

## MCRH/RM Series

REVISIONS								
ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	Α	RELEASED	Kiran	20/06/09	Suresh	20/06/09	Farnell	06/07/09
	·							

**Truth Table** 

9

Α

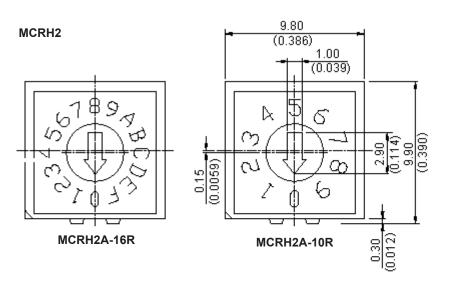
В

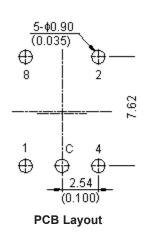
С

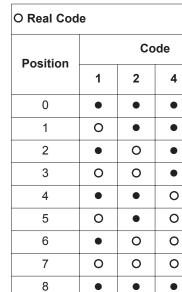
D

Ε

F







0

lacktrian

0

0

0

lacksquare

0

0

lacktrian

0

0

lacktrian

0

0

0

0

8

•

0

0

0

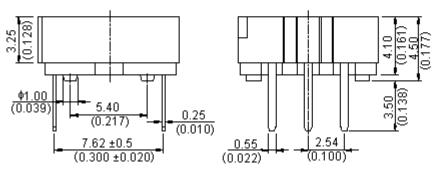
0

0

0

0

0



Dimensions: Millimetres (Inches)

the "Group") or are licensed to it. No licence is granted for the use of it other than for	TOLERANCES:	DRAWN BY:
information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change with-	UNLESS OTHERWISE	Kiran
out notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this	SPECIFIED,	CHECKED BY:
data sheet should check for themselves the Information and the suitability of the prod- ucts for their purpose and not make any assumptions based on information included or	DIMENSIONS ARE FOR REFERENCE	Suresh
omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit	PURPOSES ONLY.	APPROVED BY:
or restrict the Group's liability for death or personal injury resulting from its negligence.  SPC MULTICOMP is the registered trademark of the Group. © Premier Farmell plc 2009.		Farnell

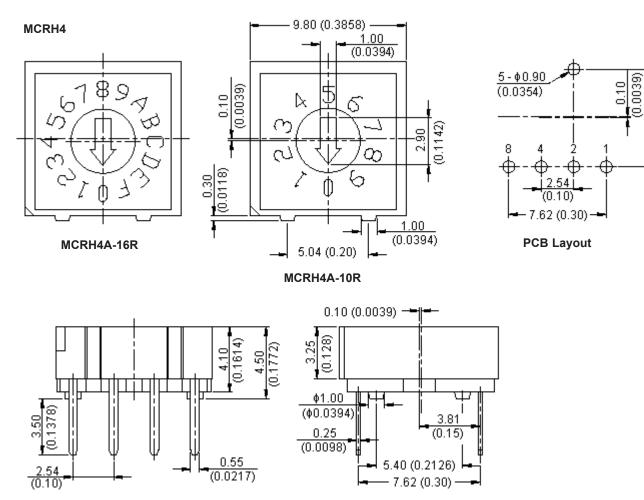
l	DRAWN BY:	DATE:	DRAWING TITLE:		
	Kiran	20/06/09			R
	CHECKED BY:	DATE:	SIZE	DWG NO.	
	Suresh	20/06/09	Α		
	APPROVED BY:	DATE:			
Farnell		06/07/09	SCALE: NTS		

Εij	DRAWI	NG TITLE:						
9	Rotary Switches - Dual In Line Type							
E:	SIZE	DWG NO.	M10002262		ELECTRONIC FILE			REV
9	Α				33007 DWG			Α
E:					<u> </u>	_	_	
9	SCALE: NTS		U.O.M.: mm (Inches)		SHEET: 1	OF	8	



#### MCRH/RM Series

REVISIONS								·
ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	Α	RELEASED	Kiran	20/06/09	Suresh	20/06/09	Farnell	06/07/09



Dimensions : Millimetres (Inches)

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is ig rantled for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from regigence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

UNLESS OTHERWISE
SPECIFIED,

**TOLERANCES:** 

SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Kiran	20/06/09
CHECKED BY:	DATE:
Suresh	20/06/09
APPROVED BY:	DATE:
Farnell	06/07/09

DRAWING TITLE:		
	Potony Switz	_

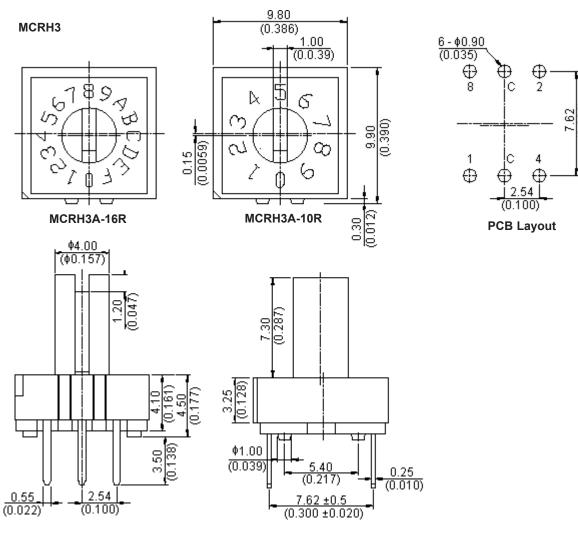
7.62 (0.30)

Rotary Switches - Dual In Line Type										
SIZE	DWG NO.	M10002262		ELEC		REV				
Α				3300		Α				
SCALE: NTS		U.O.M.: mm (Inches)		SHEET:	2	OF	- 8			



#### MCRH/RM Series

REVISIONS								
ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	Α	RELEASED	Kiran	20/06/09	Suresh	20/06/09	Farnell	06/07/09



Dimensions: Millimetres (Inches)

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from many reliance or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

**TOLERANCES:** 

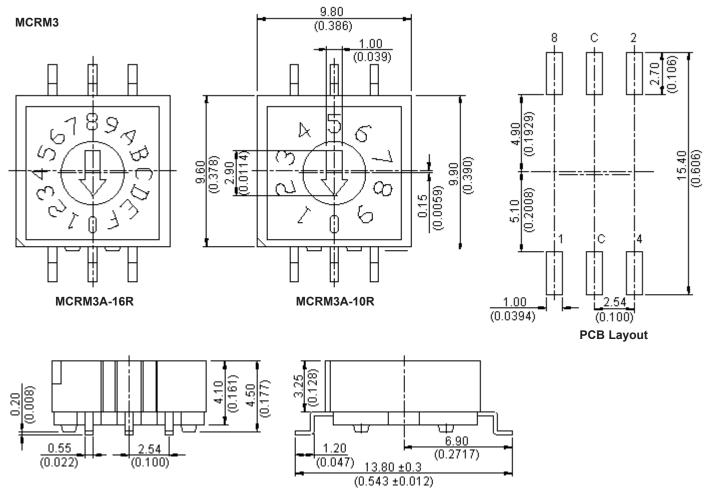
DRAWN BY:	DATE:	DRAW	ING TITLE:
Kiran	20/06/09		
CHECKED BY:	DATE:	SIZE	DWG NO
Suresh	20/06/09	Α	
APPROVED BY:	DATE:	<b></b> _	
Farnell	06/07/09	SCAL	E: NTS

DRAWING TITLE:								
Rotary Switches - Dual In Line Type								
SIZE DWG NO.			M10002262	ELECTRONIC FILE 33007_DWG				REV A
SCALE: NTS			U.O.M.: mm (Inches)	SHEET: 3		3	OF	8



#### MCRH/RM Series

		REVISIONS						
ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	Α	RELEASED	Kiran	20/06/09	Suresh	20/06/09	Farnell	06/07/09



Dimensions : Millimetres (Inches)

DDAMINO TITLE

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from medical responsability) of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injuny resulting from its peligence. SPC MULTICOMP is the registered trademark of the Group, © Premier Farnell plc 2009.

TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

	DRAWN BY:	DATE:	
	Kiran	20/06/09	
	CHECKED BY:	DATE:	
	Suresh	20/06/09	
	APPROVED BY:	DATE:	
	Farnell	06/07/09	

DRAW	ING IIILE:					
		Rotary Switches - Dual In Line Type				
SIZE <b>A</b>	DWG NO.	M10002262	ELECTRONIC FILE 33007 DWG	REV A		

SCALE: NTS U.O.M.: mm (Inches)

SHEET: 4 OF 8



#### MCRH/RM Series

		REVISIONS						
ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A RELEASED		Kiran	20/06/09	Suresh	20/06/09	Farnell	06/07/09

# **Specifications:**

Mechanical:

Mechanical life :  $200m\Omega$  maximum, 20,000 steps.

Maximum operating force : 200gf cm.

**Environmental:** 

Operating temperature range : -25° to +80°C. Storage temperature range : -40° to +85°C.

Electrical:

Electrical life :  $200m\Omega$  maximum, 20,000 steps.

Non-Switching rating : 100mA, 50V dc. Switching rating : 25mA, 24V dc.

Contact resistance :  $100m\Omega$  maximum (initial)

 $200m\Omega$  (final - after test).

Minimum insulation resistance :  $100M\Omega$  at 250V dc. Voltage proof : 250V ac for 1 minute.

Materials:

Base and cover : UL 94V-0 nylon thermoplastic.

Colour : Black.

Actuator : UL 94V-0 LCP thermoplastic.

Colour : White.

Contact : Alloy copper with gold plated over nickel.

Terminal : Brass with gold plated.

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its regilgence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plo 2009.

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE

PURPOSES ONLY.

TOLERANCES:

DRAWN BY:	DATE:		
Kiran	20/06/09		
CHECKED BY:	DATE:		
Suresh	20/06/09		
APPROVED BY:	DATE:		
Farnell	06/07/09		

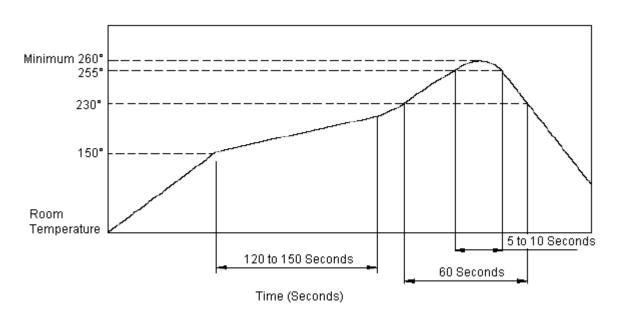
DRAWI	NG TITLE:						
		Rot	ary Switches - D	ual In	Line Type	!	
SIZE	DWG NO.	ı	M10002262		TRONIC FILE 7_DWG		REV A
SCALE: NTS			U.O.M.: mm (Inches)		SHEET: 5	OI	- 8



PART NO	
PART NO	

## MCRH/RM Series

		REVISIONS						
ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	Α	RELEASED	Kiran	20/06/09	Suresh	20/06/09	Farnell	06/07/09



# **Reflow Temperature Profile**

## **Soldering Process:**

**Hand Soldering :** Use a soldering iron of 30 watts, controlled at (350°C) approximately maximum 5 seconds. **Wave Soldering :** Recommended temperature at 500°F (260°C) maximum of 5 seconds (for through hole type).

**Reflow Soldering:** When applying reflow soldering, the peak temperature or the reflow oven should be set at 260°C maximum.

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

UNLESS OTHERWISE
SPECIFIED.
DIMENSIONS ARE
FOR REFERENCE
PURPOSES ONLY.

**TOLERANCES:** 

	DRAWN BY:	DATE:
	Kiran	20/06/09
	CHECKED BY:	DATE:
	Suresh	20/06/09
	APPROVED BY:	DATE:
	Farnell	06/07/09

DRAWING TITLE:								
Rotary Switches - Dual In Line Type								
SIZE DWG NO.			M10002262	ELECTRONIC FILE 33007_DWG				REV A
SCALE: NTS			U.O.M.: mm (Inches)		SHEET:	6	OF	8



# MCRH/RM Series

REVISIONS								
ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	Α	RELEASED	Kiran	20/06/09	Suresh	20/06/09	Farnell	06/07/09

## **Part Number Table**

Description	Part Number
Rotary Dip Switch	MCRH4AF-10R
Rotary Dip Switch	MCRH3AF-10R
Rotary Dip Switch	MCRH2AF-10R
Rotary Dip Switch	MCRH4AF-16R
Rotary Dip Switch	MCRH3AF-16R
Rotary Dip Switch	MCRH2AF-16R
Rotary Dip Switch, SMD	MCRM4AF-10R
Rotary Dip Switch, SMD	MCRM3AF-10R
Rotary Dip Switch, SMD	MCRM2AF-10R
Rotary Dip Switch, SMD	MCRM4AF-16R
Rotary Dip Switch, SMD	MCRM3AF-16R
Rotary Dip Switch, SMD	MCRM2AF-16R

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the proddata sneet should check for themselves the information and the Sutiability of the prod-ucts for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. © Premier Farnell plc 2009.

DRAWN BY:	DATE:
Kiran	20/06/09
CHECKED BY:	DATE:
Suresh	20/06/09
APPROVED BY:	DATE:
Farnell	06/07/09

≣:	DRAWING TITLE:						•	
9	Rotary Switches - Dual In Line Type							
≣:	SIZE	DWG NO.			ELEC	TRONIC FILE		REV
9	Α	2	M10002262		33007_DWG			Α
≣:							_	
9	SCALE: NTS			U.O.M.: mm (Inches)		SHEET: 7	OF	8

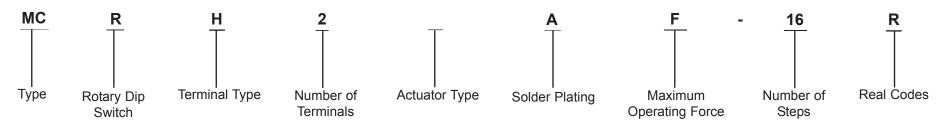


 <b>~</b> ^		10	$\mathbf{a}$
PA			

## MCRH/RM Series

REVISIONS								
ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	Α	RELEASED	Kiran	20/06/09	Suresh	20/06/09	Farnell	06/07/09

# **Part Number Explanation:**



**Terminal Type** : H = Through Hole.

M = SMT.

**Number of Terminals**  $: 2 = 3 \times 2$ 

 $3 = 3 \times 3$ 

 $4 = 4 \times 1$ .

**Actuator Type** : □ = Recessed Actuator. : A = Terminal : Gold Plated Over Nickel.

**Solder Plating Maximum Operating Force** 

: 200gf cm. Number of Steps

: 10 = 10 Steps.

16 = 16 Steps.

http://www.farnell.com

http://www.newark.com

http://www.cpc.co.uk

This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. SPC MULTICOMP is the registered trademark of the Group. @ Premier Farnell pic 2009

UNLESS OTHERWISE SPECIFIED, **DIMENSIONS ARE** FOR REFERENCE PURPOSES ONLY.

**TOLERANCES:** 

DRAWN BY:	DATE:
Kiran	20/06/09
CHECKED BY:	DATE:
Suresh	20/06/09
APPROVED BY:	DATE:
Farnell	06/07/09

DRAWING TITLE:						
		Rotary Switches - Dual In Line Type				
SIZE	DWG NO.	M10002262	ELECTRONIC FILE			

M110002262 33007 DWG

SCALE: NTS U.O.M.: mm (Inches) SHEET: 8 OF 8

**REV** 

Α