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1201 SW 7TH ST  
RENTON WA 98055

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Project No: 07CA29773  
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Subject: UL Certification Documents For Applicant

The following material resulting from the investigation under the above numbers is enclosed.

<u>Document</u>	<u>Volume</u>	<u>Report Reference</u>	<u>Status</u>	<u>Date</u>
Index	X1			
UL Test Report	X1	E137142-A12-UL-1	New	07/11/07

Please file revised Authorizations, Indices, and General Inspection Instructions in place of material of like identity. New Test Reports should be filed immediately following the last Test Report. Amendments or Corrections should be filed immediately before the Test Report to which they relate. Re-issued Test Reports should be filed immediately before all material related to the Test Report that it replaces.

NOTE: Manufacturers receive only the following sub-sections of the Applicant's complete Test Report, where applicable: Cover Page, Specific Inspection Criteria (BA through BE), Specific Technical Criteria (through section CF), Critical Components table, and Enclosures containing image supplements. Manufacturers do not receive Test Report information related to standard clause compliance or testing results.

NOTE: Manufacturers that require an Initial Product Inspection (IPI) have received their copy of the Follow-Up Service Procedure, but are instructed they are not allowed to ship products bearing the UL Mark until their UL Representative has successfully conducted the Initial Production Inspection.

Please review this material and report any inaccuracies to SCOTT VARNER (EXT. 5613), referring to the above Project and/or PD Numbers.

This material is provided on behalf of Underwriters Laboratories Inc.(UL) or any authorized licensee of UL.

c: CAM File

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## Index

<u>Product Type</u>	<u>Model/Type Reference</u>	<u>Report Reference #</u>
Bar Code Scanner	QUADRUS EZ (FIS-67XX-XXXX), Accessory Adapter Junction Box, Model IB-150	E137142-A1-UL-1
Bar Code Scanner	Model MS-860	E137142-A6-UL-1
Embedded Compact CCD Reader	MS-3 CCD	E137142-A7-UL-1
Bar Code Scanner	MS-820	E137142-A8-UL-1
Laser Bar Code Scanner	MS-3	E137142-A2-UL-2
2D CCD Reader	MS-4, Quadrus Mini, MS-4 EZ Match	E137142-A10-UL-1
Barcode Scanner Interface	MS-Connect 200	E137142-A11-UL-1
Bar Code Scanner	MS-890	E137142-A12-UL-1

## **COVER PAGE FOR TEST REPORT**

Product Category:	Information Technology Equipment Including Electrical Business Equipment
Product Category CCN:	NWGQ, NWGQ7
Test Procedure:	Listing
Product:	Bar Code Scanner
Model/Type Reference:	MS-890
Rating(s):	Voltage: 10-28 Vdc, 25 W (Provided for Reference Only)
Standards:	UL 60950-1, 1st Edition, 2006-07-07 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements)
Applicant Name and Address:	MICROSCAN SYSTEMS INC 1201 SW 7TH ST RENTON WA 98055

This Report includes the following parts, in addition to this cover page:

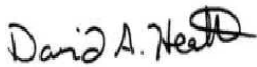
1. Specific Inspection Criteria
2. Specific Technical Criteria
3. Clause Verdicts
4. Critical Components
5. Test Results
6. National Differences
7. Enclosures

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of Underwriters Laboratories Inc. ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Test Report By:



David Heath  
Senior Project Engineer  
Underwriters Laboratories Inc.

Reviewed By:



Bob Davis  
Staff Engineer  
Underwriters Laboratories Inc.

## **SPECIFIC INSPECTION CRITERIA**

BA1.0	<b>Special Instructions to UL Representative</b>
BA1.1	N/A

BB1.0	<b>Supporting Documentation</b>
BB1.1	<p>The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:</p> <p>A. Authorization - The Authorization page may include additional Factory Identification Code markings.</p> <p>B. Generic Inspection Instructions -</p> <ul style="list-style-type: none"> <li>i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.</li> <li>ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.</li> <li>iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.</li> </ul>

BC1.0	<b>Markings and instructions</b>	
BC1.1	The following markings and instructions are provided as indicated.	
BC1.2	All clause references are from UL 60950-1, 1st Edition, 2006-07-07 (Information Technology Equipment - Safety - Part 1: General Requirements).	
Standard Clause	Clause Title	Marking or Instruction Details
1.7.1	Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
	Power rating - Model	Model Number
Other	Laser Markings:	CAUTION: Laser light when open. Do not stare into beam. Product Conforms to USA DHHS 21 CFR Subchapter J.  AVOID EXPOSURE: . Laser Light Is Emitted From This Aperture  CAUTION: Laser Light Do Not Stare Into Beam
	Date of Manufacturing -	Optional, For CNL products, the unit shall have a marking which indicates the month and year of manufacture. Coding or serial numbers are acceptable.

	Operating/Instruction.Safety Manual -	MS-890 for use with a UL Listed power supply marked "LPS" or "Class 2" output rated 10-28 Vdc, 5 W.  Warning - Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light radiation exposure.
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BD1.0	<b>Production-Line Testing Requirements</b>						
BD1.1	Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.						
					Test Potential		
	Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
	N/A						
BD1.2	Earthing Continuity Test Exemptions - This test is not required for the following models:			MS-890			
BD1.3	Electric Strength Test Exemptions - This test is not required for the following models:			MS-890			
BD1.4	Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:						

BE1.0	<b>Sample and Test Specifics for Follow-Up Tests at UL</b>					
BE1.1	Model	Component	Material	Test	Sample(s)	Test Specifics
	N/A					

## **SPECIFIC TECHNICAL CRITERIA**

<b>UL 60950-1, First Edition</b>	
<b>Information technology equipment - Safety-</b>	
<b>Part 1: General Requirements</b>	
Report Reference No .....	E137142-A12-UL-1
Compiled by .....	David Heath
Reviewed by .....	Bob Davis
Date of issue .....	2007-07-11
Standards .....	UL 60950-1, 1st Edition, 2006-07-07 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements)
Test procedure .....	Listing
Non-standard test method .....	N/A
<b>Test item</b> description .....	Bar Code Scanner
Trademark .....	None
Model and/or type reference .....	MS-890
Rating(s) .....	Voltage: 10-28 Vdc, 25 W (Provided for Reference Only)

### **Particulars: test item vs. test requirements**

Equipment mobility .....	movable (may be mounted, Stationary)
Operating condition .....	continuous
Mains supply tolerance (%) .....	No direct connection
Tested for IT power systems .....	No
IT testing, phase-phase voltage (V) .....	N/A
Class of equipment .....	Class III (supplied by SELV)
Mass of equipment (kg) .....	1.58 kg
Protection against ingress of water .....	IP X0

### **Possible test case verdicts:**

- test case does not apply to the test object .....	N / A
- test object does meet the requirement .....	Pass
- test object does not meet the requirement .....	Fail (acceptable only if a corresponding, less stringent national requirement is "Pass")

**General remarks:**

- "(see Enclosure #)" refers to additional information appended to the Test Report
- "(see appended table)" refers to a table appended to the Test Report
- Throughout the Test Report a point is used as the decimal separator



<b>GENERAL PRODUCT INFORMATION:</b>	
CA1.0	<b>Report Summary</b>
CA1.1	N/A
CB1.0	<b>Product Description</b>
CB1.1	This equipment is a Class II laser product incorporating a Class IIIb laser diode and complies with FDA Radiation Performance Standards, 21 CFR Subchapter J.
CC1.0	<b>Model Differences</b>
CC1.1	N/A
CD1.0	<b>Additional Information</b>
CD1.1	Enclosures:  Not investigated. A test report for the power supply may be required when submitting this CB Report to a National Certification Body (NCB) to obtain a national mark. Units require a Listed (EPBU), Class 2 power supply or Listed (QQGQ) power supply marked "Limited Power Source" or "LPS".
CE1.0	<b>Technical Considerations</b>
CE1.2	The product was submitted and tested for use at the maximum ambient temperature (T <sub>ma</sub> ) permitted by the manufacturer's specification of: 50
CE1.6	The class of laser product is: Class 2 (II). This equipment is a Class II laser product incorporating a Class IIIb laser diode and it complies with FDA Radiation Performance Standards, 21 CFR Subchapter J.,
CE1.15	The power supply in this equipment was: Not investigated. A test report for the power supply may be required when submitting this CB Report to a National Certification Body (NCB) to obtain a national mark. Units require a Listed (EPBU), Class 2 power supply or Listed (QQGQ) power supply marked "Limited Power Source" or "LPS".,

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1	<b>GENERAL</b>		Pass
1.5	Components		Pass
1.5.1	General	See appended table 1.5.1	Pass
	Comply with IEC 60950 or relevant component standard	See appended table 1.5.1	Pass
1.5.2	Evaluation and testing of components	Components, for which no relevant IEC-Standard exist, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950.	Pass
1.5.3	Thermal controls		N/A
1.5.4	Transformers		N/A
1.5.5	Interconnecting cables		N/A
1.5.6	Capacitors in primary circuits .....		N/A
1.5.7	Double insulation or reinforced insulation bridged by components		N/A
1.5.7.1	General		N/A
1.5.7.2	Bridging capacitors		N/A
1.5.7.3	Bridging resistors		N/A
1.5.7.4	Accessible parts		N/A
1.5.8	Components in equipment for IT power systems		N/A

1.6	<b>Power interface</b>		N/A
1.6.1	AC power distribution systems	No direct connection to mains supply.	N/A
1.6.2	Input current	Class III, Supplied by SELV power supply marked Class 2 or LPS.  Test conducted for reference purposes only.	N/A
1.6.3	Voltage limit of hand-held equipment		N/A
1.6.4	Neutral conductor		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.7	<b>Marking and instructions</b>		Pass
1.7.1	Power rating	Equipment powered from a secondary DC source. Electrical ratings not required.	N/A
	Rated voltage(s) or voltage range(s) (V) .....	Voltage: 10-28 Vdc, 25 W (Provided for Reference Only)	N/A
	Symbol for nature of supply, for d.c. only .....		N/A
	Rated frequency or rated frequency range (Hz)....		N/A
	Rated current (mA or A) .....		N/A
	Manufacturer's name or trademark or identification mark.....	Microscan	Pass
	Type/model or type reference .....	MS-890	Pass
	Symbol for Class II equipment only .....		N/A
	Other symbols .....		N/A
	Certification marks.....	UL, cUL	Pass
1.7.2	Safety instructions	All safety related markings are provided on the labels  See Enclosure-Miscellaneous for details.	Pass
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment .....		N/A
1.7.5	Power outlets on the equipment.....		N/A
1.7.6	Fuse identification.....		N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals.....		N/A
1.7.7.2	Terminal for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators	LED indicators are provided for functional use.	Pass
1.7.8.1	Identification, location and marking .....		N/A
1.7.8.2	Colours .....	Only functional indicators use color.	Pass
1.7.8.3	Symbols according to IEC 60417 .....		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.8.4	Markings using figures..... :		N/A
1.7.9	Isolation of multiple power sources .....		N/A
1.7.10	IT power distribution systems		N/A
1.7.11	Thermostats and other regulating devices		N/A
1.7.12	Language..... :	English	-
1.7.13	Durability	<p>All markings provided on UL Recognized Component labels suitable for surface they are applied upon and meet the durability test.</p> <p>Durability of Markings test subjected to the following:</p> <p>Name Plate: 3M, Type 7323 applied to the unit, withstood testing with both Water and Hexane.</p> <p>Trademark: Lexan, Type 8A35V applied to the unit, withstood testing with both Water and Hexane.</p>	Pass
1.7.14	Removable parts		N/A
1.7.15	Replaceable batteries		N/A
	Language..... :		-
1.7.16	Operator access with a tool .....	No operator access areas require the use of a tool.	Pass
1.7.17	Equipment for restricted access locations..... :		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2	<b>PROTECTION FROM HAZARDS</b>		Pass
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in operator access areas	There are no electric shock or energy hazards located in an operator access area.	Pass
2.1.1.1	Access to energized parts	There are no hazardous electrical parts in the equipment.	Pass
	Test by inspection..... :	Tested by inspection.	Pass
	Test with test finger..... :		N/A
	Test with test pin..... :		N/A
	Test with test probe ..... :		N/A
2.1.1.2	Battery compartments..... :		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V); minimum distance (mm) through insulation ..... :		-
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards..... :		N/A
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Time-constant (s); measured voltage (V) ..... :		-
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.2	<b>SELV circuits</b>		Pass
2.2.1	General requirements	Equipment is supplied from an external power source which is SELV, marked Class 2 or LPS.	Pass
2.2.2	Voltages under normal conditions (V) ..... :		N/A
2.2.3	Voltages under fault conditions (V)..... :		N/A
2.2.3.1	Separation by double insulation or reinforced insulation (method 1)		N/A
2.2.3.2	Separation by earthed screen (method 2)		N/A
2.2.3.3	Protection by earthing of the SELV circuit (method 3)		N/A
2.2.4	Connection of SELV circuits to other circuits..... :		N/A

2.3	<b>TNV circuits</b>		N/A
2.3.1	Limits		N/A
	Type of TNV circuits ..... :		-
2.3.2	Separation from other circuits and from accessible parts		N/A
	Insulation employed..... :		-
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed..... :		-
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed..... :		-
2.3.5	Test for operating voltages generated externally		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.4	<b>Limited current circuits</b>		N/A
2.4.1	General requirements		N/A
2.4.2	Limit values		N/A
	Frequency (Hz) .....		-
	Measured current (mA) .....		-
	Measured voltage (V) .....		-
	Measured capacitance (mF) .....		-
2.4.3	Connection of limited current circuits to other circuits		N/A

2.5	<b>Limited power sources</b>		N/A
	Inherently limited output		N/A
	Impedance limited output		N/A
	Overcurrent protective device limited output		N/A
	Regulating network limited output under normal operating and single fault condition		N/A
	Regulating network limited output under normal operating conditions and overcurrent protective device limited output under single fault condition		N/A
	Output voltage (V), output current (A), apparent power (VA): .....		-
	Current rating of overcurrent protective device (A):		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.6	<b>Provisions for earthing and bonding</b>		N/A
2.6.1	Protective earthing		N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG ..... :		-
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG ..... :		-
2.6.3.4	Resistance (Ohm) of earthing conductors and their terminations, test current (A) ..... :		N/A
2.6.3.5	Colour of insulation ..... :		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type and nominal thread diameter (mm) ..... :		-
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A



IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.7	<b>Overcurrent and earth fault protection in primary circuits</b>		N/A
2.7.1	Basic requirements		N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices..... :		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel ..... :		N/A

2.8	<b>Safety interlocks</b>		N/A
2.8.1	General principles		N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (mm) ..... :		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.9	<b>Electrical insulation</b>		Pass
2.9.1	Properties of insulating materials	Natural rubber, materials containing asbestos and hygroscopic materials are not used as insulation.	Pass
2.9.2	Humidity conditioning		N/A
	Humidity (%) .....		-
	Temperature (°C).....		-
2.9.3	Grade of insulation	Only functional insulation employed in product. Complies with method c of 5.3.4.	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.10	<b>Clearances, creepage distances and distances through insulation</b>		Pass
2.10.1	General	Functional insulation complies with method c of 5.3.4.	Pass
2.10.2	Determination of working voltage		N/A
2.10.3	Clearances	Functional insulation complies with method c of 5.3.4.	Pass
2.10.3.1	General		N/A
2.10.3.2	Clearances in primary circuit		N/A
2.10.3.3	Clearances in secondary circuits		N/A
2.10.3.4	Measurement of transient voltage levels		N/A
2.10.4	Creepage distances	Functional insulation complies with method c of 5.3.4.	Pass
	CTI tests..... :	Material group IIIb	-
2.10.5	Solid insulation		N/A
2.10.5.1	Minimum distance through insulation		N/A
2.10.5.2	Thin sheet material		N/A
	Number of layers (pcs) ..... :		-
	Electric strength test ..... :		-
2.10.5.3	Printed boards		N/A
	Distance through insulation		N/A
	Electric strength test for thin sheet insulating material ..... :		-
	Number of layers (pcs) ..... :		N/A
2.10.5.4	Wound components		N/A
	Number of layers (pcs) ..... :		N/A
	Two wires in contact inside wound component; angle between 45° and 90° ..... :		N/A
2.10.6	Coated printed boards		N/A
2.10.6.1	General		N/A
2.10.6.2	Sample preparation and preliminary inspection		N/A
2.10.6.3	Thermal cycling		N/A
2.10.6.4	Thermal ageing (°C) ..... :		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.10.6.5	Electric strength test .....		-
2.10.6.6	Abrasion resistance test		N/A
	Electric strength test .....		-
2.10.7	Enclosed and sealed parts .....		N/A
	Temperature $T_1=T_2 = T_{ma} - T_{amb} + 10K (^{\circ}C)$ .....		N/A
2.10.8	Spacings filled by insulating compound.....		N/A
	Electric strength test .....		-
2.10.9	Component external terminations		N/A
2.10.10	Insulation with varying dimensions		N/A

3	<b>WIRING, CONNECTIONS AND SUPPLY</b>		Pass
3.1	General		N/A
3.1.1	Current rating and overcurrent protection		N/A
3.1.2	Protection against mechanical damage		N/A
3.1.3	Securing of internal wiring		N/A
3.1.4	Insulation of conductors		N/A
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections		N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors		N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

3.2	<b>Connection to an a.c. mains supply or a d.c. mains supply</b>		N/A
3.2.1	Means of connection		N/A
3.2.1.1	Connection to an a.c. mains supply		N/A
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter (mm) of cable and conduits..... :		-
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type ..... :		-
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG ..... :		-
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N) ..... :		-
	Longitudinal displacement (mm)..... :		-
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	D (mm); test mass (g) ..... :		-
	Radius of curvature of cord (mm) ..... :		-
3.2.9	Supply wiring space		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

3.3	<b>Wiring terminals for connection of external conductors</b>		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm <sup>2</sup> ) .....		-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm) .....		-
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

3.4	<b>Disconnection from the mains supply</b>		N/A
3.4.1	General requirement		N/A
3.4.2	Disconnect devices		N/A
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Single-phase equipment and d.c. equipment		N/A
3.4.7	Three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.5	<b>Interconnection of equipment</b>		Pass
3.5.1	General requirements	Interconnection of equipment is achieved by SELV to SELV circuits	Pass
3.5.2	Types of interconnection circuits .....	Interconnection circuits are SELV Circuits.	Pass
3.5.3	ELV circuits as interconnection circuits		N/A

4	<b>PHYSICAL REQUIREMENTS</b>		Pass
4.1	Stability		N/A
	Angle of 10°		N/A
	Test: force (N) .....		N/A

4.2	<b>Mechanical strength</b>		N/A
4.2.1	General		N/A
4.2.2	Steady force test, 10 N		N/A
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		N/A
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test		N/A
4.2.7	Stress relief test		N/A
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified .....		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N) .....	By Inspection, unit weight is 1.58 kg, metal enclosure provided with tapped and threaded hole for possible mounting kit.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.3	<b>Design and construction</b>		Pass
4.3.1	Edges and corners	All edges and corners are judged to be sufficiently well rounded so as not to constitute a hazard.	Pass
4.3.2	Handles and manual controls; force (N) ..... :		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts		N/A
4.3.5	Connection of plugs and sockets	IEC 60083 or IEC 60320 type connectors are not used for SELV circuits.	Pass
4.3.6	Direct plug-in equipment		N/A
	Dimensions (mm) of mains plug for direct plug-in . :		N/A
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N) ..... :		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries		N/A
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases		N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids ..... :		N/A
	Quantity of liquid (l) ..... :		N/A
	Flash point (°C) ..... :		N/A
4.3.13	Radiation; type of radiation	Class II product with Class II radiation.  See Enclosure-Miscellaneous for details.	Pass
4.3.13.1	General	Class II product with Class II radiation.  See Enclosure-Miscellaneous for details.	Pass
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg) ..... :		-
	Measured high-voltage (kV) ..... :		-



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Clause	Requirement + Test	Result - Remark	Verdict

	Measured focus voltage (kV)..... :		-
	CRT markings..... :		-
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification ..... :		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation..... :		N/A
4.3.13.5	Laser (including LEDs)		Pass
	Laser class..... :	Class II	-
4.3.13.6	Other types ..... :		N/A

4.4	<b>Protection against hazardous moving parts</b>		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A

4.5	<b>Thermal requirements</b>		Pass
4.5.1	Maximum temperatures	The equipment and its component parts did not attain excessive temperatures during normal operation.  See appended Table 4.5.	Pass
	Normal load condition per Annex L ..... :	Maximum normal load was defined as follows:  Unit powered on and continuously scanning.	Pass
4.5.2	Resistance to abnormal heat		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.6	<b>Openings in enclosures</b>		N/A
4.6.1	Top and side openings	There are no openings in the enclosure.	N/A
	Dimensions (mm)..... :		-
4.6.2	Bottoms of fire enclosures		N/A
	Construction of the bottom..... :		-
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C)/time (weeks) ..... :		-

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Clause	Requirement + Test	Result - Remark	Verdict

4.7	<b>Resistance to fire</b>		Pass
4.7.1	Reducing the risk of ignition and spread of flame	A Fire Enclosure covers all parts.	Pass
	Method 1, selection and application of components wiring and materials	See appended Table 1.5.1	Pass
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	Equipment considered movable. Fire Enclosure is Aluminum.  See appended Table 1.5.1	Pass
4.7.2.1	Parts requiring a fire enclosure	A fire enclosure covers all parts.	Pass
4.7.2.2	Parts not requiring a fire enclosure	A fire enclosure covers all parts.	Pass
4.7.3	Materials		Pass
4.7.3.1	General	The propagation of fire is minimized through the Fire Enclosure construction.  See appended Table 1.5.1	Pass
4.7.3.2	Materials for fire enclosures	Equipment is moveable with mass less than 18 kg.  Fire enclosure material is Aluminum.	Pass
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	All internal materials are rated minimum V-2 or are mounted on a PWB rated minimum V-1.	Pass
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5	<b>ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS</b>		Pass
5.1	Touch current and protective conductor current		N/A
5.1.1	General		N/A
5.1.2	Equipment under test (EUT)		N/A
5.1.3	Test circuit		N/A
5.1.4	Application of measuring instrument		N/A
5.1.5	Test procedure		N/A
5.1.6	Test measurements		N/A
	Test voltage (V) .....		-
	Measured touch current (mA) .....		-
	Max. allowed touch current (mA) .....		-
	Measured protective conductor current (mA) .....		-
	Max. allowed protective conductor current (mA) ...		-
5.1.7	Equipment with touch current exceeding 3.5 mA ..		N/A
5.1.8	Touch currents to and from telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network and a cable distribution system		N/A
	Test voltage (V) .....		-
	Measured touch current (mA) .....		-
	Max. allowed touch current (mA) .....		-
5.1.8.2	Summation of touch currents from telecommunication networks .....		N/A

5.2	<b>Electric strength</b>		N/A
5.2.1	General		N/A
5.2.2	Test procedure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5.3	<b>Abnormal operating and fault conditions</b>		Pass
5.3.1	Protection against overload and abnormal operation		N/A
5.3.2	Motors	See Annex B and Table 1.5.1 for details.	Pass
5.3.3	Transformers		N/A
5.3.4	Functional insulation .....	Functional insulation complies with method c.	Pass
5.3.5	Electromechanical components		N/A
5.3.6	Simulation of faults	See appended Table 5.3	Pass
5.3.7	Unattended equipment		N/A
5.3.8	Compliance criteria for abnormal operating and fault conditions	See appended Table 5.3	Pass

6	<b>CONNECTION TO TELECOMMUNICATION NETWORKS</b>		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Test voltage (V) .....		-
	Current in the test circuit (mA) .....		-
6.1.2.2	Exclusions .....		N/A

6.2	<b>Protection of equipment users from overvoltages on telecommunication networks</b>		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

6.3	<b>Protection of the telecommunication wiring system from overheating</b>		N/A
	Max. output current (A) .....		-
	Current limiting method.....		-

7	<b>CONNECTION TO CABLE DISTRIBUTION SYSTEMS</b>		N/A
7.1	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.2	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.3	Insulation between primary circuits and cable distribution systems		N/A
7.3.1	General		N/A
7.3.2	Voltage surge test		N/A
7.3.3	Impulse test		N/A

A	<b>Annex A, TESTS FOR RESISTANCE TO HEAT AND FIRE</b>		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples .....		-
	Wall thickness (mm) .....		-
A.1.2	Conditioning of samples; temperature (°C) .....		N/A
A.1.3	Mounting of samples.....		N/A
A.1.4	Test flame		N/A
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s).....		-
	Sample 2 burning time (s).....		-
	Sample 3 burning time (s).....		-

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Clause	Requirement + Test	Result - Remark	Verdict

A.2	<b>Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)</b>		N/A
A.2.1	Samples, material .....		-
	Wall thickness (mm) .....		-
A.2.2	Conditioning of samples		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame		N/A
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s).....		-
	Sample 2 burning time (s).....		-
	Sample 3 burning time (s).....		-
A.2.7	Alternative test acc. to IEC 60695-2-2, cl. 4, 8		N/A
	Sample 1 burning time (s).....		-
	Sample 2 burning time (s).....		-
	Sample 3 burning time (s).....		-

A.3	<b>Hot flaming oil test (see 4.6.2)</b>		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

B	<b>Annex B, MOTOR TESTS UNDER ABNORMAL CONDITIONS(see 4.7.2.2 and 5.3.2)</b>		Pass
B.1	General requirements	Secondary d.c mirror motor tested in accordance with annex B.7.	Pass
	Position .....	Secondary d.c., internal	-
	Manufacturer .....	Maxon Motor	-
	Type .....	EC 32	-
	Rated values .....	9 Vdc	-
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days).....		-
	Electric strength test: test voltage (V).....		-
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		Pass
B.7.1	Test procedure	See apended Table 5.3	Pass
B.7.2	Alternative test procedure; test time (h).....		N/A
B.7.3	Electric strength test		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V).....		-



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Clause	Requirement + Test	Result - Remark	Verdict

C	<b>Annex C, TRANSFORMERS (see 1.5.4 and 5.3.3)</b>		N/A
	Position .....		-
	Manufacturer.....		-
	Type .....		-
	Rated values .....		-
	Method of protection .....		-
C.1	Overload test		N/A
C.2	Insulation		N/A
	Protection from displacement of windings .....		N/A

D	<b>Annex D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS</b>		N/A
D.1	Measuring instrument		N/A
D.2	Alternative measuring instrument		N/A

E	<b>Annex E, TEMPERATURE RISE OF A WINDING</b>		N/A
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F	<b>Annex F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10)</b>		Pass
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Clause	Requirement + Test	Result - Remark	Verdict

G	<b>Annex G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES</b>		N/A
G.1	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	DC mains supply		N/A
G.3	Determination of telecommunication network transient voltage (V) :..... :		N/A
G.4	Determination of required withstand voltage (V) ... :		N/A
G.5	Measurement of transient levels (V)..... :		N/A
G.6	Determination of minimum clearances ..... :		N/A

H	<b>ANNEX H, IONIZING RADIATION (see 4.3.13)</b>		N/A
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J	<b>Annex J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)</b>		N/A
	Metal used ..... :		-

K	<b>ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)</b>		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V) ..... :		N/A
K.3	Thermostat endurance test; operating voltage (V) :		N/A
K.4	Temperature limiter endurance; operating voltage (V) ..... :		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

L	<b>Annex L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.1)</b>		Pass
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment	Unit powered on and continuously scanning.	Pass

M	<b>Annex M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)</b>		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringling signal		N/A
M.3.1.1	Frequency (Hz) .....		-
M.3.1.2	Voltage (V) .....		-
M.3.1.3	Cadence; time (s), voltage (V) .....		-
M.3.1.4	Single fault current (mA) .....		-
M.3.2	Tripping device and monitoring voltage .....		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) .....		N/A

N	<b>Annex N, IMPULSE TEST GENERATORS (see 2.10.3.4, 6.2.2.1, 7.3.2 and clause G.5)</b>		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

P	<b>Annex P, NORMATIVE REFERENCES</b>		Pass
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Q	<b>Annex Q, BIBLIOGRAPHY</b>		Pass
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R	<b>Annex R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES</b>		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A

S	<b>Annex S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)</b>		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A

T	<b>Annex T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)</b>		N/A
	..... :		-

U	<b>Annex U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)</b>		N/A
	..... :		-

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	<b>TABLE: list of critical components</b>					Pass
Object/part No.	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID
Enclosure	Various	Aluminum	Three piece construction, overall 14.6 cm by 12.7 cm by 8.3 cm, minimum 4.0 mm thick.  Top, Rear and bottom enclosure parts are secured by screws to complete the overall enclosure.	--	--	
Interface Connector	Various	Various	SELV interface connector (DB- 15).  Metal pins in a metal housing.  Insulating base plastic shall be R/C (QMFZ2 rated minimum V- 2.	--	--	
Interface Connector (Alternate)	Various	Various	SELV interface connector (DB- 15).	ECBT2 or DUXR2	UL	
Printed Wiring Board	Various	Various	Rated minimum V-1, 105 °C	ZPMV2	UL	
Scan Window	--	--	Glass, overall 9.7 cm by 5.5 cm	--	--	
Mirror Motor	Maxon Motor	EC 32	Rated 9 V dc, 6 W (SELV)	--	--	
Laser Diode	Toshiba	TOLD9441MC	Rated 2.2. V, 650 nm, 7 mW	--	--	
Power Supply	Various	Various	Input rated: 100-240 Vac, 1.5 A.  Output rated: 10-28 Vdc, 5 W.	EPBU	UL	
Power Supply (Alternate)	Various	Various	Input rated: 100-240 Vac, 1.5 A.	QQGQ	UL	

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Clause	Requirement + Test	Result - Remark	Verdict

			Output rated: 10-28 Vdc, 5 W. Additionally marked "LPS" or "Limited Power Source"			
LED	Various	Various	Visible indicator for unit condition "Power On"	--	--	

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Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	<b>TABLE: electrical data (in normal conditions)</b>					N/A
fuse #	I rated (A)	U (V)	P (W)	I (mA)	I fuse (mA)	condition/status
--	--	10 Vdc	5.63	0.563	--	Unit powered on and continuously scanning
--	--	28 Vdc	7.56	.0270	--	Unit powered on and continuously scanning
supplementary information:						
Test conducted for reference purposes only.						

2.10.3 and 2.10.4	<b>TABLE: clearance and creepage distance measurements</b>						Pass
clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)	
--	--	--	--	--	--	--	--
supplementary information:							
Functional insulation complies with Method C of 5.3.4.							

2.10.5	<b>TABLE: distance through insulation measurements</b>				N/A
distance through insulation di at/of:	Up (V)	test voltage (V)	required di (mm)	di (mm)	
supplementary information:					

4.5	<b>TABLE: temperature rise measurements</b>						Pass
	test voltage (V).....	24 Vdc	24 Vdc	--	--	--	—
	t1 (°C).....	23	--	--	--	--	—
	t2 (°C).....	23	Adjusted Tma of 50°C	--	--	--	—
maximum temperature T of part/at:		T (°C)					allowed Tmax (°C)
Transformer L1 (Coil) (Main board)		46	73	--	--	--	105
IC U22 (Body) (Main board)		35	62	--	--	--	105
IC U15 (Body) (Main board)		37	64	--	--	--	105

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Clause	Requirement + Test	Result - Remark	Verdict

T1 Body (Rear Board)	36	63	--	--	--	105
Test Duration	230 min	--	--	--	--	--
temperature T of winding:		R <sub>1</sub> (Ω)	R <sub>2</sub> (Ω)	T (°C)	allowed Tmax (°C)	insulation class
--	--	--	--	--	--	--
supplementary information:						
Unit powered on and continuously scanning.						

4.5.2	TABLE: ball pressure test of thermoplastics			N/A
	allowed impression diameter (mm)..... :			—
part		test temperature (°C)	impression diameter (mm)	
supplementary information:				

4.7	<b>TABLE: resistance to fire</b>			Pass
part	manufacturer of material	type of material	thickness(mm)	flammability class
--	--	--	--	--
supplementary information:				
See appended table 1.5.1 for information on enclosure material.				

5.2	TABLE: electric strength tests, impulse tests and voltage surge tests		N/A
test voltage applied between:		test voltage (V) a.c./d.c.	breakdown Yes / No
supplementary information:			
Class III product, Functional insulation employed complies with 5.3.4 (c).			

5.3	<b>TABLE: fault condition tests</b>			Pass
	ambient temperature (°C)..... :	23		—
	model/type of power supply..... :	Microscan		—



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Clause	Requirement + Test	Result - Remark	Verdict

	manufacturer of power supply ..... :				AD60W1P-310B		—
	rated markings of power supply ..... :				Input rated: 100-240 Vac, 1.5 A. Output rated: 10-28 Vdc, 5 W.		—
component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result	
Mirror Motor (EC 32)	Rotor locked	9 Vdc	7 hours	--	--	Motor casing reached 33°C in a 23°C ambient	
supplementary information:							
Annex B.7 - Locked-Rotor Overload Test for DC Motors in Secondary Circuits							

**Enclosure**  
**National Differences**

USA / Canada

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

USA / Canada - Differences to IEC 60950-1:2001, First Edition			
1.1	Equipment able to be installed in accordance with the National Electrical Code ANSI/NFPA 70 and the Canadian Electrical Code, Part1, and when applicable, the National Electrical Safety Code, IEEE C2.	Equipment shall be installed in accordance with the NEC and CEC	Pass
1.1.1	Equipment able to be installed in accordance with ANSI/NFPA 75 and NEC Art. 645 unless intended for use outside of computer room and provided with such instructions.		N/A
1.1.2	Equipment in wire-line communication facilities serving high-voltage electric power stations operating at greater than 1kV are excluded.		N/A
1.1.2	Special requirements apply to equipment intended for use outdoors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20 A.		N/A
1.5.1	All IEC standards for components identified in Annex P.1 replaced by the relevant requirements of CSA and UL component standards in Annex P.1.	See appended table 1.5.1	Pass
1.5.1	All IEC standards for components identified in Annex P.2 alternatively satisfied by the relevant requirements of CSA and UL component standards in Annex P.2.	See appended table 1.5.1	Pass
1.5.5	Interconnecting cables acceptable for the application regarding voltage, current, temperature, flammability, mechanical serviceability and the like.		N/A
1.5.5	For other than limited power and TNV circuits, the type of output circuit identified for output connector.		N/A
1.5.5	External cable assemblies that exceed 3.05 m in length to be types specified in the NEC and CEC.		N/A
1.5.5	Detachable external interconnecting cables 3.05 m or less in length and provided with equipment marked to identify the responsible organization and the designation for the cable.		N/A
1.5.5	Building wiring and cable for use in ducts, plenums and other air handling space subject to special requirements and excluded from scope.		N/A
1.5.5	Telephone line and extension cords and the like comply with UL 1863 and CSA C22.2 No. 233.		N/A
1.6.1.2	Equipment intended for connection to a d.c. power (mains) distribution system is subject to special		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

	circuit classification requirements (e.g., TNV-2)		
1.6.1.2	Earthing of d.c. powered equipment provided.		N/A
1.7	Lamp replacement information indicated on lampholder in operator access area.		N/A
1.7.1	Special marking format for equipment intended for use on a supply system with an earthed neutral and more than one phase conductor.		N/A
1.7.1	Equipment voltage rating not higher than rating of the plug except under special conditions.		N/A
1.7.6	Special fuse replacement marking for operator accessible fuses.		N/A
1.7.7	Identification of terminal connection of the equipment earthing conductor.		N/A
1.7.7	Connectors and field wiring terminals for external Class 2 or Class 3 circuits provided with marking indicating minimum Class of wiring to be used.		N/A
1.7.7	Marking located adjacent to terminals and visible during wiring.		N/A
2.1.1	Screw shell of Edison-base lampholder tied to the neutral conductor.		N/A
2.1.1.1	Bare TNV conductive parts in the interior of equipment normally protected against contact by a cover intended for occasional removal are exempt provided instructions include directions for disconnection of TNV prior to removal of the cover.		N/A
2.3.1.b	Other telecommunication signaling systems (e.g., message waiting) than described in 2.3.1(b) are subject to M.4.		N/A
2.3.1.b	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vp or 60 V d.c., the maximum current limit through a 2000 Ohm or greater resistor with loads disconnected is 7.1 mA peak or 30 mA d.c. under normal conditions.		N/A
2.3.1.b	Limits for measurements across 5000 ohm resistor in the event of a single fault are replaced after 200 ms with the limits of M.3.1.4.		N/A
2.3.2	Enamel coating on signal transformer winding wire allowed as an alternative to Basic insulation in specific telecommunication applications when subjected to special construction requirements and routine testing.		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
2.3.2	In the event of a single fault, the limits of 2.2.3 apply to SELV circuits and accessible conductive parts.		N/A
2.5	Overcurrent protection device required for Class 2 and Class 3 limiting in accordance with the NEC, or for a Limited Power Source, not interchangeable with devices of higher ratings if operator replaceable.		N/A
2.6	Equipment having receptacles for output a.c. power connectors generated from an internal separately derived source have the earthed (grounded) circuit conductor suitably bonded to earth.		N/A
2.6.3.3	For Pluggable Equipment Type A, if neither a) or b) are applicable, the current rating of the circuit is taken as 20 A.		N/A
2.6.3.4	Capacity of connection between earthing terminal and parts required to be earthed subject to special conditions based on the current rating of the circuit.		N/A
2.6.3.4	Protective bonding conductors and their terminals of non-standard constructions (e.g. PWB traces) evaluated to limited short-circuit test of CSA C22.2 No.0.4.		N/A
2.6.4.1	Field wiring terminals for earthing conductors suitable for wire sizes (gauge) used in US and Canada.		N/A
2.7.1	Data for selection of special external branch circuit overcurrent devices marked on the equipment.		N/A
2.7.1	Standard supply outlets protected by overcurrent device in accordance with the NEC, and CEC, Part 1.		N/A
2.7.1	Overcurrent protection for individual transformers that distribute power to other units over branch circuit wiring.		N/A
2.7.1	Additional requirements for overcurrent protection apply to equipment provided with panelboards.		N/A
2.7.1	Non-motor-operated equipment requiring special overcurrent protective device marked with device rating.		N/A
2.10.5.4	Multi-layer winding wire subject to UL component wire requirements in addition to 2.10.5.4 and Annex U.		N/A
3.1.1	Permissible combinations of internal wiring/external		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	cable sizes for overcurrent and short circuit protection.		
3.1.1	All interconnecting cables protected against overcurrent and short circuit.		N/A
3.2	Wiring methods permit connection of equipment to primary power supply in accordance with the NEC and CEC, Part 1.		N/A
3.2.1	Permitted use for flexible cords and plugs.		N/A
3.2.1	Flexible cords provided with attachment plug rated 125% of equipment current rating.		N/A
3.2.1	Any Class II equipment provided with 15 or 20 A standard supply outlets, Edison-base lampholders or single pole disconnect device provided with a polarized type attachment plug.		N/A
3.2.1.2	Equipment intended for connection to DC mains supply power systems complies with special wiring requirements (e.g., no permanent connection to supply by flexible cord).		N/A
3.2.1.2	Equipment with one pole of the DC mains supply connected to both the equipment mains input terminal and the main protective earthing terminal provided with special instructions and construction provisions for earthing		N/A
3.2.1.2	Equipment with means for connecting supply to earthing electrode conductor has no switches or protective devices between supply connection and earthing electrode connection.		N/A
3.2.1.2	Special markings and instructions for equipment with provisions to connect earthed conductor of a DC supply circuit to earthing conductor at the equipment.		N/A
3.2.1.2	Special markings and instructions for equipment with earthed conductor of a DC supply circuit connected to the earthing conductor at the equipment.		N/A
3.2.1.2	Terminals and leads provided for permanent connection of DC powered equipment to supply marked to indicate polarity if reverse polarity may result in a hazard.		N/A
3.2.3	Permanently connected equipment has provision for connecting and securing a field wiring system (i.e. conduit, or leads etc.) per the NEC and CEC.		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

	Part 1.		
3.2.3	Permanently connected equipment may have terminals or leads not smaller than No. 18 AWG (0.82 mm <sup>2</sup> ) and not less than 152 mm in length for connection of field installed wiring.		N/A
3.2.3	If supply wires exceed 60 °C, marking indicates use of 75 °C or 90 °C wiring for supply connection as appropriate.		N/A
3.2.3	Equipment compatible with suitable trade sizes of conduits and cables.		N/A
3.2.5	Length of power supply cord limited to between 1.5 and 4.5 m unless shorter length used when intended for a special installation.		N/A
3.2.5	Conductors in power supply cords sized according to NEC and CEC, Part I.		N/A
3.2.5	Power supply cords and cord sets incorporate flexible cords suitable for the particular application.		N/A
3.2.6	Strain relief provided for non-detachable interconnecting cables not supplied by a limited power source.		N/A
3.2.9	Adequate wire bending space and volume of field wiring compartment required to properly make the field connections.		N/A
3.2.9	Equipment intended solely for installation in Restricted Access Locations using low voltage d.c. systems may not need provision for connecting and securing a field wiring system. A method of securing wiring or instructions provided to ensure the wiring is protected from abuse.		N/A
3.3	Field wiring terminals provided for interconnection of units for other than LPS or Class 2 circuits also comply with 3.3.		N/A
3.3	Interconnection of units by LPS or Class 2 conductors may have field wiring connectors other than those specified in 3.3 if wiring is reliably separated.		N/A
3.3.1	Terminals for the connection of neutral conductor identified by a distinctive white marking or other equally effective means.		N/A
3.3.3	Wire binding screw terminal permitted for connection of No. 10 AWG (5.3 mm <sup>2</sup> ) or smaller conductor if provided with upturned lugs, cupped		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	washer or equivalent retention.		
3.3.4	Terminals accept wire sizes (gauge) used in the U.S. and Canada.		N/A
3.3.4	Terminals accept current-carrying conductors rated 125% of the equipment current rating.		N/A
3.3.6	Field wiring terminals marked to indicate the material(s) of the conductor appropriate for the terminals used.		N/A
3.3.6	Connection of an aluminum conductor not permitted to terminal for equipment earthing conductor.		N/A
3.3.6	Field wiring connections made through the use of suitable pressure connectors (including set screw type), solder lugs or splices to flexible leads.		N/A
3.4.2	Separate motor control device(s) required for cord-connected equipment rated more than 12 A, or with motor rated more than 1/3 hp or more than 120 V.		N/A
3.4.8	Vertically mounted disconnect devices oriented so up position of handle is "on".		N/A
3.4.11	For computer-room applications, equipment with battery systems capable of supplying 750 VA for 5 min require battery disconnect means.		N/A
4.2.8.1	Special opening restrictions for enclosures around CRTs with face dimension of 160 mm or more.		N/A
4.2.9	Compartment housing high-pressure lamp marked to indicate risk of explosion.		N/A
4.3.2	Loading test for equipment with handle(s) used to support more than 9 kg tested at four times the weight of the unit.		N/A
4.3.6	In addition to the IEC requirements, Direct Plug-in Equipment complies with UL 1310 or CSA 223 mechanical assembly requirements.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with ANSI/NFPA 30(Table NAE.6).		N/A
4.3.12	Equipment using replenishable liquids marked to indicate type of liquid to be used.		N/A
4.3.13.2	Equipment that produces x-radiation and does not comply with 4.3.12 under all conditions of servicing marked to indicate the presence of radiation where readily visible.		N/A



IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
4.3.13.5	Requirements contained in the applicable national codes and regulations apply to lasers (21 CFR 1040 and REDR C1370).	Laser product complies with 21 CFR 1040.	Pass
4.7	Automated information storage equipment intended to contain more than 0.76 m <sup>3</sup> of combustible media requires provision for automatic sprinklers or a gaseous agent extinguishing system.		N/A
4.7.3.1	Equipment for use in environmental air space other than ducts or plenums provided with metal enclosure or with non-metallic enclosure having adequate fire-resistance and low smoke producing characteristics. Low smoke-producing characteristics evaluated according to UL 2043. Equipment for installation in space used for environmental air as described in Sec. 300-22(c) of the NEC provided with instructions indicating suitability for installation in such locations.		N/A
4.7.3.1	Flame spread rating for external surface of combustible material with exposed area greater than 0.93 m <sup>2</sup> or a single dimension greater than 1.8 m; 50 or less for computer room applications or 200 or less for other applications.		N/A
4.7.3.4	Wire marked "VW-1" or "FT-1" considered equivalent.		N/A
5.1.8.2	Special earthing provisions and instructions for equipment with high touch current due to telecommunication network connections.		N/A
5.1.8.3	Touch current due to ringing voltage for equipment containing telecommunication network leads.		N/A
5.3.6	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator.		N/A
5.3.6	Tests interrupted by opening of a component repeated two additional times.		N/A
5.3.8.1	Test interrupted by opening of wire or trace subject to certain conditions.		N/A
6	Specialized instructions provided for telephones that may be connected to a telecommunications network.		N/A
6	Marking identifying function of telecommunication type connectors not used for connection to a telecommunication network.		N/A
6.2.1	Special requirements for enameled wiring used as electrical separation provided between parts		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	connected to telecommunication network and telecommunication circuitry intentionally isolated from network.		
6.2.1	Digital line termination equipment (e.g., NCTE) subject to separation requirements.		N/A
6.3	Equipment remotely powered over telecommunication wiring systems provided with specialized markings adjacent to the connection.		N/A
6.3	Overcurrent protection incorporated into equipment to provide power over telecommunication wiring system not interchangeable with devices of higher ratings if operator replaceable.		N/A
6.4	Additional requirements for equipment intended for connection to a telecommunication network using cable subject to overvoltage from power line failures (Fig. 6C).		N/A
6.4	Where 26 AWG line cord required by Fig. 6C, either the cord is provided with the equipment or described in the safety instructions.		N/A
6.5	Acoustic pressure from an ear piece less than 136 dBA for short duration disturbances, and less than 125 dBA for handsets, 118 dBA for headsets, and 121 dBA for insert earphones, for long duration disturbances.		N/A
7	Equipment associated with the cable distribution system may need to be subjected to applicable parts of Chapter 8 of the NEC.		N/A
H	Ionizing radiation measurements made under single fault conditions in accordance with the requirements of the Code of Federal Regulations 21 CFR 1020 and the Canadian Radiation Emitting Devices Act, REDR C1370.		N/A
M.2	Continuous ringing signals evaluated to Method A subjected to special accessibility considerations.		N/A
M.4	Special requirements for message waiting and similar telecommunications signals.		N/A
NAC	Equipment intended for use with a generic secondary protector marked with suitable instructions.		N/A
NAC	Equipment intended for use with a specific primary or secondary protector marked with suitable instructions.		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

NAF	Household/Home Office Document Shredders		N/A
NAF.1.7	Markings and instructions alert the user to key safety considerations related to use of shredders, including not intended to be used by children, avoid touching document feed opening, avoid clothes and hair entanglement, and avoid aerosol products.		N/A
NAF.2.8.3	Safety interlock cannot be inadvertently activated by the articulated accessibility probe (figure NAF.1).		N/A
NAF.3.4	Provided with an isolating switch complying with 3.4.2, including 3 mm contact gap, with appropriate markings associated with the switch.		N/A
NAF.4.4	Hazardous moving parts are not accessible to the user, as determined using the articulated accessibility probe (figure NAF.1) and the accessibility probe/wedge (figures NAF.2/NAF.3).		N/A

**Enclosure****Photographs**

Supplement Id	Description
3-01	External View
3-02	External View Rear
3-03	Internal View

Photographs ID 3-01

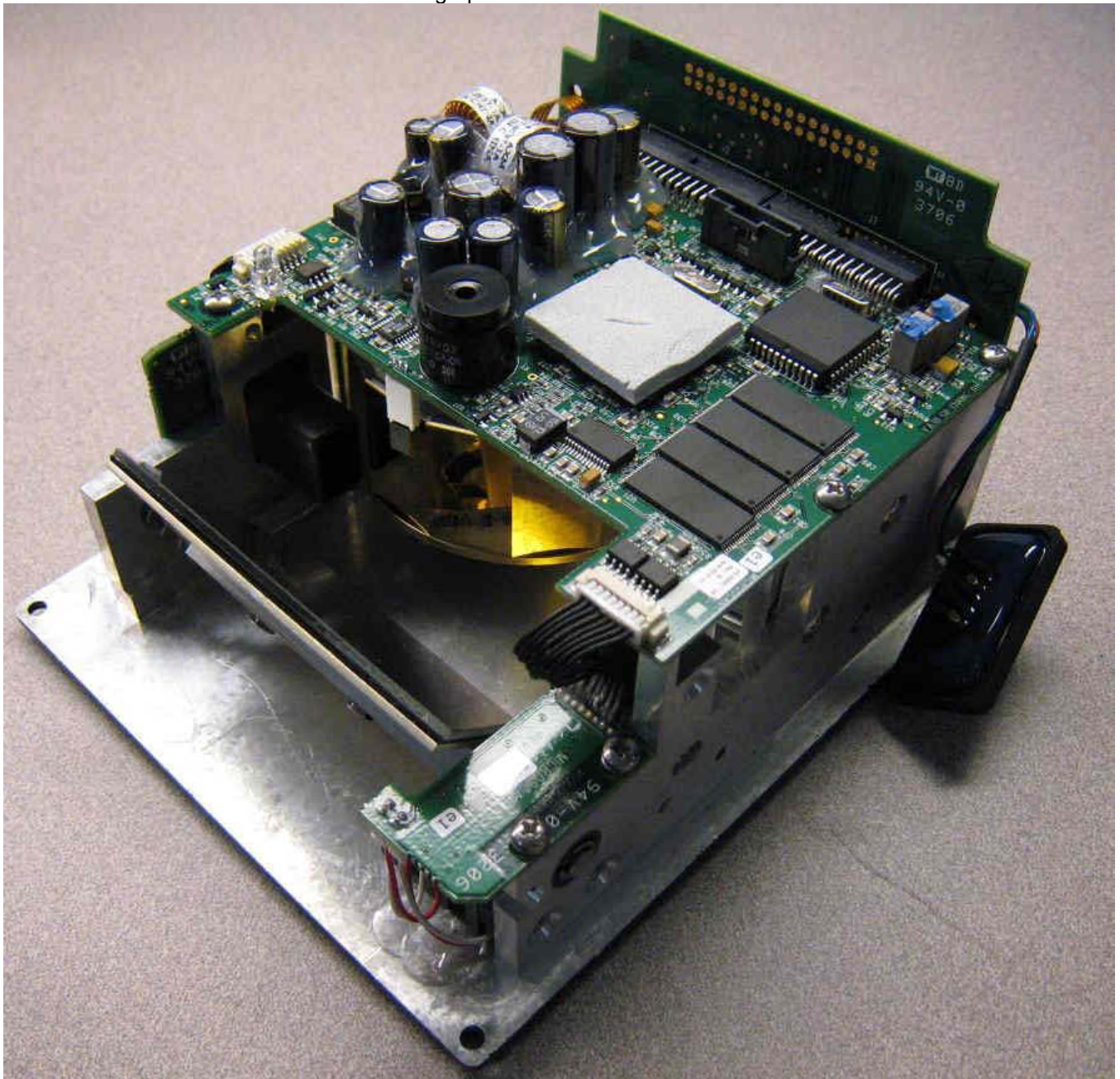


Photographs ID 3-02





Photographs ID 3-03

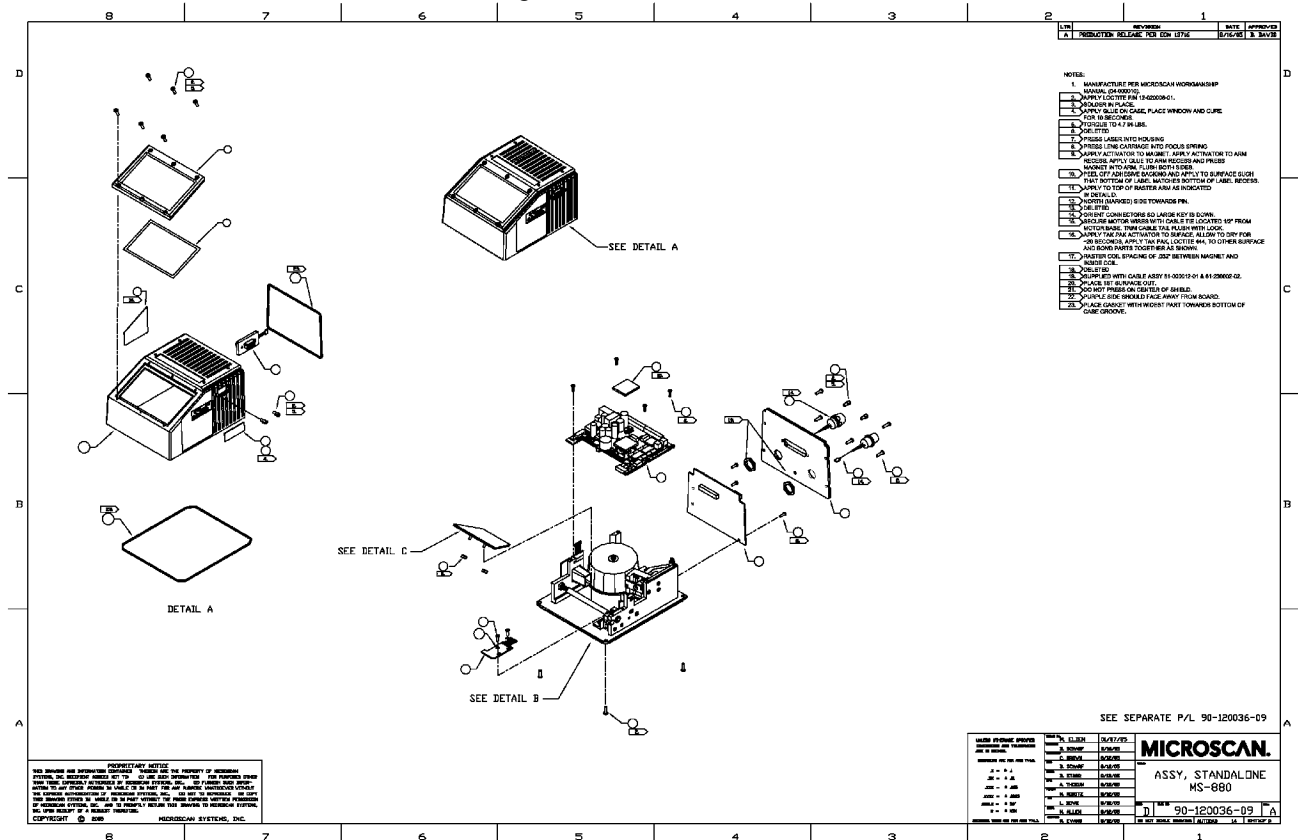


**Enclosure****Diagrams**

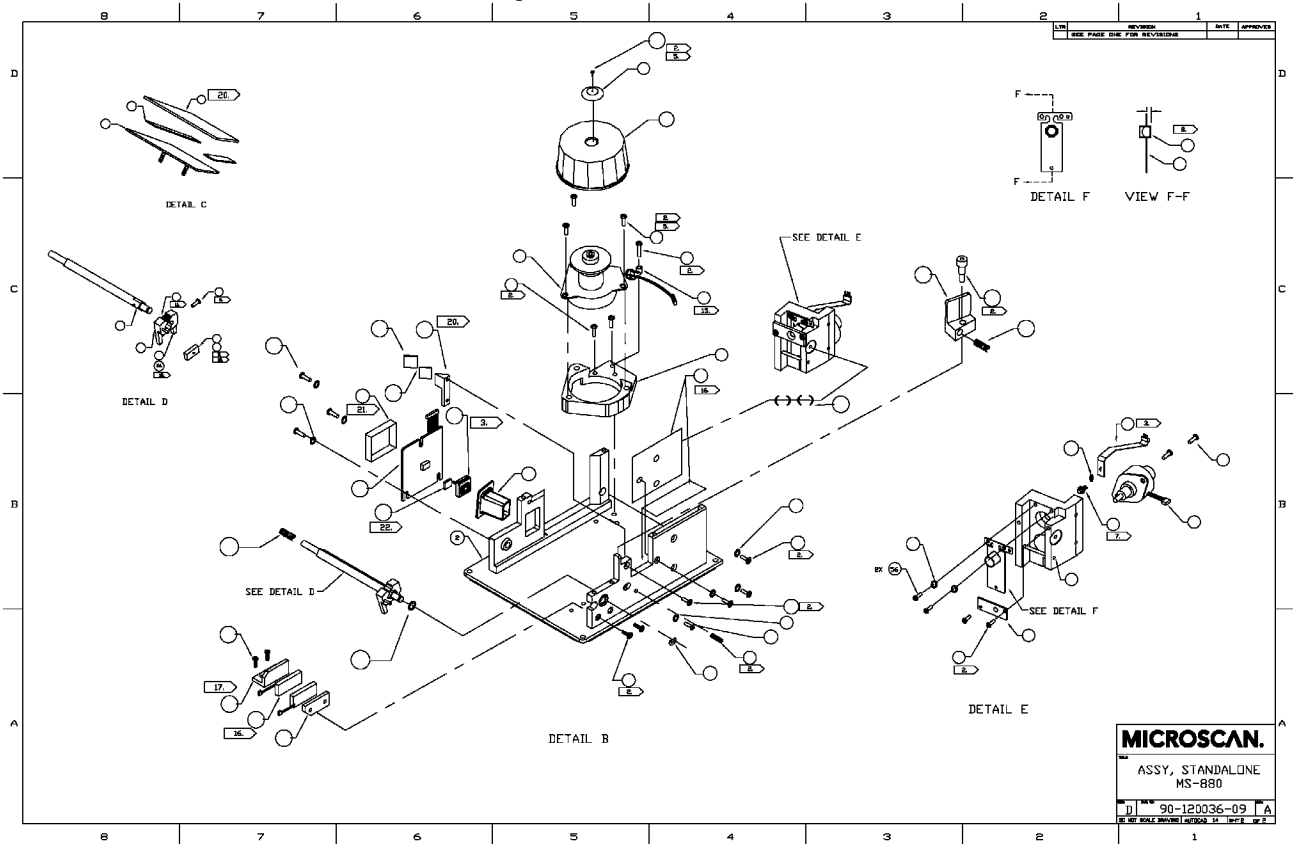
Supplement Id	Description
4-01	Exploded View of the Unit



## Diagrams ID 4-01



Diagrams ID 4-01



## Diagrams ID 4-01

## ASSY PL

16-Aug-05

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
90-120036-09			ASSY, STANDALONE, MS-880		REV: A	
1	1	10-020027-04	CASE, MS-880			
2	1	10-130020-03	BASE, RASTER/OPTICS, MS-880			
3	1	70-100049-01	ASSY, RETAINER, WINDOW, GLASS			
4	AR	12-020010-01	TAPE, URETHANE FOAM, .031" X .75", BLACK			
6	1	11-110014-01	LABEL, CDRH, BARRACUDA			
8	1	10-240020-01	WINDOW, LED, IRDA			
9	1	61-100033-01	ASSY CABLE, USER CONFIGURATION PART			
10	1	10-010043-01	GASKET, BASE SEAL, MS-880			
11	1	43-200013-03	ASSY PCB, MAIN, 128Kx8 SRAM, MS-880			
12	1	43-250006-02	ASSY PCB, RASTER, MS-880			
13	1	43-220010-02	ASSY PCB, ANALOG, MS-880			
14	1	10-220008-01	FILTER, BANDPASS, MS-880			
15	1	10-050002-07	SHIELD, FILTER HOLDER, MS-820/880			
16	1	10-050006-01	SHIELD, ANALOG, .90 X .87 X .90			
17	1	10-250044-01	MIRROR, SPHERICAL CONCENTRATOR			
18	1	10-330013-01	PLATE, L, RASTER COIL MOUNTING			
19	2	20-550022-04	INDUCTOR, RASTR, RASTER DRIVE, MOLDED,			
20	1	10-330012-01	PLATE, RASTER COIL MOUNTING			
21	1	10-010041-01	GASKET, WINDOW, MS-880			
22	1	10-250043-01	MIRROR, FOLD			
23	AR	12-020002-01	ADHESIVE, 5 MIL, 1" WIDE, FOAM TAPE, DOUBLE COA			
90-120036-09		REV A				1

## Diagrams ID 4-01

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
24	1	10-110069-01	BRACKET, FOLD MIRROR			
25	1	40-270008-01	DRILL, FLEX CIRCUIT,LASER,BARRACUDA			
26	1	20-340016-01	DIODE, LASER, 7MW, 650 NM,	LASER/TSLD		
27	1	20-510023-01	MOTOR, STEPPER, FOCUS, 5V, LINEAR ACTUATOR			
28	1	10-020023-03	HOUSING, LASER, MS-880			
29	1	10-020024-01	HOUSING, CAP			
30	1	10-190014-01	SPRING, FOCUS			
31	1	70-150013-01	ASSY, CARRIAGE, LENS			
32	1	10-160007-02	ARM, RASTER, MS-880			
33	1	10-150026-02	SHAFT, RASTER MIRROR, MS-880			
34	1	10-080006-01	SUPPORT, RASTER MIRROR			
35	1	10-100121-01	MAGNET, RASTER MOTION			
36	1	10-250042-02	MIRROR, RASTER			
37	1	10-110074-03	BRACKET, 3", CANNON MOTOR, MS-880			
38	1	20-510022-01	MOTOR, PANACAKE, MS880,			
39	1	10-000018-02	MIRROR, 14 FACET, MS-880			
41	1	10-010042-01	GASKET, BACK SEAL, MS-880			
43	1	43-310009-01	ASSY PCB, INTERFACE,STANDALONE,MS-880			
44	1	10-330014-01	PLATE, END,STANDALONE			
45	1	61-000012-01	ASSY CABLE, SCANNER PWR, MS-880			
46	1	61-230002-02	ASSY CABLE, INPUT, SDS PB			
47	2	12-220005-03	SCREW, JACK, HEX, 3/16 X 5/16, LARGE HEAD			
48	1	12-210146-01	SCREW, 8-32x3/8"x.187"DIA			
49	1	12-260004-01	SPRING, COMP 11lbs/in, .188"OD x .146ID x .47L			
50	1	12-210153-01	SCREW, SET, 4-40x3/8", SOCKET, CUP POINT			

90-120036-09 REV A

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## Diagrams ID 4-01

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
51	4	12-210157-01	WASHER,			
52	1	12-210151-01	CLIP, E, RETAINING, 5/32" SHAFT, .116" ID			
53	1	12-210159-01	WASHER, SPRING, ID.156, OD 1.0, H.147, SS			
54	5	12-210133-01	SCREW, SELF-SEALNG,6-32X1/4,PN HD, PHIL.,SS,BL			
56	5	12-200013-01	SCREW, 2-56 X 1/4", PH MACH.			
57	1	12-210064-01	SCREW, 2-56 X 1/4, FH PHIL.			
58	1	12-210128-01	SCREW, 4-40 X 5/16, FLAT HEAD, S/S, PHIL			
59	15	12-200015-01	SCREW, 4-40 X 5/16TH", PAN HEAD, PHIL., S/S			
60	3	12-200017-01	SCREW, 6-32 X 5/16", PHILIPS, PH., S/S			
61	2	12-210147-01	NUT, 2-56,HEX,SS			
63	4	12-210036-01	SCREW, 6-32 X 7/16, PAN HD MS, BLK OXD WAX, BIN			
64	6	12-200015-02	SCREW, BLACK OXIDED, 4-40 X 5/16", PHIL., P.H.			
65	4	12-210025-01	SCREW, 4-40 X 3/16", PN HD, PHIL., SS, W/NYLON			
66	AR	12-020032-01	ADHESIVE, LOCTITE 392			
67	AR	12-020031-01	ADHESIVE, UV/VISABLE LIGHT			
68	AR	12-010006-01	PAINT, FLAT WHITE			
69	1	12-200110-01	SCREW, CAP SCREW, 2-56 X 3/8", SOC. CAP SCREW			
70	2	12-200068-01	SCREW, 4-40X1/4", FH PHIL, STAINLESS STEEL			
72	2	12-220005-02	SCREW, JACK SCREW, HEX, .187 X .25, 4-40			
73	1	12-200108-01	SCREW, PH, PHIL., 4-40 X 7/16" LG.			
74	1	12-000002-01	TIE, CABLE, RTM 400, 5-7/16"			
75	1	10-030009-02	PAD, THERMAL TRANSFER, MS-880			
76	1	10-010045-01	INSULATOR, TAPE, DIE CUT, TEFLON, MS-880			
77	3	12-210158-01	WASHER, SHOULDER, NYLON, #4			
78	1	12-220006-01	SPACER, PERM-O-PAD			

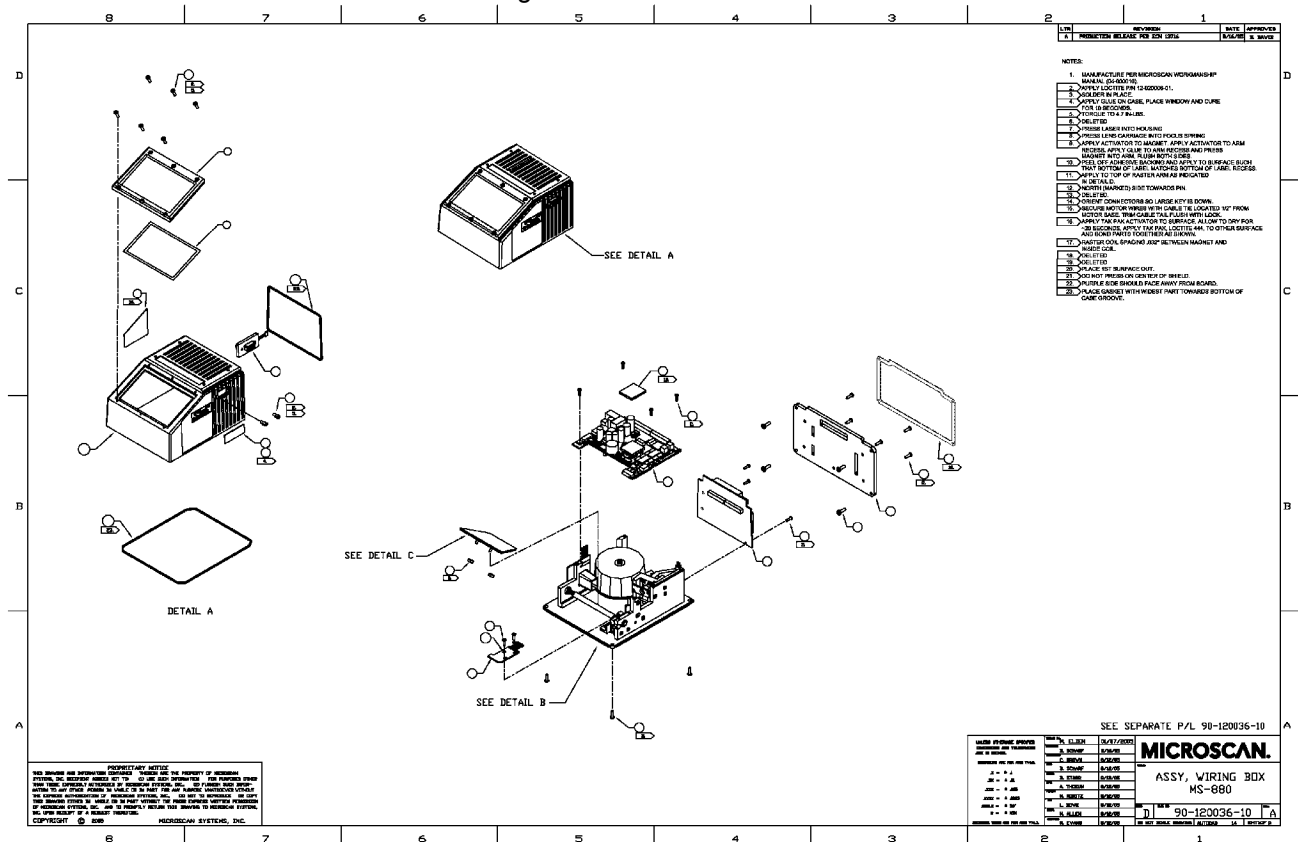
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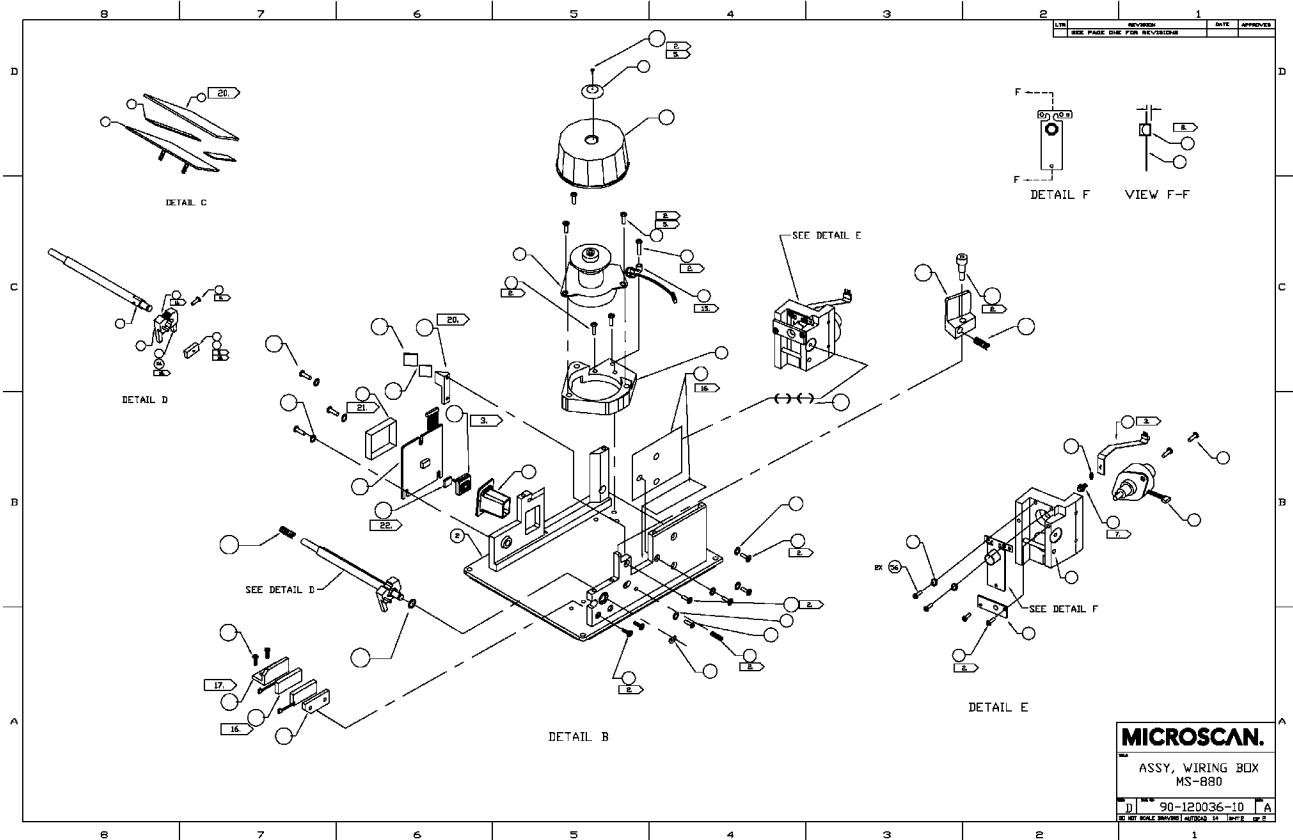
## Diagrams ID 4-01

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
79	AR	12-010007-01	ACTIVATOR, LOCTITE 7380			
80	5	12-200008-01	WASHER, #4, SPLIT LOCK WASHER, BIN			
81	3	12-200012-01	WASHER, #2, LOCK, SPLIT			
83	AR	12-020006-01	THREADLOCK, SURFACE CURING			
84	1	12-000129-01	SPRING, OD.312 X 1", RATE .97lb/in			
85	2	12-200006-01	SCREW, 4-40 X 1/4", PHIL PH MACH			
86	1	10-000021-01	BAFFLE, MS-880			
87	1	12-000156-01	WASHER, FLAT, SS, .188 ID x .25 OD x .016 THK			

## Diagrams ID 4-01



Diagrams ID 4-01





## Diagrams ID 4-01

## ASSY PL

16-Aug-05

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
90-120036-10			ASSY, WIRING BOX, MS-880		REV: A	
1	1	10-020027-04	CASE, MS-880			
2	1	10-130020-03	BASE, RASTER/OPTICS, MS-880			
3	1	70-100049-01	ASSY, RETAINER, WINDOW, GLASS			
4	AR	12-020010-01	TAPE, URETHANE FOAM, .031" X .75", BLACK			
6	1	11-110014-01	LABEL, CDRH, BARRACUDA			
8	1	10-240020-01	WINDOW, LED, IRDA			
9	1	61-100033-01	ASSY CABLE, USER CONFIGURATION PART			
10	1	10-010043-01	GASKET, BASE SEAL, MS-880			
11	1	43-200013-03	ASSY PCB, MAIN, 128Kx8 SRAM, MS-880			
12	1	43-250006-02	ASSY PCB, RASTER, MS-880			
13	1	43-220010-02	ASSY PCB, ANALOG, MS-880			
14	1	10-220008-01	FILTER, BANDPASS, MS-880			
15	1	10-050002-07	SHIELD, FILTER HOLDER, MS-820/880			
16	1	10-050006-01	SHIELD, ANALOG, .90 X .87 X .90			
17	1	10-250044-01	MIRROR, SPHERICAL CONCENTRATOR			
18	1	10-330013-01	PLATE, L, RASTER COIL MOUNTING			
19	2	20-550022-04	INDUCTOR, RASTR, RASTER DRIVE, MOLDED,			
20	1	10-330012-01	PLATE, RASTER COIL MOUNTING			
21	1	10-010041-01	GASKET, WINDOW, MS-880			
22	1	10-250043-01	MIRROR, FOLD			
23	AR	12-020002-01	ADHESIVE, 5 MIL, 1" WIDE, FOAM TAPE, DOUBLE COA			
90-120036-10		REV A				1

## Diagrams ID 4-01

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
24	1	10-110069-01	BRACKET, FOLD MIRROR			
25	1	40-270008-01	DRILL, FLEX CIRCUIT,LASER,BARRACUDA			
26	1	20-340016-01	DIODE, LASER, 7MW, 650 NM,	LASER/TSLD		
27	1	20-510023-01	MOTOR, STEPPER, FOCUS, 5V, LINEAR ACTUATOR			
28	1	10-020023-03	HOUSING, LASER, MS-880			
29	1	10-020024-01	HOUSING, CAP			
30	1	10-190014-01	SPRING, FOCUS			
31	1	70-150013-01	ASSY, CARRIAGE, LENS			
32	1	10-160007-02	ARM, RASTER, MS-880			
33	1	10-150026-02	SHAFT, RASTER MIRROR, MS-880			
34	1	10-080006-01	SUPPORT, RASTER MIRROR			
35	1	10-100121-01	MAGNET, RASTER MOTION			
36	1	10-250042-02	MIRROR, RASTER			
37	1	10-110074-03	BRACKET, 3", CANNON MOTOR, MS-880			
38	1	20-510022-01	MOTOR, PANACAKE, MS880,			
39	1	10-000018-02	MIRROR, 14 FACET, MS-880			
40	1	43-310009-03	ASSY PCB, INTERFACE, WIRING BOX, MS-880			
41	1	10-010042-01	GASKET, BACK SEAL, MS-880			
42	1	10-120038-01	PLATE, INTERFACE, WIRING BOX, MS-880			
48	1	12-210146-01	SCREW, 8-32x3/8"x.187"DIA			
49	1	12-260004-01	SPRING, COMP 11lbs/in, .188"OD x .146ID x .47L			
50	1	12-210153-01	SCREW, SET, 4-40x3/8", SOCKET, CUP POINT			
51	4	12-210157-01	WASHER,			
52	1	12-210151-01	CLIP, E, RETAINING, 5/32" SHAFT, .116" ID			
53	1	12-210159-01	WASHER, SPRING, ID.156, OD 1.0, H.147, SS			

90-120036-10 REV A

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## Diagrams ID 4-01

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
54	5	12-210133-01	SCREW, SELF-SEALNG,6-32X1/4,PN HD, PHIL.,SS,BL			
55	1	10-010044-01	GASKET, GATOR BOX, MS-880			
56	5	12-200013-01	SCREW, 2-56 X 1/4", PH MACH.			
57	1	12-210064-01	SCREW, 2-56 X 1/4, FH PHIL.			
58	1	12-210128-01	SCREW, 4-40 X 5/16, FLAT HEAD, S/S, PHIL.			
59	15	12-200015-01	SCREW, 4-40 X 5/16TH", PAN HEAD, PHIL., S/S			
60	3	12-200017-01	SCREW, 6-32 X 5/16", PHILIPS, PH., S/S			
61	2	12-210147-01	NUT, 2-56,HEX,SS			
63	4	12-210036-01	SCREW, 6-32 X 7/16, PAN HD MS, BLK OXD WAX, BIN			
64	6	12-200015-02	SCREW, BLACK OXIDED, 4-40 X 5/16", PHIL., P.H.			
65	4	12-210025-01	SCREW, 4-40 X 3/16", PN HD, PHIL, SS, W/NYLON			
66	AR	12-020032-01	ADHESIVE, LOCTITE 392			
67	AR	12-020031-01	ADHESIVE, UV/VISABLE LGHT			
68	AR	12-010006-01	PAINT, FLAT WHITE			
69	1	12-200110-01	SCREW, CAP SCREW, 2-56 X 3/8", SOC. CAP SCREW			
70	2	12-200068-01	SCREW, 4-40X1/4", FH PHIL, STAINLESS STEEL			
71	4	12-210156-01	SCREW, CAPTIVE, 6-32 X .33 LG			
72	2	12-220005-02	SCREW, JACK SCREW, HEX, .187 X .25, 4-40			
73	1	12-200108-01	SCREW, PH, PHIL., 4-40 X 7/16" LG.			
74	1	12-000002-01	TIE, CABLE, RTM 400, 5-7/16"			
75	1	10-030009-02	PAD, THERMAL TRANSFER, MS-880			
76	1	10-010045-01	INSULATOR, TAPE, DIE CUT, TEFLON, MS-880			
77	3	12-210158-01	WASHER, SHOULDER, NYLON, #4			
78	1	12-220006-01	SPACER, PERM-O-PAD			
79	AR	12-010007-01	ACTIVATOR, LOCTITE 7380			

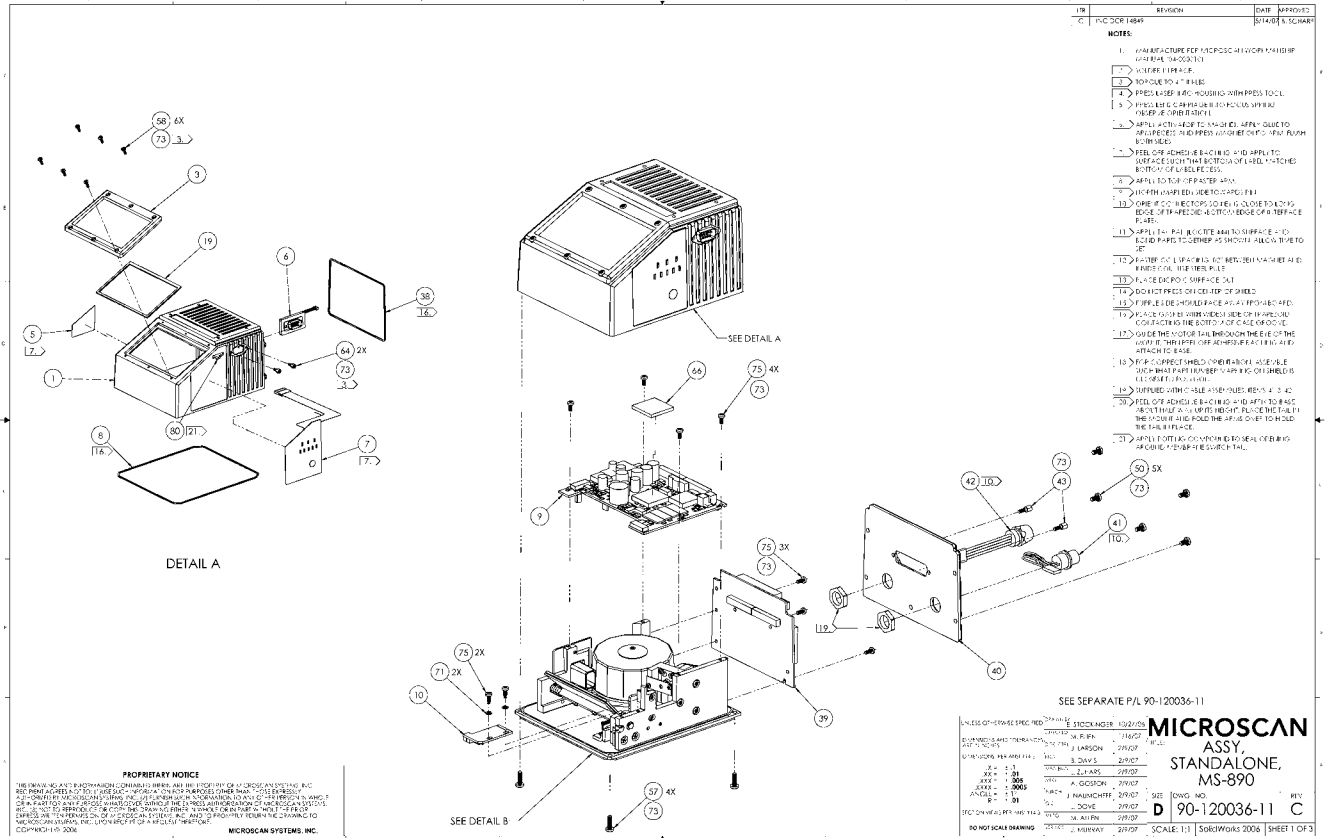
90-120036-10 REV A

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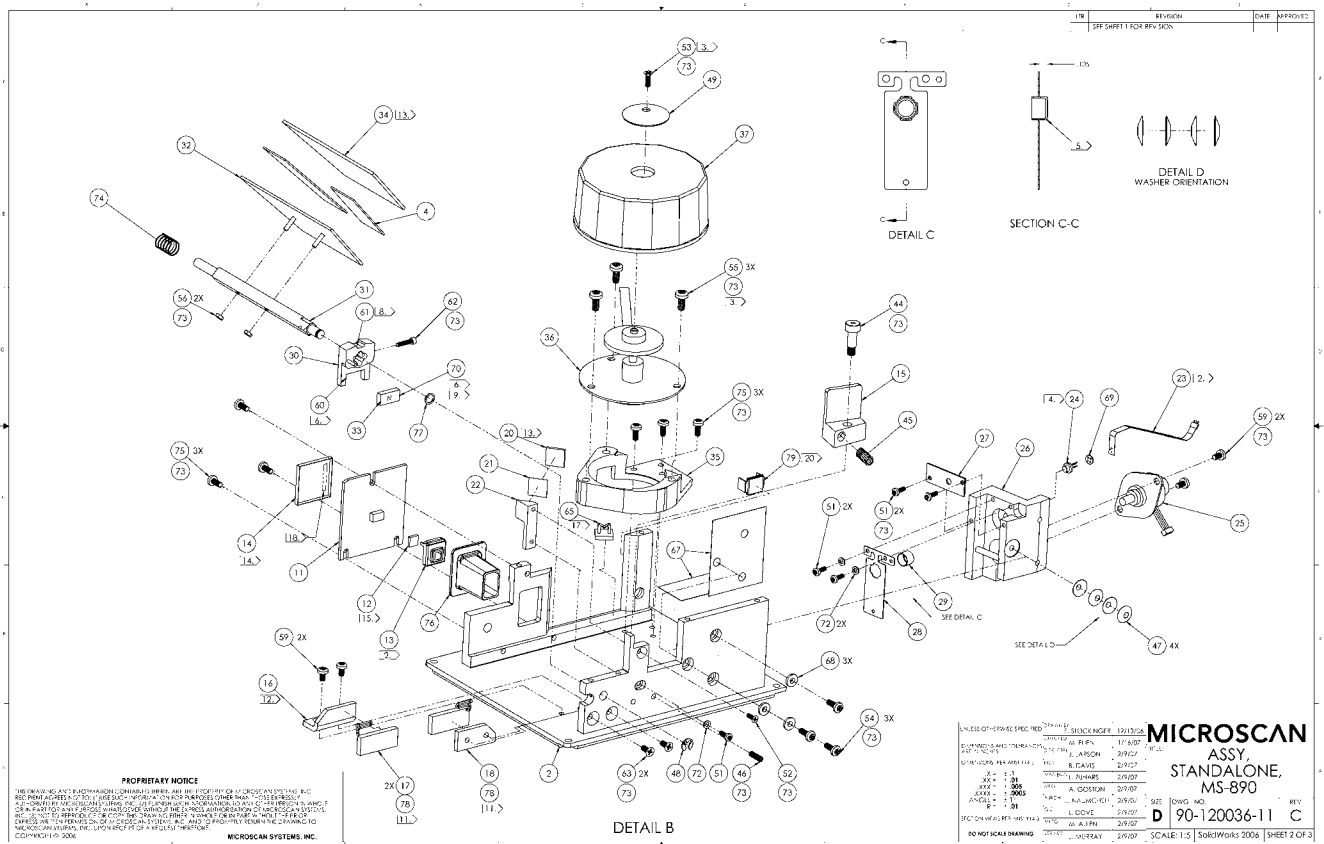
## Diagrams ID 4-01

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
80	5	12-200008-01	WASHER, #4, SPLIT LOCK WASHER, BIN			
81	3	12-200012-01	WASHER, #2, LOCK, SPLIT			
83	AR	12-020006-01	THREADLOCK, SURFACE CURING			
84	1	12-000129-01	SPRING, OD.312 X 1", RATE .97lb/in			
85	2	12-200006-01	SCREW, 4-40 X 1/4", PHIL PH MACH			
86	1	10-000021-01	BAFFLE, MS-880			
87	1	12-000156-01	WASHER, FLAT, SS, .188 ID x .25 OD x .016 THK			

## Diagrams ID 4-01



Diagrams ID 4-01



## Diagrams ID 4-01

## ASSY PL

10-May-07

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
90-120036-11			ASSY, STANDALONE, MS-890		REV: C	
1	1	10-020027-05	CASE, MEM-SW, MS-890			
2	1	10-130020-04	BASE, RASTER/OPTICS, MS-880	-		
3	1	70-100049-01	ASSY, RETAINER, WINDOW, GLASS			
4	AR	12-020010-01	TAPE, URETHANE FOAM, .031" X .75", BLACK			
5	1	11-110014-01	LABEL, CDRH, BARRACUDA			
6	1	61-100033-02	ASSY CABLE, USER CONFIGURATION PORT, MS-890			
7	1	43-000058-01	ASSY, MEMBRANE SWITCH, MS-890			
8	1	10-010043-02	GASKET, BASE SEAL, MS-890			
9	1	43-200013-05	ASSY, PCB, MAIN, MS-890			
10	1	43-250006-03	ASSY, PCB, RASTER, MS-890			
11	1	43-220010-03	ASSY, PCB, ANALOG, MS-890			
12	1	10-220008-01	FILTER, BANDPASS, MS-880			
13	1	10-050002-07	SHIELD, FILTER HOLDER, MS-820/880			
14	1	10-050006-01	SHIELD, ANALOG, .90 X .87 X .90			
15	1	10-250044-01	MIRROR, SPHERICAL CONCENTRATOR			
16	1	10-330013-01	PLATE, L, RASTER COIL MOUNTING			
17	2	20-550022-04	INDUCTOR, RASTER DRIVE, MOLDED,			
18	1	10-330012-01	PLATE, RASTER COIL MOUNTING			
19	1	10-010041-01	GASKET, WINDOW, MS-880			
20	1	10-250043-01	MIRROR, FOLD			
21	AR	12-020002-01	ADHESIVE, 5 MIL, 1" WIDE, FOAM TAPE, DOUBLE COA			
90-120036-11		REV C				1

## Diagrams ID 4-01

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
22	1	10-110069-01	BRACKET, FOLD MIRROR			
23	1	43-270008-02	ASSY, PCB, LASER FLEX, MS-890			
24	1	20-340016-01	DIODE, LASER, 7MW, 650 NM,	LASER/TSLD		
25	1	20-510023-02	MOTOR, STEPPER, FOCUS			
26	1	10-020023-04	HOUSING, LASER, MS-880	-		
27	1	10-020024-02	HOUSING, APERTURE, MS-880			
28	1	10-190014-02	SPRING, FOCUS, MS-880	-		
29	1	70-150013-02	ASSY, CARRIAGE, LENS, MS-880	-		
30	1	10-160007-02	ARM, RASTER, MS-880			
31	1	10-150026-02	SHAFT, RASTER MIRROR, MS-880			
32	1	10-080006-01	SUPPORT, RASTER MIRROR			
33	1	10-100121-01	MAGNET, RASTER MOTION			
34	1	10-250042-02	MIRROR, RASTER			
35	1	10-110074-04	MOUNT, MOTOR, 3 DEG, MS-880	-		
36	1	20-510022-02	MOTOR, CUSTOM, PANCAKE			
37	1	10-000018-02	MIRROR, 14 FACET, MS-880			
38	1	10-010042-02	GASKET, INTERFACE PLATE, MS-890			
39	1	43-310009-04	ASSY, PCB, INTERFACE, STAND ALONE, MS-890			
40	1	10-330014-02	PLATE, END, STANDALONE			
41	1	61-000012-02	ASSY, CABLE, SCANNER POWER, MS-880			
42	1	61-230002-03	ASSY, CABLE, TRIGGER INPUT			
43	2	12-000240-01	SCREW, JACK, 3/16 x 5/16, 4-40, LG HEAD, BIN			
44	1	12-210146-01	SCREW, 8-32x3/8"x.187"DIA			
45	1	12-260004-02	SPRING, COMP 11lbs/in, .188"OD x .146ID x .47L			
46	1	12-210153-01	SCREW, SET, 4-40x3/8", SOCKET, CUP POINT			
90-120036-11 REV C						



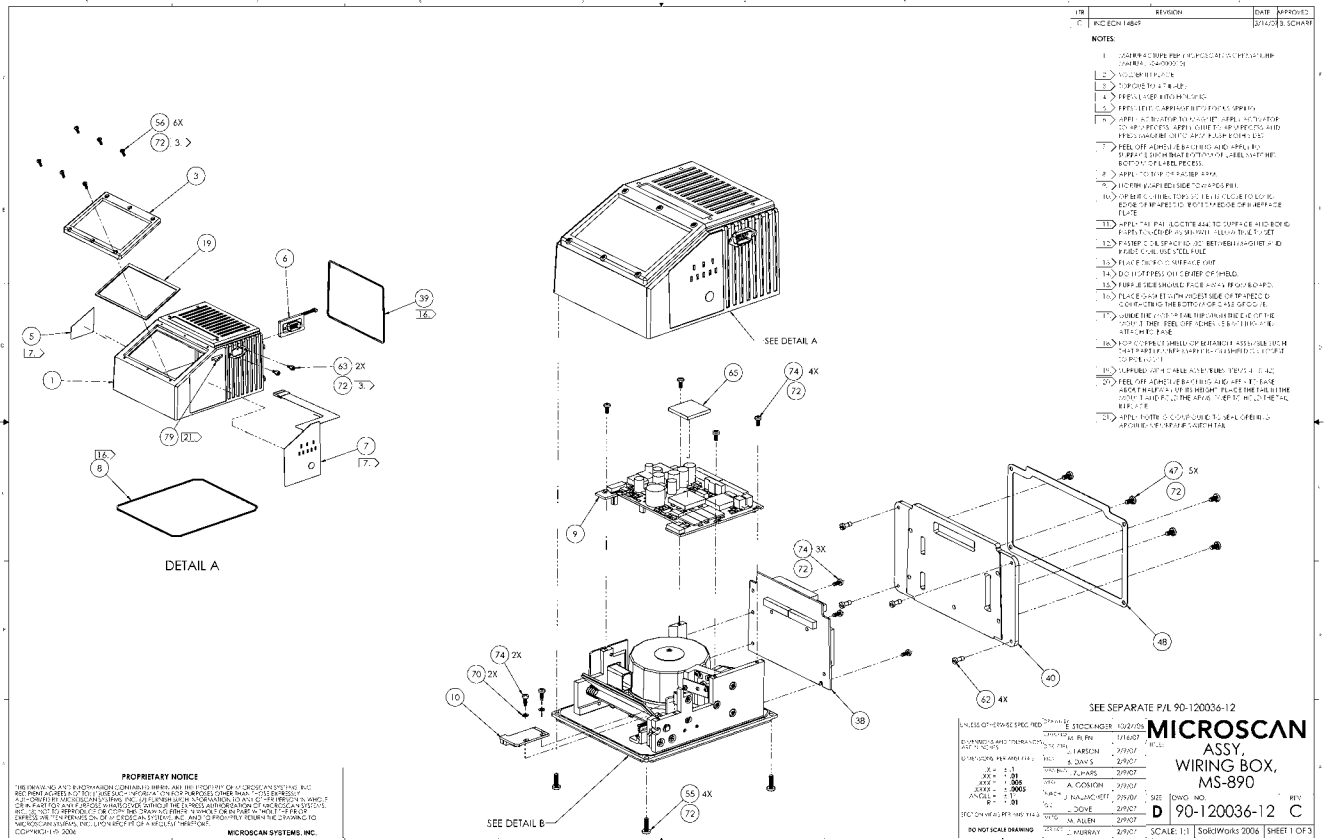
## Diagrams ID 4-01

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
47	4	12-210157-01	WASHER,			
48	1	12-210151-01	CLIP, E, RETAINING, 5/32" SHAFT, .116" ID			
49	1	12-210159-01	WASHER, SPRING, ID.156, OD 1.0, H.147, SS			
50	5	12-210133-01	SCREW, SELF-SEALNG,6-32X1/4,PN HD, PHIL.,SS,BL			
51	5	12-200013-01	SCREW, 2-56 X 1/4", PH MACH.			
52	1	12-210064-01	SCREW, 2-56 X 1/4, FH PHIL.			
53	1	12-000310-01	SCREW, M2.5 x 8mm, FH, PHIL., SS			
54	3	12-200015-01	SCREW, 4-40 X 5/16TH", PAN HEAD, PHIL., S/S			
55	3	12-200017-01	SCREW, 6-32 X 5/16", PHILIPS, PH., S/S			
56	2	12-210147-01	NUT, 2-56,HEX,SS			
57	4	12-210036-01	SCREW, 6-32 X 7/16, PAN HD MS, BLK OXD WAX, BIN			
58	6	12-200015-02	SCREW, 4-40 X 5/16", PHIL., PH, BLK OXIDE, SS			
59	4	12-210025-01	SCREW, 4-40 X 3/16", PN HD, PHIL., SS, W/NYLON			
60	AR	12-020032-01	ADHESIVE, LOCTITE 392			
61	AR	12-010006-01	PAINT, FLAT WHITE			
62	1	12-200110-01	SCREW, CAP SCREW, 2-56 X 3/8", SOC. CAP SCREW			
63	2	12-200068-01	SCREW, 4-40X1/4", FH PHIL, STAINLESS STEEL			
64	2	12-000239-01	SCREW, JACK, 3/16 x 1/4, 4-40, BIN			
65	1	12-000309-01	MOUNT, MICRO WIRE w/ADHESIVE, FR NYLON			
66	1	10-030009-04	PAD, THERMAL, TRANSFER, MS-880	-		
67	1	10-010045-01	INSULATOR, TAPE, DIE CUT, TEFLON, MS-880			
68	3	12-210158-01	WASHER, SHOULDER, NYLON, #4			
69	1	12-220006-01	SPACER, PERM-O-PAD			
70	AR	12-010007-01	ACTIVATOR, LOCTITE 7380			
71	2	12-000259-01	WASHER, #4, SPLIT LOCK, SS			
90-120036-11			REV C		3	

## Diagrams ID 4-01

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
72	3	12-200012-01	WASHER, #2, LOCK, SPLIT			
73	AR	12-020006-01	THREADLOCK, SURFACE CURING			
74	1	12-000129-01	SPRING, OD.312 X 1", RATE .97lb/in			
75	15	12-200006-01	SCREW, 4-40 X 1/4", PHIL PH MACH			
76	1	10-000021-02	BAFFLE, MS-880			
77	1	12-000156-01	WASHER, FLAT, SS, .188 ID x .25 OD x .016 THK			
78	AR	12-020019-01	ADHESIVE, LOCTITE, TAK PAK 444, 70 ML BOTTLE			
79	1	12-000311-01	MOUNT, CABLE CLAMP, ALUMINUM			
80	AR	12-000221-01	EPOXY, POTTING COMPOUND, LOCTITE E-60NC			

## Diagrams ID 4-01





## Diagrams ID 4-01

## ASSY PL

10-May-07

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
90-120036-12			ASSY, WIRING BOX, MS-890		REV: C	
1	1	10-020027-05	CASE, MEM-SW, MS-890			
2	1	10-130020-04	BASE, RASTER/OPTICS, MS-880	-		
3	1	70-100049-01	ASSY, RETAINER, WINDOW, GLASS			
4	AR	12-020010-01	TAPE, URETHANE FOAM, .031" X .75", BLACK			
5	1	11-110014-01	LABEL, CDRH, BARRACUDA			
6	1	61-100033-02	ASSY CABLE, USER CONFIGURATION PORT, MS-890			
7	1	43-000058-01	ASSY, MEMBRANE SWITCH, MS-890			
8	1	10-010043-02	GASKET, BASE SEAL, MS-890			
9	1	43-200013-05	ASSY, PCB, MAIN, MS-890			
10	1	43-250006-03	ASSY, PCB, RASTER, MS-890			
11	1	43-220010-03	ASSY, PCB, ANALOG, MS-890			
12	1	10-220008-01	FILTER, BANDPASS, MS-880			
13	1	10-050002-07	SHIELD, FILTER HOLDER, MS-820/880			
14	1	10-050006-01	SHIELD, ANALOG, .90 X .87 X .90			
15	1	10-250044-01	MIRROR, SPHERICAL CONCENTRATOR			
16	1	10-330013-01	PLATE, L, RASTER COIL MOUNTING			
17	2	20-550022-04	INDUCTOR, RASTER DRIVE, MOLDED,			
18	1	10-330012-01	PLATE, RASTER COIL MOUNTING			
19	1	10-010041-01	GASKET, WINDOW, MS-880			
20	1	10-250043-01	MIRROR, FOLD			
21	AR	12-020002-01	ADHESIVE, 5 MIL, 1" WIDE, FOAM TAPE, DOUBLE COA			
90-120036-12		REV C				1

## Diagrams ID 4-01

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
22	1	10-110069-01	BRACKET, FOLD MIRROR			
23	1	43-270008-02	ASSY, PCB, LASER FLEX, MS-890			
24	1	20-340016-01	DIODE, LASER, 7MW, 650 NM,	LASER/TSLD		
25	1	20-510023-02	MOTOR, STEPPER, FOCUS			
26	1	10-020023-04	HOUSING, LASER, MS-880	-		
27	1	10-020024-02	HOUSING, APERTURE, MS-880			
28	1	10-190014-02	SPRING, FOCUS, MS-880	-		
29	1	70-150013-02	ASSY, CARRIAGE, LENS, MS-880	-		
30	1	10-160007-02	ARM, RASTER, MS-880			
31	1	10-150026-02	SHAFT, RASTER MIRROR, MS-880			
32	1	10-080006-01	SUPPORT, RASTER MIRROR			
33	1	10-100121-01	MAGNET, RASTER MOTION			
34	1	10-250042-02	MIRROR, RASTER			
35	1	10-110074-04	MOUNT, MOTOR, 3 DEG, MS-880	-		
36	1	20-510022-02	MOTOR, CUSTOM, PANCAKE			
37	1	10-000018-02	MIRROR, 14 FACET, MS-880			
38	1	43-310009-05	ASSY, PCB, INTERFACE, WIRING BOX, MS-890			
39	1	10-010042-02	GASKET, INTERFACE PLATE, MS-890			
40	1	10-120038-02	PLATE, INTERFACE, WIRING BOX, MS-880			
41	1	12-210146-01	SCREW, 8-32x3/8"x.187"DIA			
42	1	12-260004-02	SPRING, COMP 11lbs/in, .188"OD x .146ID x .47L			
43	1	12-210153-01	SCREW, SET, 4-40x3/8", SOCKET, CUP POINT			
44	4	12-210157-01	WASHER,			
45	1	12-210151-01	CLIP, E, RETAINING, 5/32" SHAFT, .116" ID			
46	1	12-210159-01	WASHER, SPRING, ID.156, OD 1.0, H.147, SS			
90-120036-12 REV C						

## Diagrams ID 4-01

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
47	5	12-210133-01	SCREW, SELF-SEALNG,6-32X1/4,PN HD, PHIL.,SS,BL			
48	1	10-010044-01	GASKET, GATOR BOX, MS-880			
49	5	12-200013-01	SCREW, 2-56 X 1/4", PH MACH.			
50	1	12-210064-01	SCREW, 2-56 X 1/4, FH PHIL.			
51	1	12-000310-01	SCREW, M2.5 x 8mm, FH, PHIL., SS			
52	3	12-200015-01	SCREW, 4-40 X 5/16TH", PAN HEAD, PHIL., S/S			
53	3	12-200017-01	SCREW, 6-32 X 5/16", PHILIPS, PH., S/S			
54	2	12-210147-01	NUT, 2-56,HEX,SS			
55	4	12-210036-01	SCREW, 6-32 X 7/16, PAN HD MS, BLK OXD WAX, BIN			
56	6	12-200015-02	SCREW, 4-40 X 5/16", PHIL., PH, BLK OXIDE, SS			
57	4	12-210025-01	SCREW, 4-40 X 3/16", PN HD, PHIL, SS, W/NYLON			
58	AR	12-020032-01	ADHESIVE, LOCTITE 392			
59	AR	12-010006-01	PAINT, FLAT WHITE			
60	1	12-200110-01	SCREW, CAP SCREW, 2-56 X 3/8", SOC. CAP SCREW			
61	2	12-200068-01	SCREW, 4-40X1/4", FH PHIL, STAINLESS STEEL			
62	4	12-210156-01	SCREW, CAPTIVE, 6-32 X .33 LG			
63	2	12-000239-01	SCREW, JACK, 3/16 x 1/4, 4-40, BIN			
64	1	12-000309-01	MOUNT, MICRO WIRE w/ADHESIVE, FR NYLON			
65	1	10-030009-04	PAD, THERMAL, TRANSFER, MS-880	-		
66	1	10-010045-01	INSULATOR, TAPE, DIE CUT, TEFLON, MS-880			
67	3	12-210158-01	WASHER, SHOULDER, NYLON, #4			
68	1	12-220006-01	SPACER, PERM-O-PAD			
69	AR	12-010007-01	ACTIVATOR, LOCTITE 7380			
70	2	12-000259-01	WASHER, #4, SPLIT LOCK, SS			
71	3	12-200012-01	WASHER, #2, LOCK, SPLIT			
90-120036-12 REV C						

## Diagrams ID 4-01

ITM	QTY	ID	DESCRIPTION	PACKAGE	REF. DESIGNATORS	NOTES
72	AR	12-020006-01	THREADLOCK, SURFACE CURING			
73	I	12-000129-01	SPRING, OD.312 X 1", RATE .97lb/in			
74	15	12-200006-01	SCREW, 4-40 X 1/4", PHIL PH MACH			
75	I	10-000021-02	BAFFLE, MS-880			
76	I	12-000156-01	WASHER, FLAT, SS, .188 ID x .25 OD x .016 THK			
77	AR	12-020019-01	ADHESIVE, LOCTITE, TAK PAK 444, 70 ML BOTTLE			
78	I	12-000311-01	MOUNT, CABLE CLAMP, ALUMINUM			
79	AR	12-000221-01	EPOXY, POTTING COMPOUND,LOCTITE E-60NC			



**Enclosure****Manuals**

Supplement Id	Description
6-01	Quick Start Guide
6-02	Safety Instructions (Manual)

## Manuals ID 6-01

**Step 1 — Connect Reader to Host and Install ESP**

Once your reader is connected to a host computer with Windows™ operating system (98 or above), you can use **ESP** (Easy Setup Program) for configuration and control.\*

If downloading from your "Microscan Tools" CD:

1. Insert your "Microscan Tools" CD in your computer's CD drive.
2. Click **ESP Software** from the main menu.
3. Launch **Setup.exe** under **ESP** and follow the prompts.

If downloading from the web:

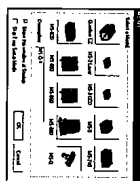
1. Go to <http://www.microscan.com/downloadcenter>
2. Create a new "myMicroscan" member account or, if you are already a member, enter your user name and password.
3. Click the **Download Software** link and extract the latest version of **ESP** to a directory of your choice. *Note: where your ESP.exe file is stored on your hard drive.*
4. At the end of the install process, the following icon should appear on your desktop:
5. Click the **ESP** icon to start the program.

**Step 2 — Select Reader Model in ESP**

When you start **ESP**, the menu shown at left will appear:

1. Select your reader from the menu and click **OK**.

**Hint:** If you do not want to make this selection every time you load **ESP**, uncheck "Show this window at Startup".



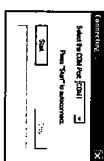
2. Click **Yes** when you see the dialog shown at right:



**Note:** To select another model later, use the **Switch Model** icon and choose from the list or choose **New Model** to return to the model menu shown above.

**Step 3 — Select Com Port and Connect**

1. In the **Connecting...** dialog, if your communications port is not the default **COM1**, use the pull down arrow to change your communications port.



2. Click the **Start** button.

When connected, the reader's settings will be loaded into **ESP** and the **CONNECTED** message will appear in a green box in the status bar at the bottom right of the screen.

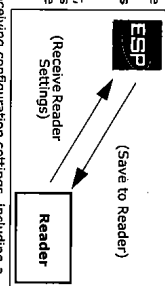
3. If the connection fails, enable a different **Com Port**, check connections, and try again.

**Step 4 — Receive Reader Settings**

To receive the reader's current configuration settings in **ESP**, click the **App Mode** button on the upper left of the **ESP** setup screen and then right click anywhere in the configuration window. Select **Receive Reader Settings** from the dropdown menu.

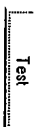
When you select **Receive Reader Settings**, your reader, scanner, or imager sends its current settings to **ESP**. This is useful when you want to compare the settings that are in the reader's memory with those in **ESP**.

This menu gives you several options for sending and receiving configuration settings, including a command in the **Advanced Options** sub-menu that lets you send the current screen's settings to the reader (**Send Current View**) or to send just one configuration setting at a time (**Send Current Command**).

**Step 5 — Position Reader and Test for Read Rate**

**Code 39** is the default symbology enabled. If you are uncertain as to your symbology type, enable all symbologies.\*

1. Set up a sample symbol at the distance you will be using in your application. You can find test symbols packaged with your Microscan Tools CD.
2. Avoid bright light or IR light from other sources including other readers.
3. Pitch the symbol or reader at a minimum of  $\pm 15^\circ$  to avoid specular reflection (the return of direct, non-diffused light).
4. After you install and start **ESP**, it will open in its setup mode. Click the **Test** button to begin the read rate test.



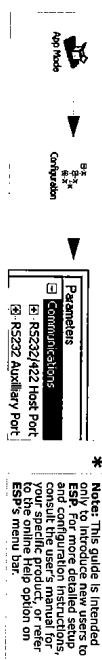
**Note:** Once you become more familiar with **ESP**, you may also want to use the read rate test in **Utilities** mode.

**Step 6 — Configure Reader and Save Settings**

Your reader can be configured in three ways using **ESP**:

- Choosing items from dropdown menus in the tree controls.
- Sending commands in **Terminal** mode.
- Interacting directly with the graphic interfaces.

To configure your reader in **ESP**, click the **App Mode** button. Once you are in **App Mode**, click the **Configuration** button and then use the tree controls, the **Terminal** window, and the available graphic interfaces to set and save desired reader parameters.



\* **Note:** This guide is intended to help you understand the **ESP** interface. For more detailed instructions, consult the user's manual for your reader or visit the Microscan website for the online Help option on **ESP**'s menu bar.

## Manuals ID 6-02

A 4,1

## Warning and Caution Summary

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
  - Increase the separation between the equipment and receiver
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
  - Consult the dealer or an experienced radio/TV technician for help
- For connection to a UL listed direct plug-in power unit marked Class II and rated 10 to 28 VDC at 6 watts, or greater if using electrical accessories.
- European models must use a similarly rated Class I or Class II power supply that is certified to comply with standard for safety EN 60950.

**WARNING**

*Use of controls, adjustments, or performance of procedures other than those specified herein may result in hazardous laser light radiation exposure.*

**WARNING**

*There are no user serviceable parts in the scanner. Opening the scanner voids the Microscan Systems warranty and could expose the user to laser diode power of up to 7 mW.*

**WARNING**

*The laser beam can be harmful to eyesight. Avoid eye contact with the laser beam. Never point the beam at other people, or in a direction where people may be passing.*

**Enclosure****Miscellaneous**

Supplement Id	Description
7-01	Label
7-05	Laser Markings

Misc ID 7-01



Misc ID 7-05



## **Enclosure**

## **Test Record**

Description
Test Record 1
Data Sheets

**Test Record No. 1**

The manufacturer submitted representative production sample(s) of MS-890.

The following tests were conducted:

Test	Testing Location/Comments
End Product Reference Page	
General Guidelines	
Input: Single-Phase (1.6.2)	
Durability of Marking (1.7.13)	
Loading (4.2.10)	
Heating (4.5.1, 1.4.12, 1.4.13)	
Locked-Rotor Overload for DC Motors in Secondary Circuits (Annex B.7)	

Test results are valid only for the tested equipment. These tests are considered representative of the products covered by this Test Report. The test methods and results of the above tests have been reviewed and found to be in accordance with the requirements in the Standard(s) referenced at the beginning of this Test Report.