

EMONA

INSTRUMENTS PTY LTD

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Instrument data:

Model: MI 3155

Serial Number: 17430935

Calibration date: 01/02/2018

User:

HOSPITAL ABC/Object/DB1/CB1/Cardiac Protected area Inspection	Pass
EARTHING	Pass
Confirm that the earth pins of all socket-outlets are earthed to less than 0.1 ohm with respect to EP junction or node or other electrical equipment	Pass
Confirm that the earth pin of all socket-outlets with 5.0 m of the entrance to the patient area are earthed to less than 0.1 Ω with respect to EP junction or node or other electrical equipment	Pass
Confirm that all permanently wired appliances with conductive parts below 2.3 m are earthed to less than 0.1 ohm with respect to EP junction or node or other electrical equipment	Pass
RCD SENSITIVITY FOR AUSTRALIA	Pass
Confirm that the RCD trips between 4.5–10.5 mA. Record the RCD sensitivity mA	Pass
RCD TRIPPING TIMES FOR AUSTRALIA	Pass
Confirm this by carrying out at least two such tests. Record the longest tripping time ms	Pass
RCD TRIPPING TIMES FOR NEW ZEALAND	Pass
Confirm this by repeating the test at 0° and 180°. Record both cases ms	Pass
RCD SUPPLY AVAILABLE INDICATORS	Pass
Confirm that the indicator is operational	Pass
AUDIOVISUAL RCD TRIP INDICATORS	Pass
If applicable, confirm that they are operational	Pass
PROSPECTIVE HAZARD CURRENT OF INSULATION	Pass
Ensure PHC is less than 2.00 mA when no electrical equipment is plugged in. For routine testing, the PHC under normal conditions of operation shall be verified by applying the following process to each transformer Line Isolation Overload Monitor (LIOM):	Pass
LIM PROSPECTIVE HAZARD CURRENT ALARM	Pass
Confirm that the LIM alarms between 4.5–10.5 mA.	Pass
Record alarm current mA	Pass
OVERLOAD MONITORS	Pass
Confirm that the alarm operates when a load between 110–120% of rated load is applied in 3–5 s	Pass
UNINTERRUPTIBLE POWER SUPPLIES (UPS)	Pass
Confirm that UPS status indicator performance is routinely verified	Pass
INSPECTION	Pass
All electrical equipment and fittings in good condition	Pass
LABELLING	Pass
Circuit identification visible and intact on each RCD	Pass
Relevant electrical points labelled to identify associated RCD	Pass

Signature:

Created date: 04/09/2018

Circuit identification visible and intact on each LIM	Pass
Relevant electrical points labelled to identify associated LIMs	Pass
Overload monitors labelled with alarm setting	Pass
Socket-outlets protected by RCD labelled 'RCD PROTECTED'	Pass
Socket-outlets protected by isolating transformers labelled 'ISOLATING TRANSFORMER PROTECTED'	Pass
Socket-outlets intended for cleaning purposes labelled 'CLEANING PURPOSES ONLY'	Pass
Cardiac-protected electrical area sign:	Pass
Visible	Pass
Labelled with current inspection date	Pass
Labelled with identity of authorized person	Pass
Labelled with next test date	Pass
SOCKET-OUTLETS	Pass
Socket-outlets coloured according to type of supply	Pass
If RCD protected, power-available indicator operational	Pass
Number of socket-outlets and permanently wired electrical equipment protected by LPD does not exceed 12	Pass
ON indicator light operational, if present	Pass
Socket-outlets double-poled if protected by a transformer-isolated supply	Pass
All socket-outlets below 2.3 m protected by LPD	Pass
Confirm that when a fault is applied to each socket outlet within patient area or within 5.0 m of entrance of the patient area, the RCD trips	Pass
Confirm that a fault applied to each socket-outlet within patient area or within 5.0 m of entrance of the patient area causes a response on LIM	Pass
Confirm that RCDs do not protect socket-outlets in another patient location	Pass
HOSPITAL ABC/Object/DB1/CB2/Body Protected areas Inspections	Pass
INSPECTION	Pass
All electrical equipment and fittings in good condition	Pass
LABELLING	Pass
Circuit identification visible and intact on each	Pass
Protected points labelled as to which RCD protects them	Pass
Circuit identification visible and intact on each LIM	Pass
Protected points labelled as to which LIM monitors them	Pass
Overload monitors labelled with alarm setting	Pass
Socket-outlets protected by RCD labelled 'RCD PROTECTED'	Pass
Socket-outlets protected by isolating transformers labelled 'ISOLATING TRANSFORMER PROTECTED'	Pass
Socket-outlets intended for cleaning purposes labelled 'CLEANING PURPOSES ONLY'	Pass
Body-protected electrical area sign:	Pass
Still visible	Pass
Labelled with current inspection date	Pass
Labelled with identity of authorized person	Pass
Labelled with next test date	Pass
SOCKET-OUTLETS	Pass
Socket-outlets coloured according to type of supply	Pass
If RCD protected, power-available indicator operational	Pass
Number of socket-outlets and permanently wired electrical equipment protected by RCD does not exceed 12	Pass
On/Off luminous indicators operational, if applicable	Pass
Socket-outlets double-poled if protected by a transformer-isolated supply	Pass
All socket-outlets below 2.3 m protected by LPD	Pass

Confirm that when a fault is applied to each socket outlet within patient area or within 2.0 m of entrance of the patient area, the RCD trips	Pass
Confirm that when a fault is applied to each socket outlet within patient area or within 2.0 m of entrance of the patient area causes a response on LIM	Pass
EARTHING	Pass
Confirm that the earth pins of all socket-outlets below 2.3 m are earthed to less than 1.0 ohm	Pass
Confirm that the earth pins of all socket-outlets within 2.0 m of entrance to patient area are earthed to less than 1.0 ohm	Pass
Confirm that all socket-outlets used by medical electrical equipment accessible above 2.3 m are earthed to less than 1.0 ohm	Pass
Confirm that all permanently wired electrical equipment with conductive parts below 2.3 m are earthed to less than 1.0 ohm	Pass
RCD SENSITIVITY FOR AUSTRALIA	Pass
Confirm that the RCD trips between 4.5–10.5 mA. Record the RCD sensitivity mA	Pass
RCD TRIPPING TIMES FOR AUSTRALIA	Pass
Confirm this by carrying out at least two such tests. Record the worst case ms	Pass
RCD TRIPPING TIMES FOR NEW ZEALAND	Pass
Confirm this by repeating the test at 0° and 180°. Record both cases ms	Pass
RCD SUPPLY AVAILABLE INDICATOR LIGHTS	Pass
If applicable, confirm that they are operational	Pass
AUDIOVISUAL RCD TRIP INDICATORS	Pass
If applicable, confirm that they are operational	Pass
PROSPECTIVE HAZARD CURRENT	Pass
Confirm that the hazard current is below 2.00 mA. Record hazard current mA . For routine testing, the PHC under normal conditions of operation shall be verified by applying the following process to each transformer Line Isolation Overload Monitor (LIOM):	Pass
Custom Inspection	Pass
OVERLOAD MONITORS	Pass
Confirm that a load of 110–120% of transformer rated current causes the alarm to activate in 3–5 s	Pass
UNINTERRUPTIBLE POWER SUPPLIES (UPS)	Nothing
Confirm that UPS status indicator performance is routinely verified	Checked
HOSPITAL ABC/Object/DB2/Cardiac Protected area Inspection	Pass
INSPECTION	Pass
All electrical equipment and fittings in good condition	Pass
LABELLING	Pass
Circuit identification visible and intact on each RCD	Pass
Relevant electrical points labelled to identify associated RCD	Pass
Circuit identification visible and intact on each LIM	Pass
Relevant electrical points labelled to identify associated LIMs	Pass
Overload monitors labelled with alarm setting	Pass
Socket-outlets protected by RCD labelled 'RCD PROTECTED'	Pass
Socket-outlets protected by isolating transformers labelled 'ISOLATING TRANSFORMER PROTECTED'	Pass
Socket-outlets intended for cleaning purposes labelled 'CLEANING PURPOSES ONLY'	Pass
Cardiac-protected electrical area sign:	Pass
Visible	Pass
Labelled with current inspection date	Pass
Labelled with identity of authorized person	Pass
Labelled with next test date	Pass
SOCKET-OUTLETS	Pass
Socket-outlets coloured according to type of supply	Pass
If RCD protected, power-available indicator operational	Pass
Number of socket-outlets and permanently wired electrical equipment protected by LPD does not exceed 12	Pass

ON indicator light operational, if present	Pass
Socket-outlets double-poled if protected by a transformer-isolated supply	Pass
All socket-outlets below 2.3 m protected by LPD	Pass
Confirm that when a fault is applied to each socket outlet within patient area or within 5.0 m of entrance of the patient area, the RCD trips	Pass
Confirm that a fault applied to each socket-outlet within patient area or within 5.0 m of entrance of the patient area causes a response on LIM	Pass
Confirm that RCDs do not protect socket-outlets in another patient location	Pass
EARTHING	Pass
Confirm that the earth pins of all socket-outlets are earthed to less than 0.1 ohm with respect to EP junction or node or other electrical equipment	Pass
Confirm that the earth pin of all socket-outlets within 5.0 m of the entrance to the patient area are earthed to less than 0.1 Ω with respect to EP junction or node or other electrical equipment	Pass
Confirm that all permanently wired appliances with conductive parts below 2.3 m are earthed to less than 0.1 ohm with respect to EP junction or node or other electrical equipment	Pass
RCD SENSITIVITY FOR AUSTRALIA	Pass
Confirm that the RCD trips between 4.5–10.5 mA. Record the RCD sensitivity mA	Pass
RCD TRIPPING TIMES FOR AUSTRALIA	Pass
Confirm this by carrying out at least two such tests. Record the longest tripping time ms	Pass
RCD TRIPPING TIMES FOR NEW ZEALAND	Pass
Confirm this by repeating the test at 0° and 180°. Record both cases ms	Pass
RCD SUPPLY AVAILABLE INDICATORS	Pass
Confirm that the indicator is operational	Pass
AUDIOVISUAL RCD TRIP INDICATORS	Pass
If applicable, confirm that they are operational	Pass
PROSPECTIVE HAZARD CURRENT OF INSULATION	Pass
Ensure PHC is less than 2.00 mA when no electrical equipment is plugged in. For routine testing, the PHC under normal conditions of operation shall be verified by applying the following process to each transformer Line Isolation Overload Monitor (LIOM):	Pass
LIM PROSPECTIVE HAZARD CURRENT ALARM	Pass
Confirm that the LIM alarms between 4.5–10.5 mA.	Pass
Record alarm current mA	Pass
OVERLOAD MONITORS	Pass
Confirm that the alarm operates when a load between 110–120% of rated load is applied in 3–5 s	Pass
UNINTERRUPTIBLE POWER SUPPLIES (UPS)	Pass
Confirm that UPS status indicator performance is routinely verified	Pass
HOSPITAL ABC/Object/DB2/CB1/Medical RCD 6x RCD Triptime 1X Ramp	Pass
RCD I	Pass
Results	
I Δ	7.0 mA
t I Δ	31.5 ms
Uc I Δ	1.0 V
Uc	1.4 V
RCD t	Pass
Results	
t Δ N	28.9 ms
Uc	1.3 V
Phase	53 °
RCD t	Pass
Results	
t Δ N	35.9 ms

Uc	1.2 V	
Phase	284 °	
RCD t		Pass
Results		
t ΔN	33.9 ms	
Uc	1.2 V	
Phase	142 °	
RCD t		Pass
Results		
t ΔN	33.1 ms	
Uc	1.3 V	
Phase	337 °	
RCD t		Pass
Results		
t ΔN	32.2 ms	
Uc	1.3 V	
Phase	171 °	
RCD t		Pass
Results		
t ΔN	36.3 ms	
Uc	1.3 V	
Phase	101 °	
HOSPITAL ABC/Object/DB2/CB2/Medical RCD 2XTriptime 1X Ramp		Pass
RCD I		Pass
Results		
IΔ	7.0 mA	
t IΔ	31.4 ms	
Uc IΔ	0.7 V	
Uc	1.1 V	
RCD t		Pass
Results		
t ΔN	31.3 ms	
Uc	1.2 V	
Phase	7 °	
RCD t		Pass
Results		
t ΔN	34.7 ms	
Uc	1.3 V	
Phase	121 °	
HOSPITAL ABC/Object/DB2/CB3/Protective Earthing 1 ohm Limit		Pass
R low 4W		Pass
Results		
R	0.01 Ω	Pass
R+	0.0 Ω	
R-	0.0 Ω	
HOSPITAL ABC/Object/DB3/Body Protected areas Inspections		Pass
INSPECTION		Pass
All electrical equipment and fittings in good condition		Pass

LABELLING	Pass
Circuit identification visible and intact on each	Pass
Protected points labelled as to which RCD protects them	Pass
Circuit identification visible and intact on each LIM	Pass
Protected points labelled as to which LIM monitors them	Pass
Overload monitors labelled with alarm setting	Pass
Socket-outlets protected by RCD labelled 'RCD PROTECTED'	Pass
Socket-outlets protected by isolating transformers labelled 'ISOLATING TRANSFORMER PROTECTED'	Pass
Socket-outlets intended for cleaning purposes labelled 'CLEANING PURPOSES ONLY'	Pass
Body-protected electrical area sign:	Pass
Still visible	Pass
Labelled with current inspection date	Pass
Labelled with identity of authorized person	Pass
Labelled with next test date	Pass
SOCKET-OUTLETS	Pass
Socket-outlets coloured according to type of supply	Pass
If RCD protected, power-available indicator operational	Pass
Number of socket-outlets and permanently wired electrical equipment protected by RCD does not exceed 12	Pass
On/Off luminous indicators operational, if applicable	Pass
Socket-outlets double-poled if protected by a transformer-isolated supply	Pass
All socket-outlets below 2.3 m protected by LPD	Pass
Confirm that when a fault is applied to each socket outlet within patient area or within 2.0 m of entrance of the patient area, the RCD trips	Pass
Confirm that when a fault is applied to each socket outlet within patient area or within 2.0 m of entrance of the patient area causes a response on LIM	Pass
EARTHING	Pass
Confirm that the earth pins of all socket-outlets below 2.3 m are earthed to less than 1.0 ohm	Pass
Confirm that the earth pins of all socket-outlets within 2.0 m of entrance to patient area are earthed to less than 1.0 ohm	Pass
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RCD TRIPPING TIMES FOR AUSTRALIA	Pass
Confirm this by carrying out at least two such tests. Record the worst case ms	Pass
RCD TRIPPING TIMES FOR NEW ZEALAND	Pass
Confirm this by repeating the test at 0° and 180°. Record both cases ms	Pass
RCD SUPPLY AVAILABLE INDICATOR LIGHTS	Pass
If applicable, confirm that they are operational	Pass
AUDIOVISUAL RCD TRIP INDICATORS	Pass
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PROSPECTIVE HAZARD CURRENT	Pass
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Custom Inspection	Pass
OVERLOAD MONITORS	Pass
Confirm that a load of 110–120% of transformer rated current causes the alarm to activate in 3–5 s	Pass
UNINTERRUPTIBLE POWER SUPPLIES (UPS)	Pass
Confirm that UPS status indicator performance is routinely verified	Pass

HOSPITAL ABC/LG212/Protective Earthing 1 ohm Limit			Pass
R low 4W			Pass
Results			
R	0.01 Ω	Pass	
R+	0.0 Ω		
R-	0.0 Ω		