File E52653
Project 4788421040

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REPORT

on

COMPONENT - CONNECTORS FOR USE IN DATA, SIGNAL, CONTROL AND POWER APPLICATIONS

Hirose Electric Co., Ltd.
Tokyo, Japan

DESCRIPTION

PRODUCT COVERED:

USR, CNR Component Connector, Series MQ221:

Cat. Nos. MQ221, followed by -5P/10P or -5S/10S, may be followed by (01) to (99).

GENERAL:

These devices are multi-pole connectors intended for factory assembly on copper wire sizes as indicated in Ratings table below where the acceptability of combinations is determined by UL LLC. The devices are identified as follows:

USR indicates investigation to United States Standards, UL 1977.

CNR indicates investigation to Canadian National Standards, C22.2 No. 182.3.

RATINGS:

Series	Selected Contact (Plug/Rece) Part Nos.	Voltage (Vac/dc)	Ampere (Amax)	Conductor Sizes, AWG, (CU/STR) (#1)
MQ221	Power Circuit (5 poles):			
	EM52M-PC2-132 / EV1-SC2-132	600	100	2
	EM52M-PC-112 / EV1-SC2-112	600	125 for USR	4
			80 for CNR	4
	EM52M-PC-142 / EV1-SC2-142	**600**	**45**	**8**
	EM52M-PC-112 / EV1-SC2-142	**600**	**45**	**4 for EM52M-PC-112** **8 for EV1-SC2-142**
	Signal Circuit (10 poles):			
	N/A (Cannot be selected)	200	1	- (#2)
Note (#1): Crimp type wiring terminal. Note (#2): Signal Connector contact.				

Disconnecting Use - see Sec Gen for required marking

NOMENCLATURE: The Series MQ221 are designated as follows:

Example: Cat. No. MQ221-5P/10P(01)

MQ221	-5	P	/10	P	(01)
I	II	III	IV	V	VI

I - Basic Construction:
MQ221: Series MQ221

II - Number of power contact:
5: 5 poles

III - Connector Style:
P: Plug
S: Receptacle

IV - Number of signal contact:
/10: 10 poles

V - Connector Style (Signal):
P: Plug
S: Receptacle

VI - Customer specification:
(01) to (99) or blank: Indicate packing differences or Insulator material color variation.

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC.

Conditions of Acceptability - The following are among the considerations to be made when evaluating the device in the end-use product.

Interruption of Current

1. These devices are not suitable for interrupting the flow of current by connecting or disconnecting the mating connector.

Current-Carrying Capability and Current Ratings

2. These devices have been subjected to the Temperature test with the rated currents and maximum temperature rise and recorded temperature (adjusted to 25°C ambient) values tabulated below for the specific circuits indicated below, when all poles are loaded simultaneously:

Connector Cat Nos. (Plug/Rece)	Circuit	Contact, Part No. (Plug/Rece)	Current, A	Wire Size, AWG (CU/STR)	Maximum Temperature °C	
					Rise	Recorded Temperature
MQ221-5P/10P mating with MQ221-5S/10S and mating signal connectors, HIF3MAW-10D-2.54R	Power	EM52M-PC2-132 / EV1-SC2-132	100	2	25.5	50.5
	Signal	-	1	28	21.6	46.6
	Power	EM52M-PC-112 / EV1-SC2-112	80 for CNR	4	26.3	51.3
	Signal	-	1	28	20.1	45.1
	Power	EM52M-PC-112 / EV1-SC2-112	125 for USR	4	75.7	100.7
	Signal	-	1	28	41.2	66.2
	Power	**EM52M-PC-142 / EV1-SC2-142**	**45**	**8**	**20.5**	**45.5**
	Signal	**-**	**1**	**28**	**16.0**	**41.0**
	Power	**EM52M-PC-112 / EV1-SC2-142**	**45**	**4 / 8**	**13.7**	**38.7**
	Signal	**-**	**1**	**28**	**8.3**	**33.3**

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