

Form B03

Scheduled Maintenance Work Order



Quantum Medical Solutions sdn bhd
transcending boundaries, transforming life
Format Ref. -QMS/TSD-003 Rev. 00

Work Order No	PW0340699	Scheduled Month	January 2018
Work Order Date	01/01/2018	Completed Date	23/1/2018
Clinic Name	Klinik Kesihatan Jalan Oya	Clinic Code	SWK169
BE No	8WK004783	District	SIBU
Be Category	Light, Examination	WO Assigned to	SIUBME1
Ownership	<input checked="" type="checkbox"/> Existing Equipment	<input type="checkbox"/> MEET Equipment	
BE Condition	<input type="checkbox"/> Under Warranty	<input type="checkbox"/> BER Proposed	
Work Order Type	<input type="checkbox"/> Preventive Maintenance (PM)	<input type="checkbox"/> Third Party Calibration (TPC)	
	<input checked="" type="checkbox"/> Routine Inspection (RI)	<input type="checkbox"/> Statutory Certification (SC)	

BE Third Party Calibration / Statutory Certification Details

Company Name	N/A	Cal / Cert Date	N/A
Company Number		Cal / Cert Expiry Date	

Action Taken

to do PM at perchecklist attached.

Schedule Maintenance Execution Details

SI No	QMS Engineer / Technician Name	Date	Start Time	End Time
0212	Wed. Charles	23/1/2018	1215	12-30

Customer Remarks

Engineer / Technician Signature Name Date WEDNISLEYJI JIMMY BIOMEDICAL TECH QUANTUM MEDICAL SOLUTIONS 23/1/18	Customer Signature Name Designation Date Seal ARTHUR ASAK ALI RUJAT Pen Pegawai Perubatan U32 LPPM 5398 23/1/2018
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For Internal Use Only

First Verification

QMS Circle Incharge

James Bo
Sr. Biomedical Engineer
Quantum Medical Solutions

Final Verification

QMS State Incharge



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BEMS Planned Preventive Maintenance Checklist

Light, Examination

SE CODE 12-276

CHECKLIST NO: CL-081
REV.006**PART 1 ASSET DETAILS**

WORK ORDER NO ▶ PWO340699

ASSET NO ▶ SWK 004783

MANUFACTURER ▶

MODEL ▶

FREQUENCY ▶ 3 MONTHLY () 6 MONTHLY () *12 MONTHLY (✓)

PPM HOURS ▶ 0.18

PART 2 SPECIAL PRECAUTION

If there is evidence of body fluid contamination, submit the device for cleaning and decontamination before inspecting it.

Wear appropriate Personnel Protection Equipment (PPE) during work.

Wear grounded electrostatic wristband when handling PCB or electronic components.

Refer to the safety procedure for additional precautions and guidance as per manufacturer guidelines.

Make sure the test equipment used are duly calibrated.

PART 3 TEST APPARATUS

Tick (✓) where appropriate

NO	ASSET NO	DESCRIPTION	SERIAL NO	CALIBRATION DUE ON
	T0050 0007	ELECTRICAL SAFETY ANALYZER	321 8073	2012/18
	T0056 0116	LUX METER	156166816	10/7/18

PART 4 QUALITATIVE TASKS

Tick (✓) where appropriate

	PASS	FAIL	NA		PASS	FAIL	NA
1 Chassis - verify physical integrity, cleanliness and condition	(✓)	()	()	7 Easy handling of all the articulation - verify performance	(✓)	()	()
2 Fittings/Connectors - verify integrity	(✓)	()	()	8 Maneuver stability - verify balance	(✓)	()	()
3 Controls/Switches - verify proper operation of controls	(✓)	()	()	9 Stand by power - verify operation	(✓)	()	()
4 Indicators/ Displays - verify proper illumination and operation	(✓)	()	()	10 Circular appearance of the light path - verify performance	(✓)	()	()
5 Brightness Control - verify operation	(✓)	()	()	11 Check light focus	(✓)	()	()
6 Lighthead - verify fixation	(✓)	()	()	12 Suspension - verify fixation	(✓)	()	()

PART 5 PREVENTIVE MAINTENANCE TASKS

Tick (✓) where appropriate


	DONE	NOT DONE**	NA		DONE	NOT DONE**	NA
1 Lenses/Heat Filter - Check and clean	(✓)	()	()	4 Bulb holder - Check / replace***	(✓)	()	()
2 Cleanliness - Clean the exterior and interior of the equipment	(✓)	()	()				
3 Bulb - Check / replace***	(✓)	()	()				

Notes:

* For all Parts, NA is defined as NOT APPLICABLE

**If you have ticked 'NOT DONE', then justify in Part 8

*** Choose Whichever Applicable

 quantum medical solutions sdn bhd 11, Jalan Puchong, 47100 Puchong, Selangor, Malaysia	Quantum Medical Solutions Sdn Bhd BEMS Planned Preventive Maintenance Checklist Light, Examination BE CODE : 12-278	CHECKLIST NO: CL-091 REV.000
	WORK ORDER NO ▶ PW0340699	

PART 6 QUANTITATIVE TASKS

Tick (✓) where appropriate

No	Description	Units / UOM	Set Values	Measured Values	Limit/Tolerance	PASS	FAIL	NA
	Light intensity at 1 m distance	Lux		169		(/) () ()		

PART 7 ELECTRICAL SAFETY TEST

ELECTRICAL SAFETY TEST, (attach report)

(In accordance to IEC 60601)

☒

PASS

☐

FAIL

☐

NA

PART 8 NOTES

unit functioning well.

☐

CORRECTIVE MAINTENANCE REQUIRED

☒

FUNCTIONING

☐

NOT FUNCTIONING

WORK ORDER NO ▶ _____

NEXT PPM DATE ▶ Jan 19

PPM has been performed in accordance to the checklist and the equipment is functioning to the intended purpose.

COMPLETED BY:

WEDNISLEYJI JIMMY
 BIOMEDICAL TECH
 QUANTUM MEDICAL SOLUTIONS

DATE:

23/1/18

Test Setup

Operator ID : A
 Calibration Tech : 99699
 Calibration Date : 20/12/2018
 Firmware Version : 2.12.01
 Serial Number : 3226903
 Date & Time : 23/01/2018 & 11:50
 JOB Name : PPM

DUT Information

Equipment Number : SWK004783
 Serial Number : N/A
 Manufacturer : N/A
 Model : N/A
 Location : KK JLN OYA
 Other :

Template Information

Template Name : Light, Examination
 Pause after Power ON: NO
 Power ON delay: 2
 Test Speed: NORMAL
 Halt on Test Failure: YES
 Include Time: YES
 Insulation Resistance V: 500V
 Multi Enclosure Test : NO

Standard : IEC60601-1-2nd Ed
 Pause before Power OFF: NO
 Power OFF delay: 0
 Test Mode: AUTO
 Multi PE Test: NO
 Multi Resstore: WORST/LAST
 Reverse Polarity: YES
 Classification: I

PLC Configuration-Applied part setup

AP Name	AP Type	AP Num
	B	II

ESA615 Test Results

Test Name	Value	High Limits	Low Limits	Status
Protective Earth Resistance	0.098 Ohm	0.2	-	P
Insulation Resistance				
Mains to Protective Earth	999 MOhm	-	-	P
Mains to Non-Earth Accessible Conductive Part	999 MOhm	-	-	P
Mains to Applied Parts	999 MOhm	-	-	P
Applied Parts to Non-Earth Accessible Conductive Part	999 MOhm	-	-	P
Mains Voltage				
Live to Neutral	239.1 V	-	-	P
Neutral to Earth	3.8 V	-	-	P
Live to Earth	240.5 V	-	-	P
Equipment Current	0.0 A	-	-	P

Earth Leakage Current


Normal Condition	16.3 μ A-OPEN	500	-	P
Open Neutral	33.5 μ A-OPEN	1000	-	P
Open Neutral- Reversed Mains	33.4 μ A-OPEN	1000	-	P
Normal Condition- Reversed Mains	17.7 μ A-OPEN	500	-	P

Enclosure Leakage Current

Normal Condition	0.7 μ A-OPEN	100	-	P
Open Earth	0.9 μ A-OPEN	500	-	P
Open Neutral	1.2 μ A-OPEN	500	-	P
Open Neutral- Reversed Mains	1.2 μ A-OPEN	500	-	P
Normal Condition- Reversed Mains	0.7 μ A-OPEN	100	-	P
Open Earth- Reversed Mains	0.9 μ A-OPEN	500	-	P

Patient Leakage Current

Normal Condition				
	0.5 μ A-OPEN	100	-	P
Open Earth				
	0.6 μ A-OPEN	500	-	P
Open Neutral				
	0.7 μ A-OPEN	500	-	P
Open Neutral- Reversed Mains				
	0.6 μ A-OPEN	500	-	P
Normal Condition- Reversed Mains				
	0.5 μ A-OPEN	100	-	P
Open Earth- Reversed Mains				
	0.5 μ A-OPEN	500	-	P


Signature