



## PRODUCT SPECIFICATION

Product Name                      Electric Double Layer Capacitor Module

Model No.                              MU3-124-003R01F1P-01

Document No.                        QDR-AD-0190-01

Issuing Date                         2015.8.17

Column for Note / Sign

### 【 Attached Documents 】

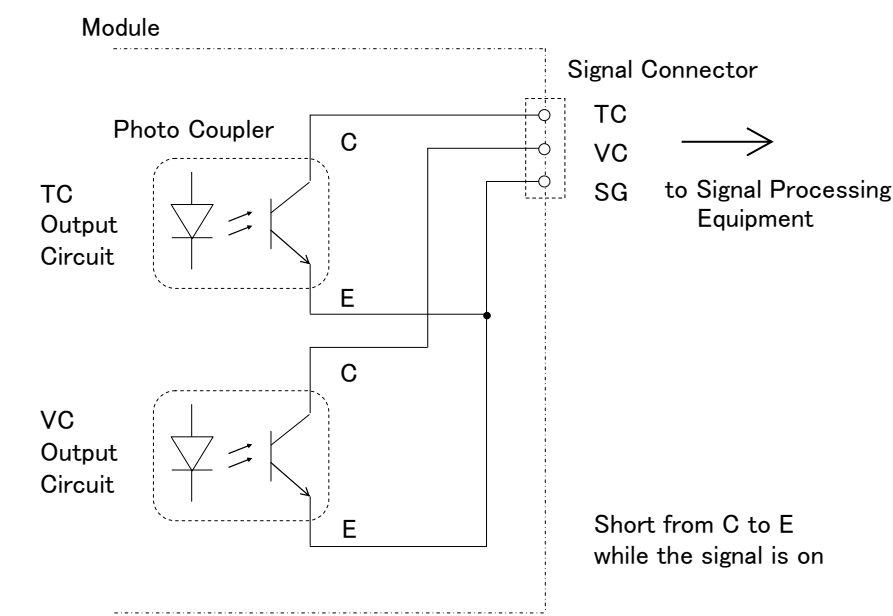
No.	Document Title	Document No.
1	Outline Drawing of MU3-124-003R01F1P-01	0300585101AP

A. Main Specification

No.	Item	Specification (*1)	Remarks
1	Environmental Condition		
1.1	Operating Temperature	0 to 50 deg.C	No Condensation.
1.2	Operating Humidity	15 to 90 % RH	Keep less than 10 V
1.3	Storage Temperature	-40 to 70 deg.C	while being stored.
1.4	Storage Humidity	5 to 95 % RH	
2	Electrical Property		
2.1	Rated Voltage	124.2 V DC	
2.2	Peak Voltage	133.4 V DC	
2.3	Capacitance	3.5 F Typical	Before Shipment
	Tolerance	within +/- 10 %	60A for measurement
2.4	Internal Resistance	52 mΩ Typical	Before Shipment
	Tolerance	61 mΩ Max.	60A for measurement
2.5	Insulation Resistance	over 100 MΩ on 500V DC	Terminal to Enclosure
2.6	Withstand Voltage	3000 V AC 1 minute	Terminal to Signal circuit
3	Structural Property		
3.1	Number of Cells	46 cells in series	
3.2	Dimensions (approx.)	(W) 143 (D) 396 (H) 227 mm	Refer to attached drawing
3.3	Weight (approx.)	11 kg	
4	Added Function		
4.1	Cell Voltage Balancing	Resistors are connected in parallel for each cell [ Resistance ] 120 Ω / cell Current bypass type circuit [Bypass voltage] 2.7 [V]/cell [Bypass current] 82 [mA] (at 2.7[V]/cell )	[Rev. 03]
4.2	Alarm Signal		
	Thermal Caution (TC)	Turned on while temperature of the cell is over 60 deg.C	The cell located in the center of module
	Voltage Caution (VC)	Turned on while one or more cells are charged over 2.9 V	
4.3	LED Lamp		
	Charged	Lighted gradually as the module voltage is rising [ LED Color ] Green	For caution about an electric shock
	Voltage Caution	Lighted while VC signal is turned on [ LED Color ] Red	To pick up abnormal ones from several modules

(\*1) on the condition of 25 deg.C unless otherwise mentioned

## B . User Interface

No.	Item	Specification		Remarks
1	Main Terminal			
1.1	Positive Terminal	Number	1	Terminal covers Tightening torque 0.3 N·m (Terminal covers are bundled)
		Size of Terminal	M8	
		Length of Bolt	20 mm	
		Tightening torque	5.5 N·m	
		Marking	+	
1.2	Negative Terminal	Number	1	
		Size of Terminal	M8	
		Length of Bolt	20 mm	
		Tightening torque	5.5 N·m	
		Marking	–	
2	Signal Connector			
2.1	Type of Connector (*2)	SMP-03V-BC ( J.S.T. Mfg. ) 2 connectors to connect with other module		J.S.T. Mfg. = Japan Solder less Terminal Mfg.
2.2	Pin Assignment	No.	Symbol	Signal
		1	TC	TC Signal Output
		2	VC	VC Signal Output
		3	SG	Signal Ground
2.3	Type of Signal Output Circuit	Open Collector Output by Photo Coupler [ while turned On ] Short from C to E (ground) [ while turned Off ] Open from C to E (ground)		C = Collector terminal E = Emitter terminal
2.4	Schematic Diagram of Signal Output Circuit			
		Type of Photo Couplers	TLP785 ( Toshiba ) or the equivalent	(*3) [Rev. 03]
		Signal Circuit Voltage	5 ~ 24 V DC	Recommended Range
		Signal Circuit Current	1 ~ 10 mA	

(\*2) Connectors which mate with the signal connectors are not bundled normally.

(\*3) Refer to Datasheet published by the manufacturer for the detail property of the photo coupler.

C . Fan Spec

No.	Item	Specification	Remarks
1	Fan type	AC FAN type UHS4556 ( IKURA SEIKI CO.,LTD. )	(*4)
2	Rated Voltage	AC 200 [V]	
3	Input power	20 [W]	
4	Warranty	Please inquire the fan manufacturer about the warranty on this product.	
5	Option	The plug code is not attached.	

(\*4) Please refer to the appendix. (QDR-AD-0163)

D . Controlled Substance

No.	Contents
1	RoHS Compliant ( European Directive 2002/95/EC of 27 January 2003 )

E . Others

No.	Contents
1	Do not Turn Over or Turn Sideways
2	Prohibit Reverse Charging or AC Charging
3	It could be fixed on the ground through the 4 U-shaped holes ( $\phi$ 7.0) by M6 bolts. The holes of metal bracket come right on the respective screw U-shaped holes of the module. Tightening torque 4.3 N・m (Metal bracket are bundled)

F . Accessory

No.	Part name	Number
1	Terminal cover	2
2	Pan-head screw M3-6	4
3	Metal bracket	2

G . Circuit Board

No.	Circuit Board Name
1	A228a

【 Revision History 】

Rev.	Comment	Date	Drawn	Checked	Approved
01	Initial Release	2015.08.17	M.S	-	M.Shimizu

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