



File E14721

Vol 21

Auth. Page 1

Issued: 2009-09-28

Revised: 2012-03-23

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

UNLISTED COMPONENT

EQUIPMENT-WIRING TERMINALS
(ZMMT3)

Manufacturer: SEE ADDENDUM FOR MANUFACTURER LOCATIONS

104923 (Party Site)
Applicant: LITTELFUSE INC
(491993-001) SUITE 500
8755 W HIGGINS RD
CHICAGO IL 60631

This Follow-Up Service Procedure authorizes the above Manufacturer(s) to use the marking specified by UL LLC, or any authorized licensee of UL LLC, including the UL Contracting Party, only on products when constructed, tested and found to be in compliance with the requirements of this Follow-Up Service Procedure and in accordance with the terms of the applicable service agreement with UL Contracting Party and any applicable Service Terms. The UL Contracting Party for Follow-Up Services is listed on addendum to this Follow-Up Service Procedure ("UL Contracting Party"). UL Contracting Party and UL LLC are referred to jointly herein as "UL."

UL further defines responsibilities, duties and requirements for both Manufacturers and UL representatives in the document titled, "UL Mark Surveillance Requirements" that can be located at the following web-site: <http://www.ul.com/fus> and in the document titled "UL and Subscriber Responsibilities" that can be located at the following website: <http://www.ul.com/responsibilities>. Manufacturers without Internet access may obtain the current version of these documents from their local UL customer service representative or UL field representative. For assistance, or to obtain a paper copy of these documents or the applicable Service Terms, please contact UL's Customer Service at <http://www.ul.com/global/eng/pages/corporate/contactus>, select a location and enter your request, or call the number listed for that location.

The Applicant and the specified Manufacturer(s) in this Follow-Up Service Procedure must agree to receive Follow-Up Services from UL Contracting Party. If your applicable agreement is a Global Services Agreement ("GSA") with an effective date of January 1, 2012 or later and this Follow-Up Service Procedure is issued on or after that effective date, the Applicant and the specified Manufacturer(s) will be bound to a Service Agreement for Follow-Up Services upon the earliest by any Subscriber of use of the prescribed UL Mark, acceptance of the factory inspection, or payment of the Follow-Up Service fees which will incorporate such GSA, this Follow-Up Service Procedure and the Follow-Up Service Terms which can be accessed by clicking here: <http://www.ul.com/contracts/Terms-After-12-31-2011>. In all other events, Follow-Up Services will be governed by and incorporate the terms of your applicable service agreement and this Follow-Up Service Procedure.

It is the responsibility of the Manufacturer to make sure that only the products meeting the aforementioned requirements bear the authorized Marks of UL LLC, or any authorized licensee of UL LLC.

This Follow-Up Service Procedure contains information for the use of the above Manufacturer(s) and representatives of UL and is not to be used for any other purpose. It is provided to the Manufacturer with the understanding that it will be returned upon request and is not to be copied in whole or in part.

This Follow-Up Service Procedure, and any subsequent revisions, is the property of UL and is not transferable. This Follow-Up Service Procedure contains confidential information for use only by the above named Manufacturer(s) and representatives of UL and is not to be used for any other purpose. It is provided to the Subscribers with the understanding that it is not to be copied, either wholly or in part unless specifically allowed, and that it will be returned to UL, upon request.

Capitalized terms used but not defined herein have the meanings set forth in the GSA and the applicable Service Terms or any other applicable UL service agreement.

UL shall not incur any obligation or liability for any loss, expense or damages, including incidental, consequential or punitive damages arising out of or in connection with the use or reliance upon this Follow-Up Service Procedure to anyone other than the above Manufacturer(s) as provided in the agreement between UL LLC or an authorized licensee of UL LLC, including UL Contracting Party, and the Manufacturer(s).

UL LLC has signed below solely in its capacity as the accredited entity to indicate that this Follow-Up Service Procedure is in compliance with the accreditation requirements.

William R. Carney
Director
North American Certification Program

LOCATION

(479717-001) 102306 (Party Site)
ZHEJIANG MINGRONG ELECTRICAL
PROTECTION CO LTD
WEI 11TH RD
ECONOMIC DEVELOPING ZONE
YUEQING
ZHEJIANG 325600 CHINA

Factory ID:
UL Contracting Party for above site is: UL AG

Models

Section

Report Date

Unlisted Component equipment wiring terminal, Connector
Cat. No. 03DP178

1

2009-09-25

File E14721
Project 09NK13783

September 25, 2009

REPORT

on

UNLISTED COMPONENT - EQUIPMENT WIRING TERMINALS

for use only in

APPLICANT'S CLASSIFIED, LISTED OR RECOGNIZED PRODUCTS,
SYSTEMS OR COMPONENTS

Littelfuse Inc
Des Plaines, IL

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DESCRIPTION

PRODUCT COVERED:

Unlisted equipment wiring terminals, Connector 03DP178

GENERAL CHARACTER AND USE:

The devices described in this Report are of the following type.

Type of Wiring Termination -

Pressure screw type wire connector

WIRE RANGE:

Cat. No.	AWG		ILL. No.
	Copper		
	Solid	Stranded	
03DP178	10-14	8-14	1

RATINGS:

Torque - 17.7 lb-in

Connector Temperature - **90°C**

Ampere Rating - 30A

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE USE):

Products designated US have been investigated using requirements contained in the Standard UL 486A-486B.

Conditions of Acceptability -

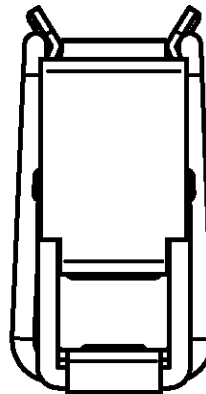
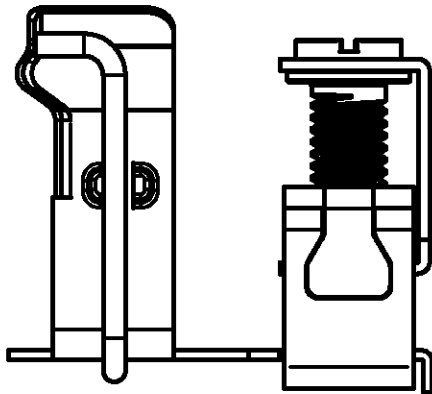
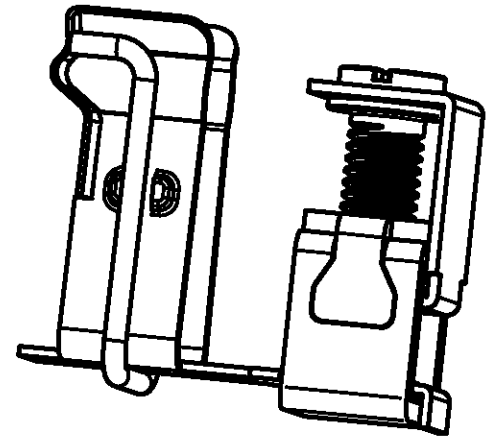
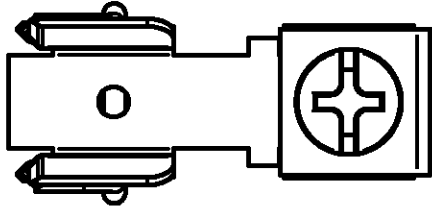
1. For use only in (or with) Applicant's complete equipment where the acceptability is determined by Underwriters Laboratories Inc.
2. The connector shall be prevented from turning by close fitting walls, turn preventive features or the equivalent.
3. Cat. No. 03DP178 has an assigned ampere rating of 30 A. It is intended for use in equipment having a maximum current rating of no more than 30 A. The Static heating sequence test was not conducted. This ampere rated connector shall be additionally evaluated for temperature rise in the end use application.
4. Cat. No. 03DP178 has been tested using an assigned torque value(s) of 17.7 in-lbs. This assigned torque value differs from those contained in the Standard.
5. Cat. No. 03DP178 has been evaluated using the Standard for Equipment Wiring Terminals, UL 486E. The suitability of these terminals shall be determined in the end-use investigation. The need for conducting additional tests (i.e., short circuit tests, etc.) shall be considered.

CONSTRUCTION DETAILS:

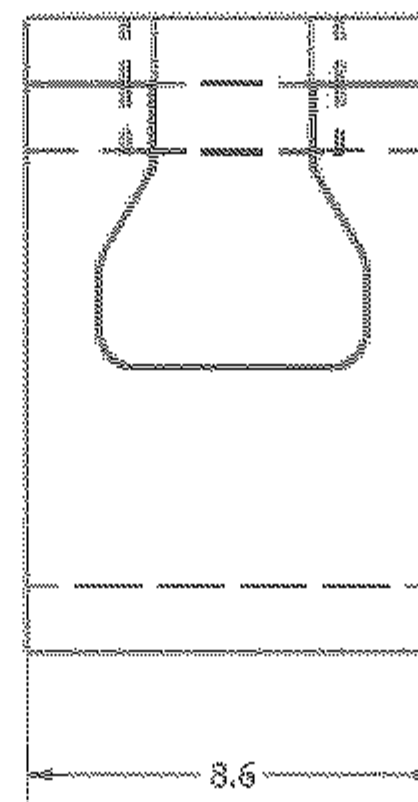
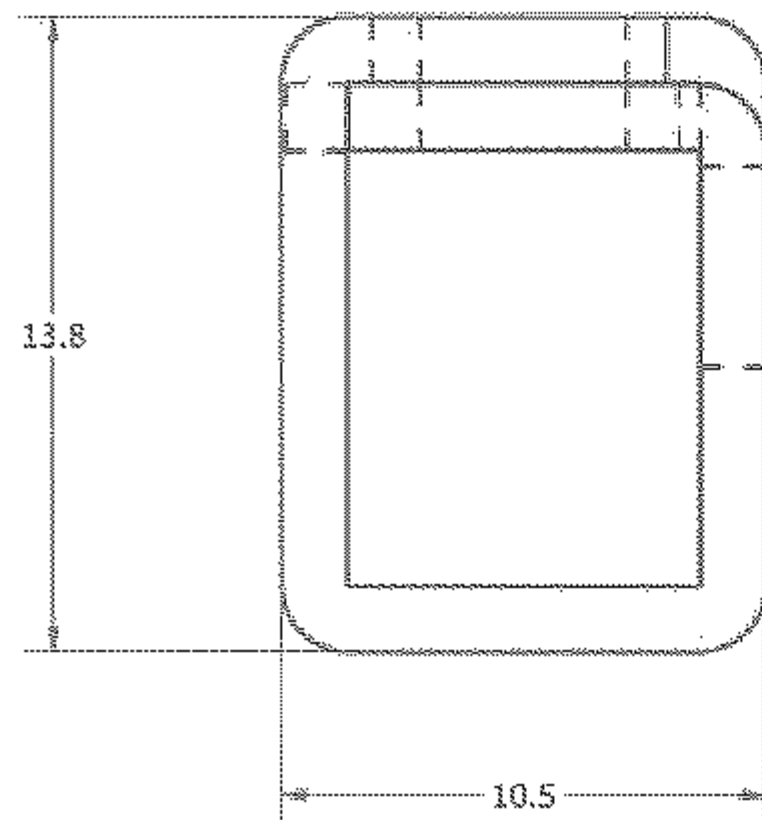
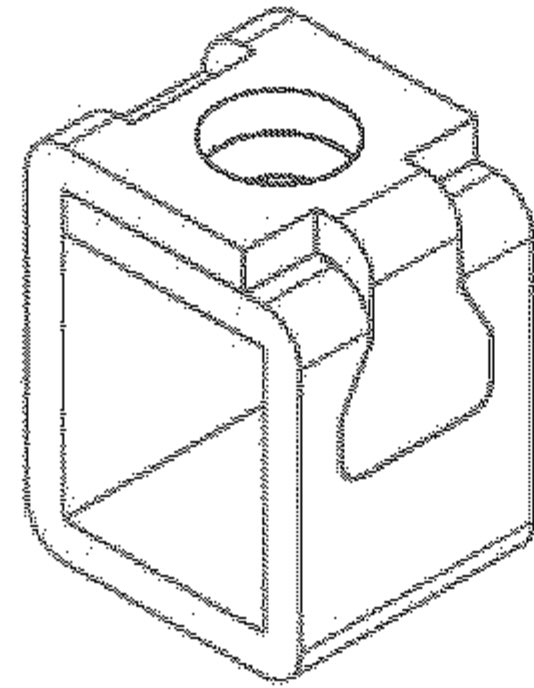
Cat. No. 03DP178 - ILL. 1

General - The illustration depicts the general shape and design of all catalog numbers covered by this Report. Consists of cage, screw and pressure plate.

1. Cage - Plated steel, approx 1.4 mm thick, overall 10.5 mm by 8.6 mm by 13.8 mm. See ILL. 2.
2. Pressure Plate - Plated steel, approximately 0.9 mm thick, secured under screw head, "C" shaped, overall 14 mm by 10 mm by 9.7 mm. See ILL. 3.
3. Screw - Steel, 4.6 mm diameter, 14.4 mm long. See ILL. 4.

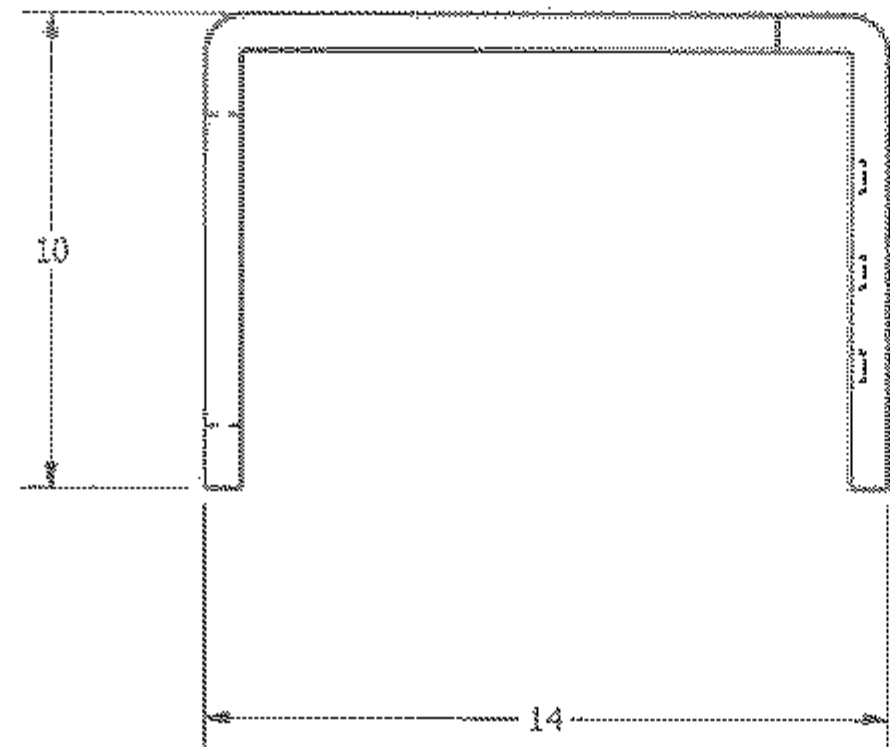
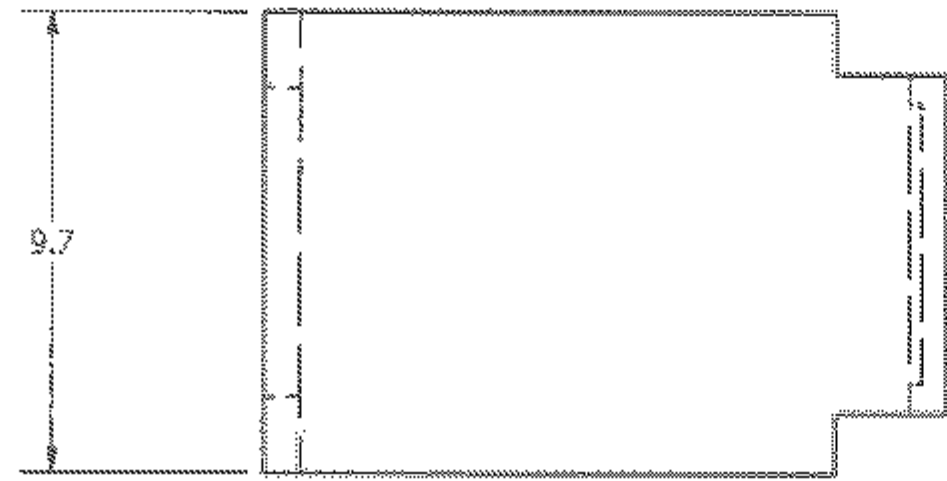
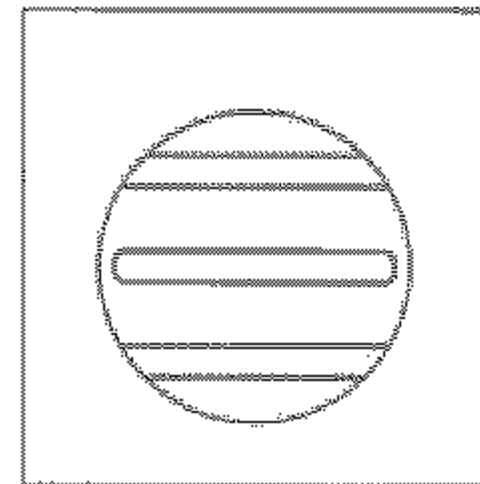


●	DENOTES CRITICAL CHARACTERISTICS.		
CPK	DENOTES CPK DIMENSIONS, -MINIMUM CPK VALUE		
⊞	DENOTES A CHARACTERISTIC THAT PROVIDES AN INDICATION OF PROCESS PERFORMANCE. PROCEDURE FOR MEASUREMENT AND TRACKING TO BE DEFINED IN LITTELFUSE INSPECTION INSTRUCTIONS.		
CP	DENOTES CP DIMENSIONS, -MINIMUM CP VALUE MUST BE WITHIN THE DIMENSIONAL LIMITATIONS SHOWN ON DRAWING AND INITIALLY LOCATED TO ALLOW FOR MAXIMUM TOOL LIFE.		A
MATL SPEC		FINISH	
DRW	DATE	SCALE NTS	FINISH GOOD WT GRAMS/PIECE
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS, DIMENSIONS IN BRACKETS [] ARE INCHES DIMENSIONING AND DO NOT INCLUDE PLATING. TOLERANCING TO BE INTERPRETED IN ACCORDANCE WITH ANSI Y14.5M-1994			
3RD ANGLE PROJECTION 	TOLERANCE UNLESS OTHERWISE SPECIFIED ONE PLACE DEC ± .25 [.01] FRACTION ± TWO PLACE DEC ± .100 [.004] ANGULAR ±1°		
TITLE UL print clip and connector			
Littelfuse DES PLAINES, ILLINOIS 60016		REVISION	DRWG NO. SHEET 1 OF 7
		UL	



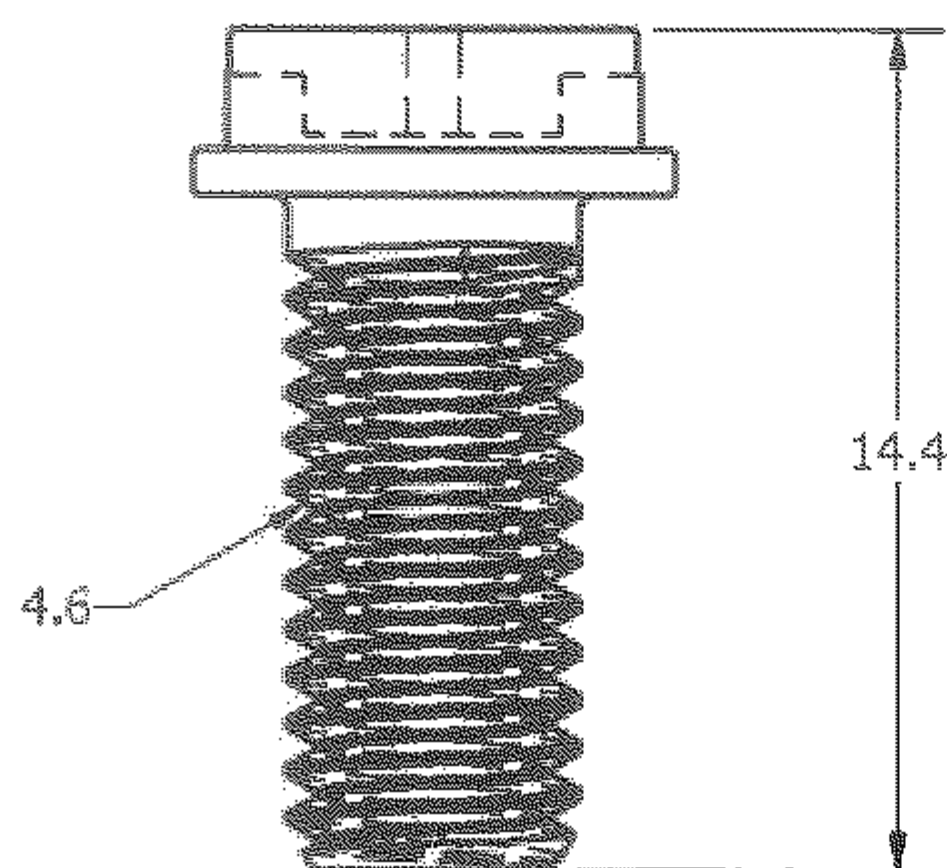
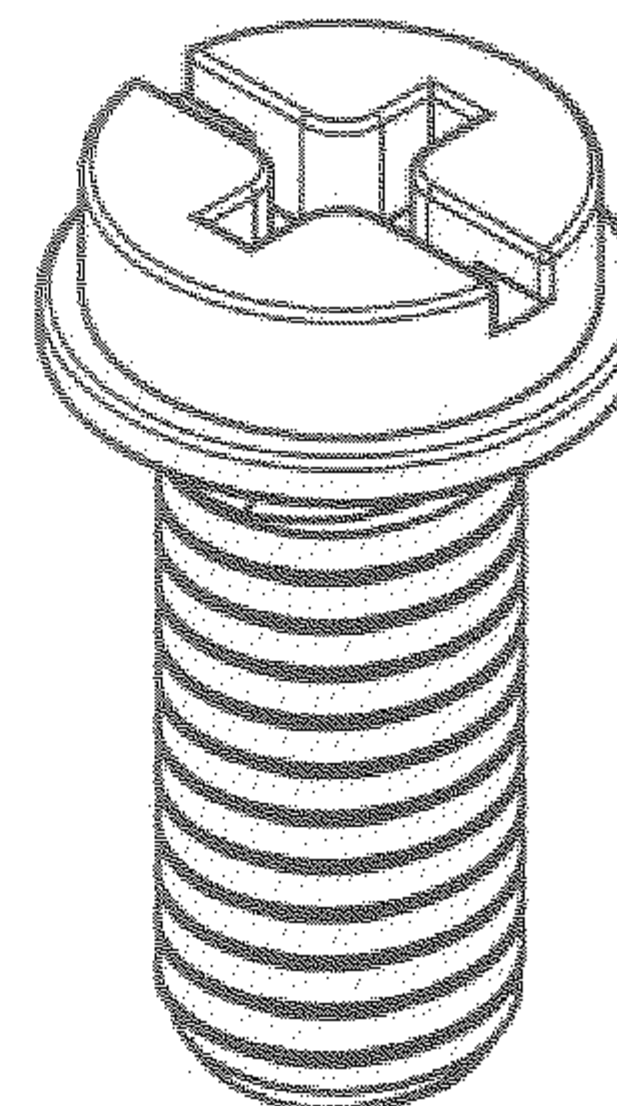
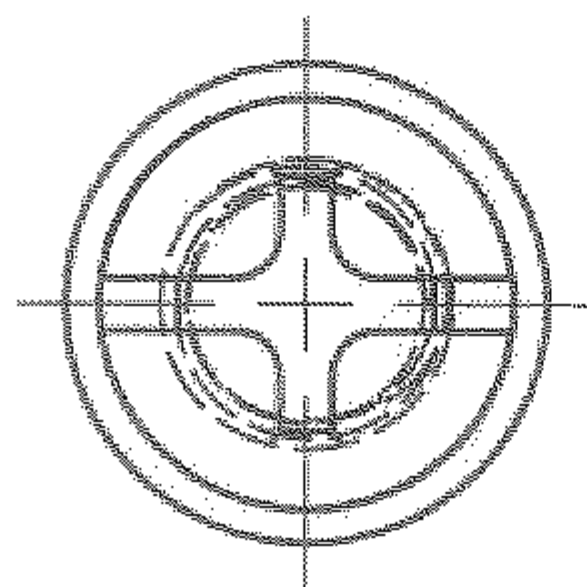
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CPK	DENOTES CPK DIMENSIONS, -MINIMUM CPK VALUE		
Ⓢ	DENOTES A CHARACTERISTIC THAT PROVIDES AN INDICATION OF PROCESS PERFORMANCE. PROCEDURE FOR MEASUREMENT AND TRACKING TO BE DEFINED IN LITTELFUSE INSPECTION INSTRUCTIONS.		
CP	DENOTES CP DIMENSIONS, -MINIMUM CP VALUE MUST BE WITHIN THE DIMENSIONAL LIMITATIONS SHOWN ON DRAWING AND INITIALLY LOCATED TO ALLOW FOR MAXIMUM TOOL LIFE.		
MATERIAL SPEC 1.4mm STEEL		FINISH PLATED	
DRW	DATE	SCALE NTS	FINISH GOOD WT GRAMS/PIECE
3RD ANGLE PROJECTION 			
TITLE 03DP178			
DES PLAINES, ILLINOIS 60018		REVISION A	DRWG NO. 03DP178 SHEET 1 OF 3

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●	DENOTES CRITICAL CHARACTERISTICS.		
CPK	DENOTES CPK DIMENSIONS, -MINIMUM CPK VALUE		
(ST)	DENOTES A CHARACTERISTIC THAT PROVIDES AN INDICATION OF PROCESS PERFORMANCE, PROCEDURE FOR MEASUREMENT AND TRACKING TO BE DEFINED IN LITTELFUSE INSPECTION INSTRUCTIONS.		
CP	DENOTES CP DIMENSIONS, -MINIMUM CP VALUE MUST BE WITHIN THE DIMENSIONAL LIMITATIONS SHOWN ON DRAWING AND INITIALLY LOCATED TO ALLOW FOR MAXIMUM TOOL LIFE.		
MATL SPEC 0.9mm STEEL		FINISH PLATED	
DRW	DATE	SCALE NTS	FINISH GOOD WT <small>(GRAMS/Piece)</small>
3RD ANGLE PROJECTION			
TITLE 03DP178			
 DES PLAINES, ILLINOIS 60516		REVISION A	DRWG NO. 03DP178 SHEET 7 OF 3

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●	DENOTES CRITICAL CHARACTERISTICS.		
CPK	DENOTES CPK DIMENSIONS, -MINIMUM CPK VALUE		
ST	DENOTES A CHARACTERISTIC THAT PROVIDES AN INDICATION OF PROCESS PERFORMANCE. PROCEDURE FOR MEASUREMENT AND TRACKING TO BE DEFINED IN LITTELFUSE INSPECTION INSTRUCTIONS.		
CP	DENOTES CP DIMENSIONS, -MINIMUM CP VALUE MUST BE WITHIN THE DIMENSIONAL LIMITATIONS SHOWN ON DRAWING AND INITIALLY LOCATED TO ALLOW FOR MAXIMUM TOOL LIFE.		A
MATL SPEC	STEEL	FINISH	PLATED
DRW	DATE	SCALE NTS	FINISH GOOD WT GRAMS/PIECE
3RD ANGLE PROJECTION			
TITLE			
03DP178			
Littelfuse DES PLAINES, ILLINOIS 60016		REVISION	DRWG NO. SHEET 3 OF 3
		A	03DP178