Molex 64318-3011 PDF

深圳创唯电子有限公司 http://www.molex-connect.com

PRODUCT SPECIFICATION

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28 AND 53CKT POWER CMC CONNECTOR, 64318 & 64321 SERIES

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
C	EC No: G2014-0095 DATE: 2013/11/27	PRODUCT SPECIFICATION 28 AND 53 WAY POWER CMC CONNECTOR	1 of 8

DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-64321-001	A.HERBELIN	C.BOUCHAN	P.BEUGNOT

1.0 SCOPE

This Product Specification covers the hybrid & sealed Power CMC Connectors Series.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

- **64318**: CMC Power Connector 28 circuits.
- **64321**: CMC Power Connector 53 circuits.
- **64322**: CP 0.6 Female Terminal.
- **64323**: CP 1.5 Female Terminal.
- **64324**: CP 2.8 Female Terminal.
- **64325**: Blind Plug.

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

All dimensions, housing materials, terminal materials and plating can be found on sales drawings.

2.3 SAFETY AGENCY APPROVALS

All molded components are flammability rated UL94 HB.

2.4 MAIN TECHNICAL CHARACTERISTICS

- Operating Voltage: 14 Volts DC.
- Dielectric Withstanding Voltage: 1000 Volts AC for 1 minute.
- Insulation Resistance: 100 MΩ minimum.
- Vibration: 10g (tin).
- Sealing: IP6K7, IP6K8, IP6K9K.
- Operating temperature: -40°C to + 125°C.
- Available wire sizes:
  CP 0.6mm²: 0.35mm² to 0.75mm² and 18 TXL AWG and 20 TXL AWG
  CP 1.5mm²: 0.50mm² to 2.00mm² and 14 TXL AWG and 16 TXL AWG
  CP 2.8mm²: 0.50 mm² to 5.00 mm²
- Available plating options: tin and gold.

2.5 VALIDATION DONE ACCORDING THE FOLLOWING STANDARDS

ISO 8092-2 standard, and some items from:
PSA B217050
AK LV 214 Standard
JD 53.3

Please contact Molex for more information.

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

Description	Document Number
Application specification	AS-64321-001
Sales drawing Power CMC 53 way	SD-64321-001
Sales drawing CP 0.6 female terminal	SD-64322-001
Sales drawing CP 1.5 female terminal	SD-64323-001
Sales drawing CP 2.8 female terminal	SD-64324-001
Interface drawing Power CMC 28 way	SD-64318-002
Interface drawing Power CMC 53 way	SD-98995-009
Application Specification CP0.6 female terminal	AS-64322-001
Application Specification CP1.5 female terminal	AS-64323-001
Application Specification CP2.8 female terminal	AS-64324-001

4.0 RATINGS

4.1 VOLTAGE

Operating Voltage: 14 Volts DC
Dielectric Withstanding Voltage: 1000 Volts AC during 1 minute

4.2 CURRENT AND APPLICABLE WIRES

Applicable wires:

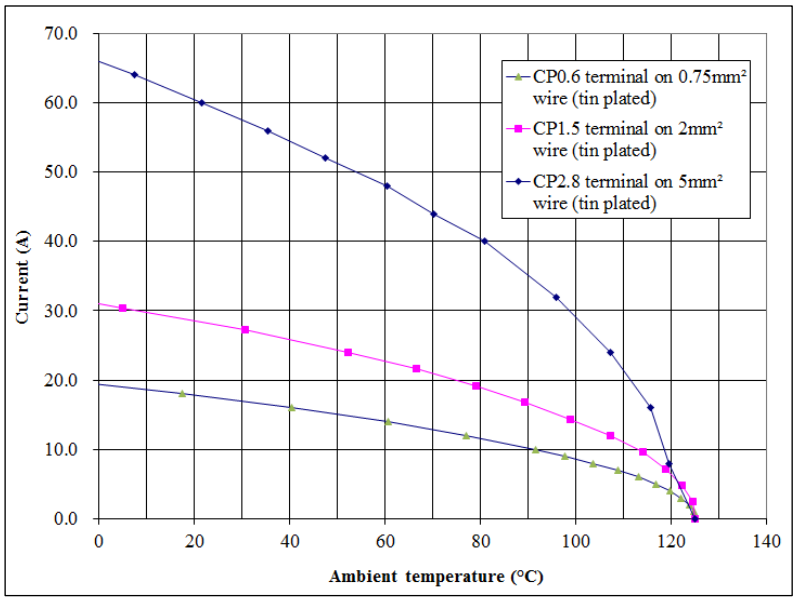
Terminal size	*ISO*	*Outside Insulation Diameter*
0.63	0.75 mm²	1.90 mm Max.
1.5	2.0 mm²	2.80 mm Max.
2.8	5.0 mm²	4.00 mm Max.

Max applicable continuous current (in housing, with 40°C temperature rising):

	28/53Ckt
CP0.6 on 0,75mm²	2,5A
CP1.5 on 2mm²	12A
CP2.8 on 5mm²	21A

Check mating header temperature class and environmental conditions for potential limitations.

Terminals derating curves (on air, for information only):



The derating curves are presented as a guideline. The end user must evaluate the performance of the connector pair in actual application to determine the suitability and actual performance.

For any further information, please contact Molex.

4.3 TEMPERATURE

Maximum system in use temperature range: - 40°C to +125°C.
Split operating temperature between female and header
Check mating header temperature class for potential limitations.

5.0 PERFORMANCE

5.1 ELECTRICAL PERFORMANCE

ITEM	DESCRIPTION	TEST CONDITION	ISO STANDARD (BY EQUIVALENCE)	REQUIREMENT
1	**Contact Resistance (Low Level)**	Mate connectors : apply a maximum voltage of 20 mV and a current of 100 mA	ISO 8092-2 § 4.8.1	Terminal 0.63: 8 mΩ max. Terminal 1.5: 4 mΩ max. Terminal 2.8: 3 mΩ max.
2	**Insulation Resistance**	Unmated connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground.	ISO 8092-2 § 4.12	100 MΩ min.
3	**Dielectric Withstanding Voltage**	Unmated connectors: apply a voltage of 1000 volts 50 Hz VAC for 1 minute between adjacent terminals and between terminals to ground.	ISO 8092-2 § 4.13	No Breakdown

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	ISO STANDARD (BY EQUIVALENCE)	REQUIREMENT
4	**Terminal Insertion Forces**	Insert terminal into the housing at a rate of 25 mm per minute	ISO 8092-2 § 4.6	Terminal 0.63: 12 N max. Terminal 1.5: 20 N max. Terminal 2.8: 25 N Max.
5	**Terminal Retention Force (in housing with TPA)**	Axial pullout force on the terminal in the housing at a rate of 25 mm per minute	ISO 8092-2 § 4.7	Terminal 0.63: 60 N min. Terminal 1.5: 100 N min. Terminal 2.8: 100 N min.
6	**Connector Mate and Unmate Forces**	Mate and unmate connector (male to female) at a rate of 25 mm per minute	ISO 8092-2 § 4.3	90 N max Fully loaded
7	**Durability**	Mate connectors up to 20 cycles	ISO 8092-2 § 4.3	No mechanical damage and no sealing leakage.
8	**Vibration (Sine)** ***Tin plated Terminals***	- Mate connectors and vibrate from 10 to 2000Hz, 3 G for 48 hours in each of three mutually perpendicular axes (X, Y, Z) coupled with a temperature cycling from -40°C to 95°C. - Mate connectors and vibrate from 10 to 2000Hz, 10 G for 8 hours in each of three mutually perpendicular axes (X, Y, Z) coupled with a temperature cycling from -40°C to 125°C.	N/A N/A	No mechanical damage and no micro-break Contact resistance: ΔRc (R final-R initial) ≤ 5mΩ
9	**Wire Pullout Force (axial)**	Apply an axial pullout force on the wire bundle	N/A	No damage under F ≤ 100N
10	**Mechanical Shocks**	Assembled female connector shall be dropped onto concrete from a height of 1m	N/A	No damage on connectors

5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	ISO STANDARD (BY EQUIVALENCE)	REQUIREMENT
11	**Thermal Shocks**	Mated connectors exposed to 100 cycles of: Temperature (C°) — Duration (mn) - 40° ±2 — 60 +125° ±2 — 60	N/A	No mechanical damage Contact resistance: ΔRc (R final-R initial) ≤ 5mΩ
12	**Endurance to temperature and humidity**	Mated connectors exposed to 5 cycles of 24 hours as defined below: - 4 Hrs @23°C with 75% of relative humidity. - 0.5 Hr of heat up to +55°C. - 10 Hrs @55°C with 99% of relative humidity. - 1.5 hrs of cool down to -40°C. - 2 hrs @ -40°C. - 2.5 Hrs of heat up to +125°C. - 2 Hrs @ +125°C. - 1.5 Hrs of cool down to 23°C.	ISO 8092-2 § 4.10	No mechanical damage Contact resistance: ΔRc (R final-R initial) ≤ 5mΩ
13	**Fluid resistance**	Submerse mated connectors in each of the following automotive fluids : - engine oil - manual gear box oil - automatic gear box oil - engine coolant - battery liquid - brake fluid - power steering fluid - diesel fuel - window washing liquid (methanol)	N/A	Insulation resistance in accordance with §2 Dielectric strength in accordance with §3
14	**Water tightness**	Submerge mated connector under water 100 mm minimum for 30 seconds minimum duration under 500mbar air pressure.	ISO 20653	IP6K7, IP6K8
15	**High Pressure Spray Resistance**	Mated connectors are placed on a rotating table and submitted to high pressure water jet (100 bars at 80°C)	ISO 20653	IP6K9K

6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.

For further information please visit Molex website: www.molex.com/product/cmc.html

PACKAGING SPECIFICATION

CMC PWR 28 CKT

1.0 SCOPE:
THIS SPECIFICATION DESCRIBES THE PACKAGING AND LABELLING NEEDS FOR CMC PWR 28 CKT WITH THE FOLLOWING MATERIAL NUMBERS: 0989943011, 0989943018, 0989943019, 0989941011, 0989941018 AND 0989941019.

2.0 PRODUCT DESCRIPTION:
CMC PWR 28 CKT.

3.0 REFERENCE DOCUMENTS
THE APPROPRIATE CUSTOMER DRAWING FOR INFORMATION ON DIMENSIONS, MATERIALS AND MARKINGS OF THE PRODUCT IS: **RSD-98994-001**.

4.0 PROCEDURE: GENERAL REQUIREMENTS

4.1 PACKING INSTRUCTIONS

PACKAGING UNIT (SEE FIG 1 & 2):
USE A CARDBOARD BOX: **A 12** P/N 0983010016.
PUT AN INTERLEAF P/N 0982990009 TO THE BOTTOM OF THE BOX.
HOUSINGS ARE DELIVERED ON 6 LAYERS SPLITTED BY AN INTERLEAF P/N 0982990009. 62 PARTS / LAYER: (***See FIG 1***)
PUT AN INTERLEAF P/N 0982990009 TO THE TOP OF THE BOX + ONE INTERLEAF P/N 0982990022.
THE CARDBOARD BOX IS THEN CLOSED BY ADHESIVE TAPE (50mm) 0982999001
TOTAL PARTS PER PACKAGING UNIT = 372

IDENTIFICATION:

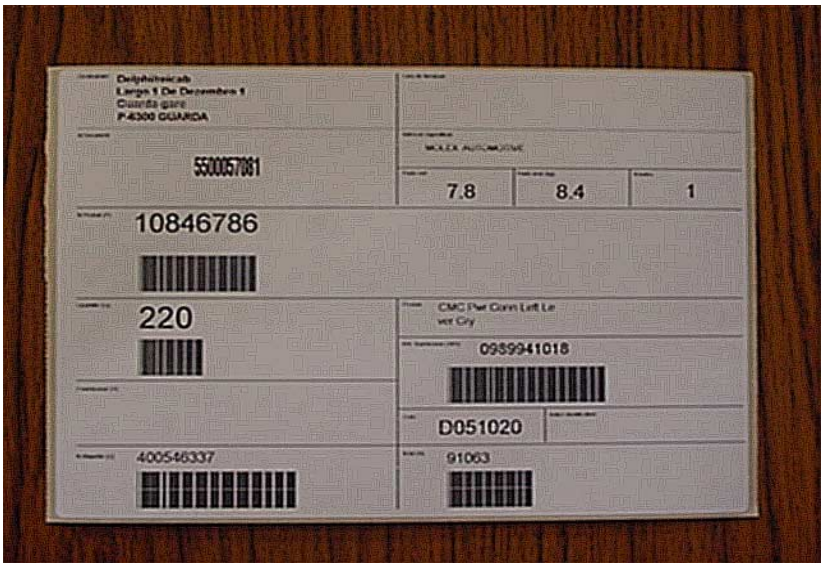
LABEL FOR STOCK IS A MOLEX INTERNAL LABEL (See the picture below)**.**
EACH BOX MUST SHOW A LABEL

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
A	EC No: **G2006-0135** DATE: **2005/10/19**	**PACKAGING SPECIFICATION FOR CMC PWR 28CKT 98994 SERIES #**	**1** of **3**

DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PK- 98994-001	**M.SIMON**	**T.ROQUES**	**L.STICKEIR**

PACKAGING SPECIFICATION

LABEL FOR CUSTOMERS DELIVERIES (GALIA LABEL See the picture below)**.**
EACH BOX MUST SHOW A LABEL IN ACCORDANCE WITH THE GALIA STANDARD REF: 0983040063 (210x148) STICKED ON EACH BOX:



INFORMATION ABOUT SHIPPING UNIT (SEE FIG 2):
EACH CARDBOARD IS PLACED ON A WOODEN PALETTE (1200x800). THERE IS 3 LAYERS OF 8 CARDBOARD BOXES PER PALLET. THE SET IS THEN FIXED BY PLASTIC FILM. CARDBOARD BOXES MUST BE PLACED IN SUCH A WAY THAT THE LABELS MUST BE VISIBLE. IN THIS CASE EACH SHIPPING UNIT MUST CONTAIN ONLY ONE PART NUMBER.

INFORMATION ABOUT SHIPPING UNIT IDENTIFICATION:
A LABEL ACCORDING TO GALIA P/N **0983040063** (210x148) STICKED WITH FOLLOWING INFORMATION IDENTIFIES EACH SHIPPING UNIT (PALETTE):

- CUSTOMER NAME
- DELIVERY ADRESS
- DELIVERY NOTE NUMBER
- SENDER REFERENCE
- PRODUCT NAME
- QUANTITY
- SUPPLIER
- LABEL NUMBER
- PRODUCTION DESCRIPTION
- MOLEX PART NUMBER
- PRODUCTION DATE
- REVISION LEVEL OF SALES DRAWING

ALL LABEL AREAS MUST BE FILLED IN.
ONLY TWO PALLETS CAN BE SUPERIMPOSED FIRST ONE OVER SECOND ONE.
NO SHOCK OR FALL WILL BE ALLOWED DURING THE STORAGE UNTIL PROCESS UTILISATION

4.2 UNPACKING INSTRUCTIONS

UNPACK THE PRODUCTS ONLY JUST BEFORE THEIR ASSEMBLY OPERATIONS.

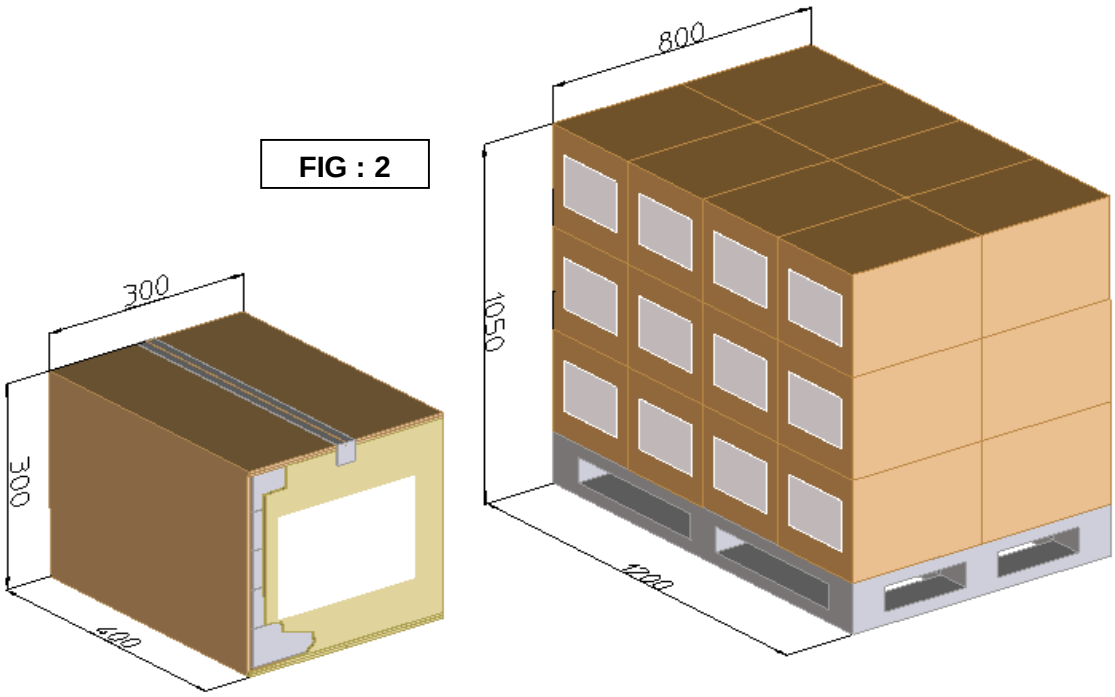
PACKAGING UNIT:

QUANTITY PER LAYER: 62 PARTS
QUANTITY PER BOX: 372 PARTS

FIG : 1

SHIPPING UNIT:
PALLET SIZE: 1200X800
MAXIMUM 3 LAYERS PER PALLET
TOTAL HEIGHT: 1050 MM
8 BOXES **A 12** PER LAYER
QUANTITY PER LAYER: 2976 PARTS
QUANTITY PER PALLET: 8928 PARTS

FIG : 2



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A	EC No: G2006-0135 DATE: 2005/10/19	PACKAGING SPECIFICATION FOR CMC PWR 28CKT 98994 SERIES #	3 of 3

DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PK- 98994-001	M.SIMON	T.ROQUES	L.STICKEIR