINIMUM
3	Dielectric Withstanding Voltage	Apply a voltage of 5000 VAC for 1 minute between adjacent terminals and between terminals to ground.	No breakdown; current leakage < 5 mA
4	Temperature Rise (via Current Cycling)	Mate connectors: measure the temperature rise at the rated current after 96 hours , Followed by 500 hours of current cycling (45 minutes ON and 15 minutes OFF perhour).	Temperature rise: +30°C MAXIMUM

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DOCUMENT NUMBER: PS-43374-001	CREATED / REVISED BY: MKIPPER	CHECKED BY: JEHRISMAN	APPROVED BY: FSMITH



PRODUCT SPECIFICATION

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
5	Connector Mate and Unmate Forces	Mate and unmate connector (male to female) at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch) per minute.	13.3 N (3 lbf) MAXIMUM insertion force & 2.2 N (.5 lbf) MINIMUM withdrawal force
6	Terminal Retention Force from Housing (Receptacle Terminal)	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch) per minute.	67 N (15 lbf) MINIMUM retention force
7	Durability	Mate connectors up to 25 cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.	3 milliohms MAXIMUM (change from initial)
8	Vibration (Random)	Subject mated connectors to vibration with an amplitude of 1.52 mm (.060 inch) peak to peak; a sweep of 10-55-10 hertz in 1.0 min.; and a duration of 2.0 hours in the $\pm X, \pm Y, \pm Z$ axes.	5 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
9	Shock (Mechanical)	Mate connectors and shock at 50 g's with $\frac{1}{2}$ sine wave (11 milliseconds) shocks in the $\pm X, \pm Y, \pm Z$ axes (18 shocks total).	5 milliohms MAXIMUM (change from initial]) & Discontinuity < 1 microsecond
10	Wire Pullout Force (Axial)	Apply an axial pullout force on the wire at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch).	14 AWG: 222 N (50 lbf) 16 AWG: 200 N (45 lbf) 18 AWG: 133 N (30 lbf) 22 AWG: 35.6 N (8 lbf) 24 AWG: 22.3 N (5 lbf) MINIMUM pullout force
11	Terminal Insertion Force (into Housing)	Apply an axial insertion force on the terminal at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch).	4.4 N (1.0 lbf) MAXIMUM insertion force

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DOCUMENT NUMBER: PS-43374-001	CREATED / REVISED BY: MKIPPER	CHECKED BY: JEHRISMAN	APPROVED BY: FSMITH



PRODUCT SPECIFICATION

5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
12	Shock (Thermal)	Mate connectors; expose to 10 cycles of: Temperature °C Duration (Minutes) -40 +0/-3 30 +105 +3/-0 30	3 milliohms MAXIMUM (change from initial); Visual: No Damage
13	Thermal Aging	Mate connectors; expose to: 240 hours at 105 ± 2°C	5 milliohms MAXIMUM (change from initial)]; Visual: No Damage
14	Humidity (Steady State)	Mate connectors: expose to a temperature of 40 ± 2°C with a relative humidity of 90-95% for 96 hours.	5 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 1000 Megohms MINIMUM & Visual: No Damage
15	Humidity (Cyclic)	Mate connectors: cycle per EIA-364-31: 24 cycles at temperature between 25 ± 3°C and 65 ± 3°C at 95 ± 5% relative humidity and 25 ± 3°C and -10 ± 3°C with humidity not controlled. Dwell time of 1.0 hour; ramp time of 0.5 hours.	5 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 1000 Megohms MINIMUM & Visual: No Damage

6.0 PACKAGING

See the appropriate sales drawings for information related to packaging requirements.

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DOCUMENT NUMBER: PS-43374-001	CREATED / REVISED BY: MKIPPER	CHECKED BY: JEHRISMAN	APPROVED BY: FSMITH