

SWIPE READERS WITH SHIFT-OUT INTELLIHEAD TECHNICAL REFERENCE MANUAL

Part Number 99875306-5

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MAGTEK[®]
REGISTERED TO ISO 9001:2008
1710 Apollo Court
Seal Beach, CA 90740
Phone: (562) 546-6400
FAX: (562) 546-6301
Technical Support: (651) 415-6800
www.magtek.com

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REVISIONS

Rev Number	Date	Notes
1	17 May 04	Initial Release
2	14 Sep 05	Added new models 21040126, 21040129, 21044007, 21046002
3	30 Aug 06	Added "Transition Revision" column to identify when 3V ASIC was incorporated; updated all drawings to current release; added 21040149, 21045091 and 21047019
4	10 Oct 09	Updated drawings and Limited Warranty & Agency Approvals.
5	21 Oct 10	Add clarifications for 3V and 5V models

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FCC WARNING STATEMENT

This equipment has been tested and was found to comply with the limits for a Class B digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation.

FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CANADIAN DOC STATEMENT

This digital apparatus does not exceed the Class B limits for radio noise from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérisé de la classe B est conforme à la norme NMB-003 du Canada.

CE STANDARDS

Testing for compliance with CE requirements was performed by an independent laboratory. The unit under test was found compliant with standards established for Class B devices.

UL/CSA

This product is recognized per Underwriter Laboratories and Canadian Underwriter Laboratories 1950.

RoHS STATEMENT


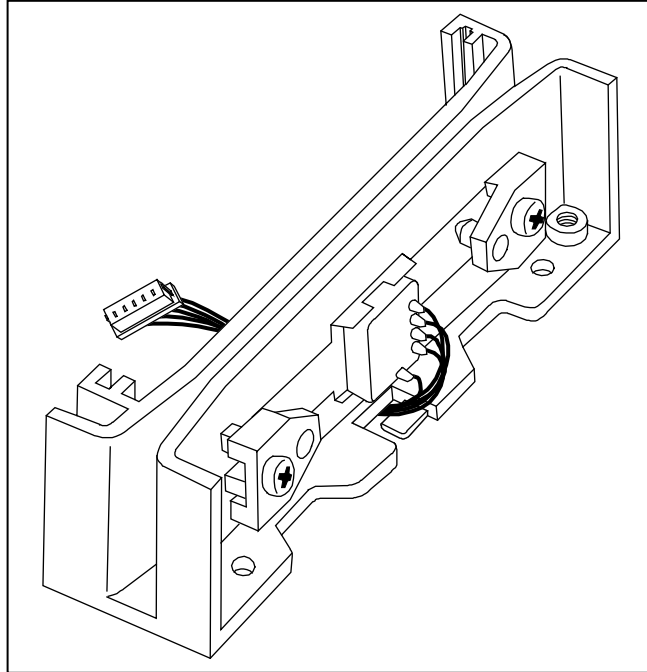
When ordered as RoHS compliant, this product meets the Electrical and Electronic Equipment (EEE) Reduction of Hazardous Substances (RoHS) European Directive 2002/95/EC. The marking is clearly recognizable, either as written words like "Pb-free", "lead-free", or as another clear symbol (.

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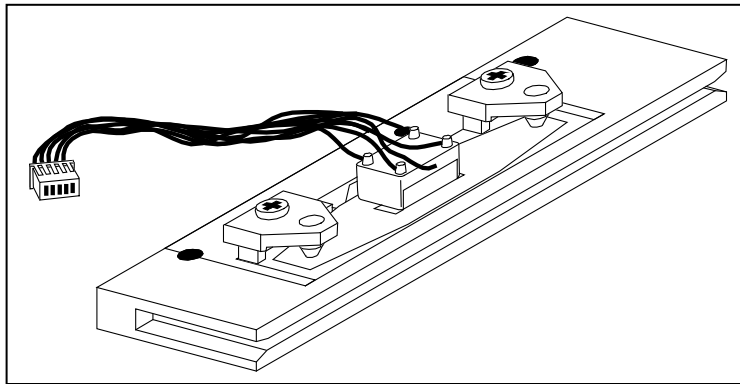
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A. 90 Millimeter



B. Slim Profile

Figure 1-1. Swipe Readers with Shift-Out IntelliHead

SECTION 1. FEATURES AND SPECIFICATIONS

The Swipe Readers presented in this manual are designed for reading capabilities for use in retail, access control, time and attendance, and other applications.

The Reader chassis provide an industry standard mechanical footprint, along with magstripe read capabilities, which comply with ISO 7810 and AAMVA standards. The Shift-Out IntelliHead™ interface provides a next generation electronics interface, which simplifies the process of collecting data bits as the card is swiped.

- Low power and “sleep mode” capabilities, which make these products ideal for use in hand-held battery-powered devices
- Low voltage operation. (Models are available in 5V (2.8 VDC - 5.5 VDC) or 3V (2.7 VDC – 3.6 VDC) versions)
- Automatic detection of card swipe and real-time data collection
- Shift-Out IntelliHead data interface. (See Reference Documents for more information.)

MODELS

The models currently offered are as follows:

Part Number	Transition Revision*	Description	Tracks	Cable Length	Drawing In
21040126	B	3V 100mm	1, 2, 3	1800mm (6 ft)	Appendix A
21040129	B	3V 100mm	1, 2, 3	127mm (5 in)	Appendix B
21040149	N/A	5V 100mm	1, 2, 3	127mm (5 in)	Appendix B
21044007	B	3V 43mm	1, 2, 3	90mm (3.5 in)	Appendix C
21045084	D	3V 90mm	1, 2, 3	80mm (3.1 in)	Appendix D
21045091	N/A	5V 90mm	1, 2, 3	80mm (3.1 in)	Appendix E
21046002	B	3V 60mm Slim Profile	1, 2, 3	125mm (4.9 in)	Appendix F
21047008	C	3V 90mm Slim Profile	1, 2, 3	125mm (4.9 in)	Appendix G
21047019	N/A	5V 90mm Slim Profile	1, 2, 3	125mm (4.9 in)	Appendix H

* The “Transition Revision” represents the first Revision for which the “3V” Delta ASIC (21006540/41) was used instead of the older “5V” Delta ASIC. The “5V” Delta ASIC (21006529/39 or 21006536/37) is detailed in 99875336 or 99875259. N/A indicates that this part number was introduced with a 5V part.

SPECIFICATIONS

STANDARDS	
Flammability	Meets UL94V-0
Speed	Card speed through the unit may vary from: 3 to 60 in/s (7.6 to 152.4 cm/s)
ELECTRICAL	
For electrical specifications, see REFERENCE DOCUMENTS section	
MECHANICAL	
Dimensions	See appendix relative to product
Connectors	See appendix relative to product
Life	1,000,000 passes
ENVIRONMENTAL	
Temperature	
Operating	-40 °C to +70 °C (-40 °F to +158 °F)
Storage	-40 °C to +70 °C (-40 °F to +158 °F)
Humidity**	
Operating	10% to 90% noncondensing
Storage	10% to 90% noncondensing
Altitude	
Operating	0-10,000 ft. (0-3048m)
Storage	0-50,000 ft. (0-15,240m)

REFERENCE DOCUMENTS

For 3V models:

Triple Track 3V ASIC With Shift-Out, Specifications, P/N 99875337

For 5V models:

Triple Track 5V ASIC With Shift-Out, Specifications, P/N 99875336

Shift-Out IntelliHead, Magnetic Read Head with Embedded Triple Track ASIC, Specification, P/N 99875258

APPENDIX A. 3-TRACK 3V, 100MM, 6 FOOT CABLE

The following Drawing is provided in this section:

Part Number	Title
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21040126	90mm 3-track Shift-Out IntelliHead 3V 6 foot & 5 pin Molex connector
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Swipe Readers With Shift-Out IntelliHead

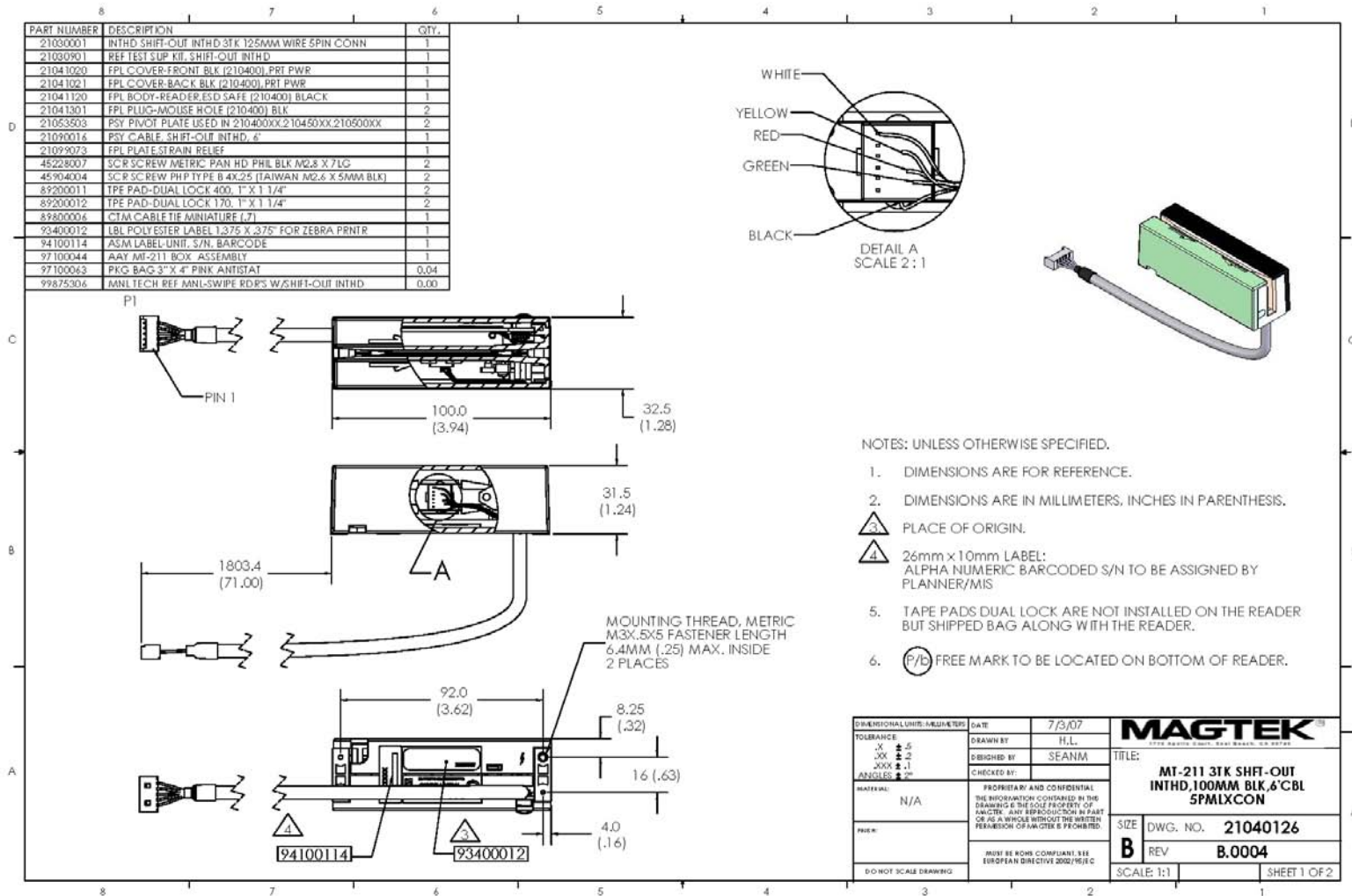


Figure A-1. 100mm 3-track Shift-Out IntelliHead 3V, 6-foot Cable

APPENDIX B. 3-TRACK 3V/5V 100MM, 6 INCH CABLE

The following Drawing is provided in this section:

Part Number	Title
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21040129	100mm 3-track Shift-Out IntelliHead 3V 6 inch & 5 pin Molex connector
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21040149	[Same as for 21040129]
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Swipe Readers With Shift-Out IntelliHead

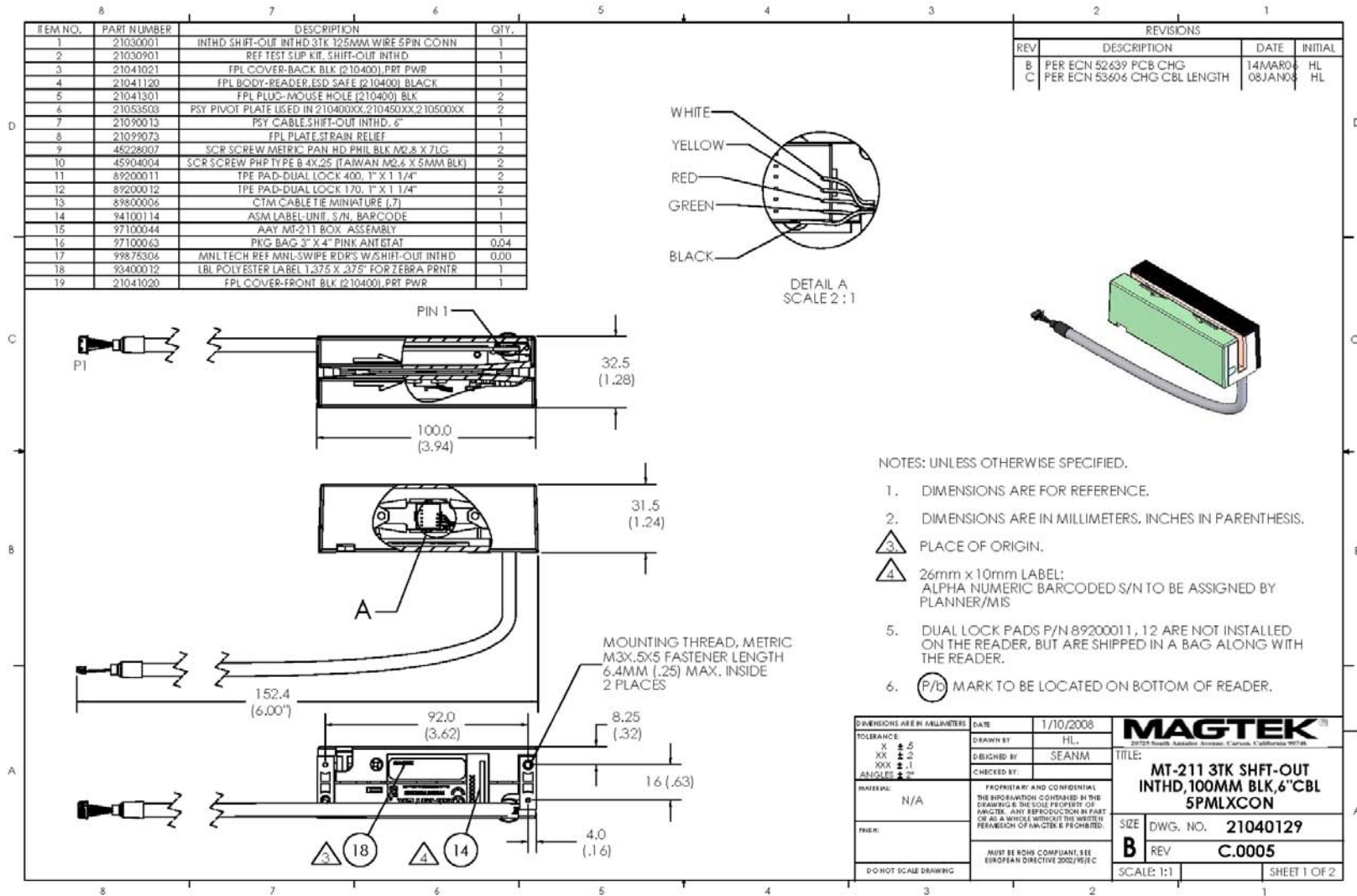


Figure B-1. 100mm 3-track Shift-Out IntelliHead 3V/5V, 6-inch cable

APPENDIX C. 3-TRACK 3V, 43MM, 125MM CABLE

The following Drawing is provided in this section:

Part Number	Title
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21044007	43mm 3-track Shift-Out IntelliHead 3V 125mm wire & 5 pin Molex connector
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Swipe Readers With Shift-Out IntelliHead

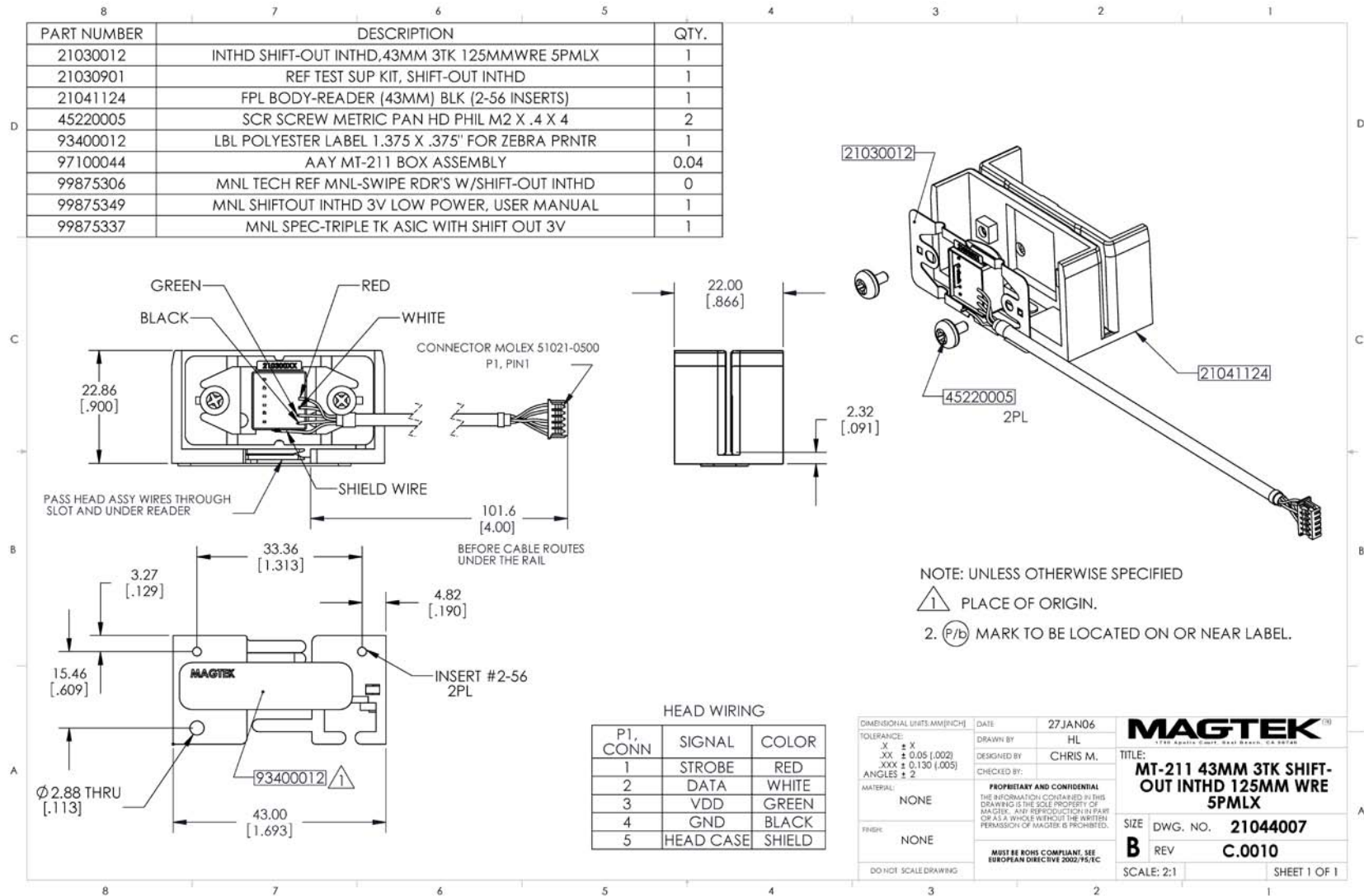


Figure C-1. 43mm 3-track Shift-Out IntelliHead 3V, 125mm wire & 5 pin Molex connector

APPENDIX D. 3-TRACK 3V, 90MM, 80MM CABLE

The following Drawing is provided in this section:

Part Number	Title
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21045084	90mm 3-track Shift-Out IntelliHead 3V 80mm wire & 5 pin Molex connector
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Swipe Readers With Shift-Out IntelliHead

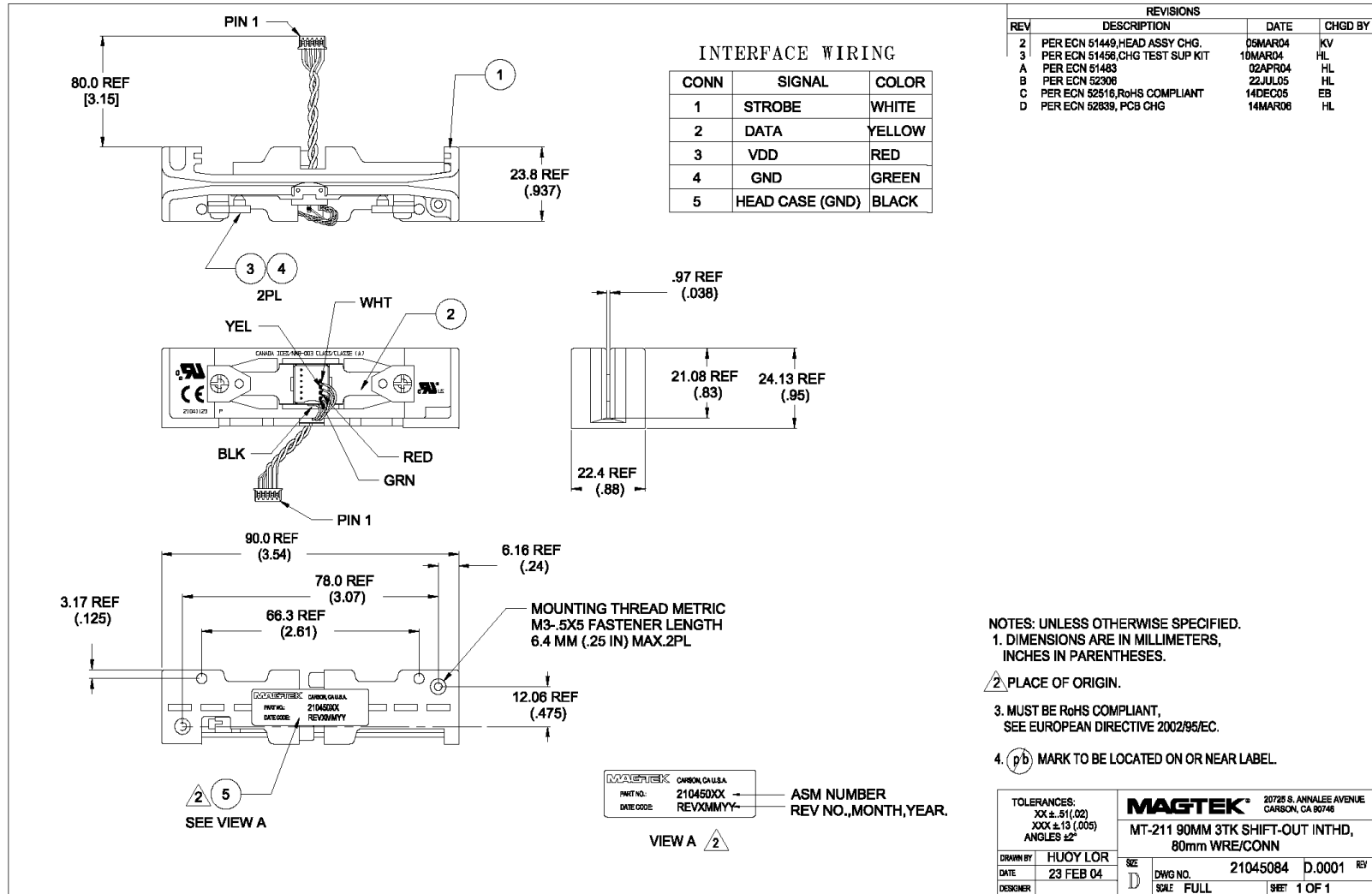


Figure D-1. 90mm 3-track Shift-Out IntelliHead 3V, 80mm wire & 5 pin Molex connector

APPENDIX E. 3-TRACK 5V, 90MM, 80MM CABLE

The following Drawing is provided in this section:

Part Number Title

21045091 90mm 3-track Shift-Out IntelliHead 5V 80mm wire & 5 pin Molex connector

Swipe Readers With Shift-Out IntelliHead

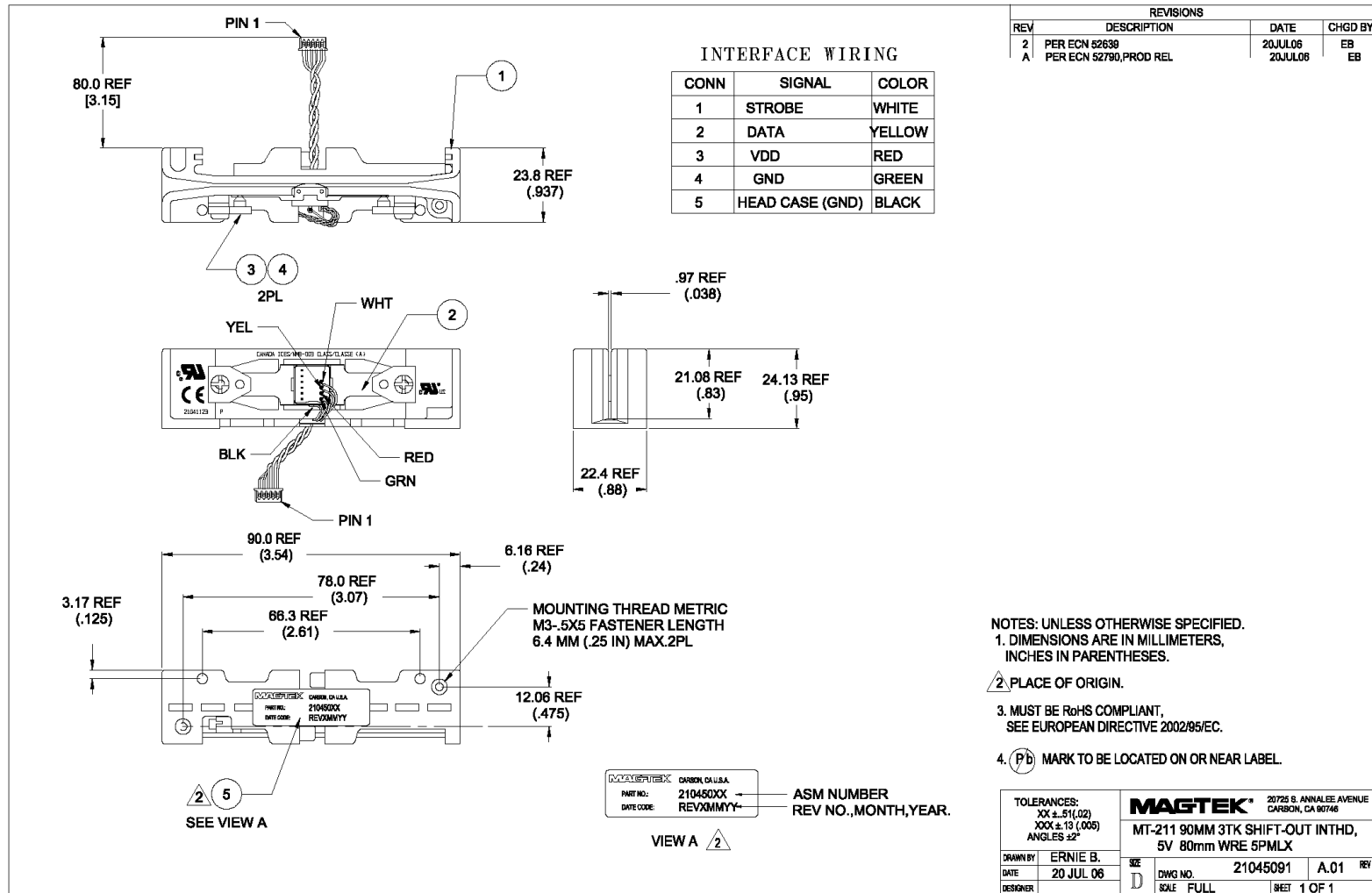


Figure E-1. 90mm 3-track Shift-Out IntelliHead 5V, 80mm wire & 5 pin Molex connector

APPENDIX F. 3-TRACK 3V, 60MM SLIM PROFILE, 125MM CABLE

The following Drawing is provided in this section:

Part Number	Title
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21046002	60mm Slim Profile, 3-track Shift-Out IntelliHead 3V 125mm wire & 5 pin Molex connector
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Swipe Readers With Shift-Out IntelliHead

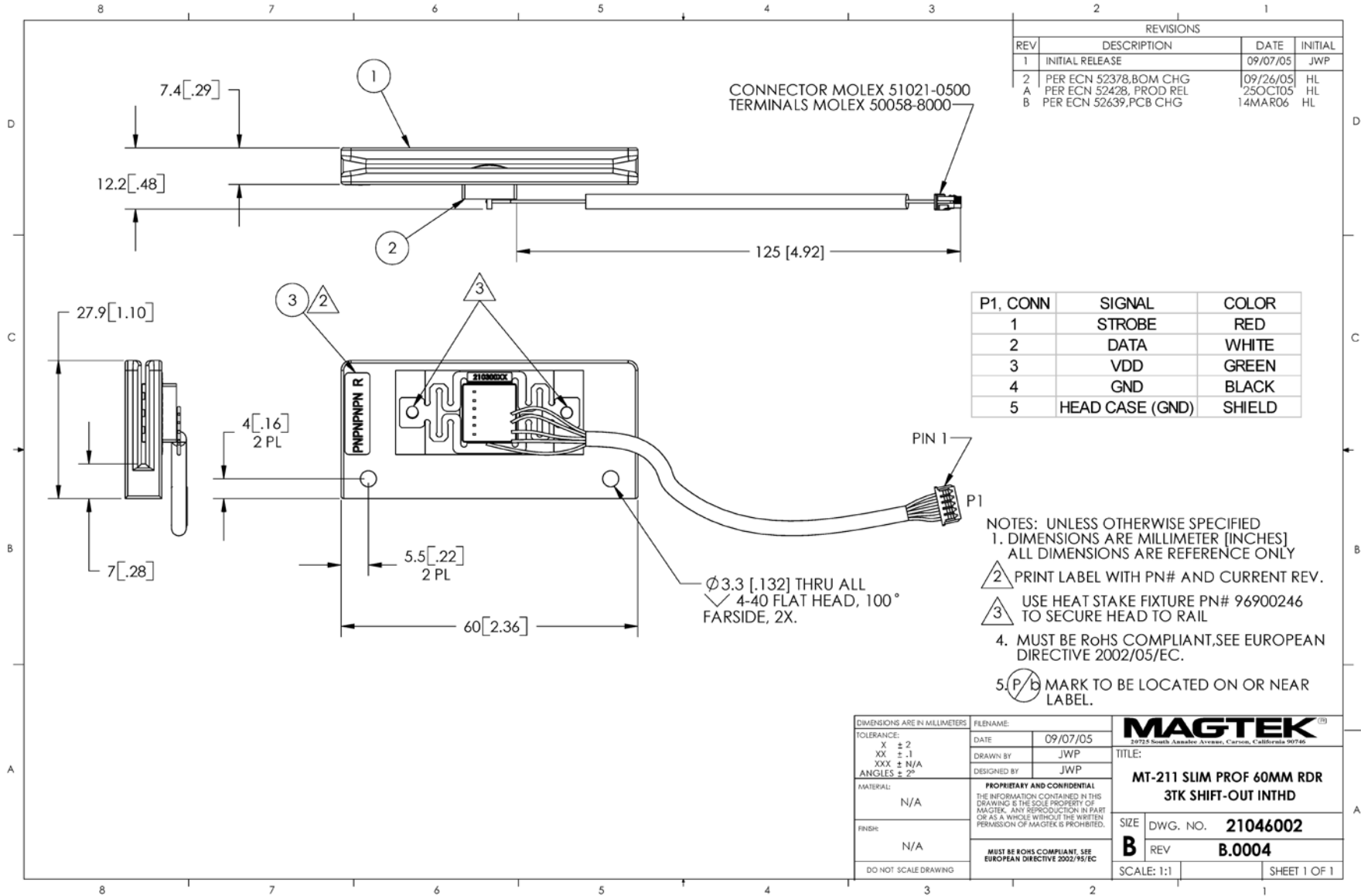


Figure F-1. 60mm Slim Profile 3-track Shift-Out IntelliHead 3V, 125mm wire & 5 pin Molex connector

APPENDIX G. 3-TRACK 3V, 90MM SLIM PROFILE, 125MM CABLE

The following Drawing is provided in this section:

Part Number	Title
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21047008	90mm Slim Profile, 3-track Shift-Out IntelliHead 3V 125mm wire & 5 pin Molex connector
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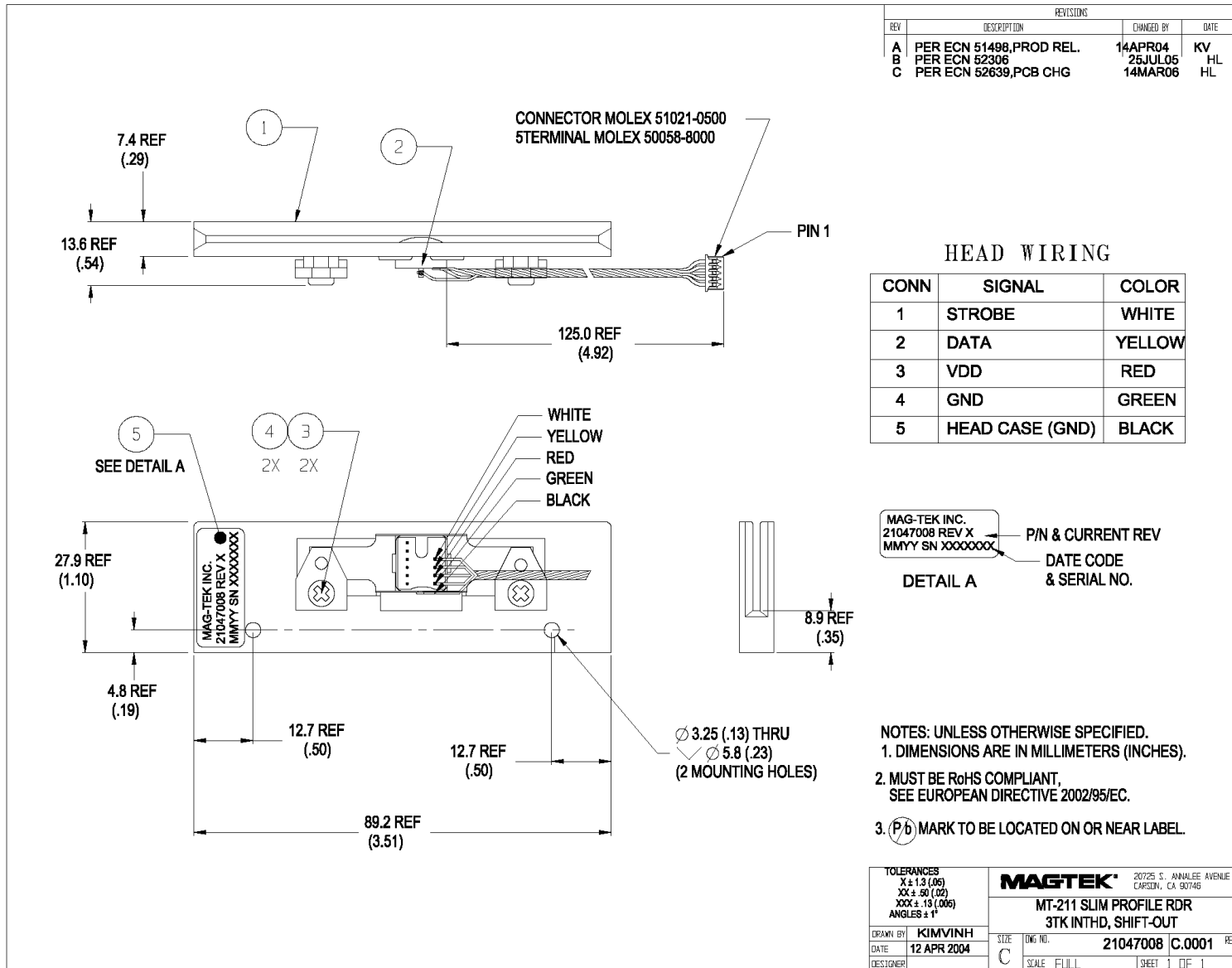


Figure G-1. 90mm Slim Profile 3-track Shift-Out IntelliHead 3V, 125mm wire & 5 pin Molex connector

APPENDIX H. 3-TRACK 5V, 90MM SLIM PROFILE, 125MM CABLE

The following Drawing is provided in this section:

Part Number	Title
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21047019	90mm Slim Profile, 3-track Shift-Out IntelliHead 5V 125mm wire & 5 pin Molex connector
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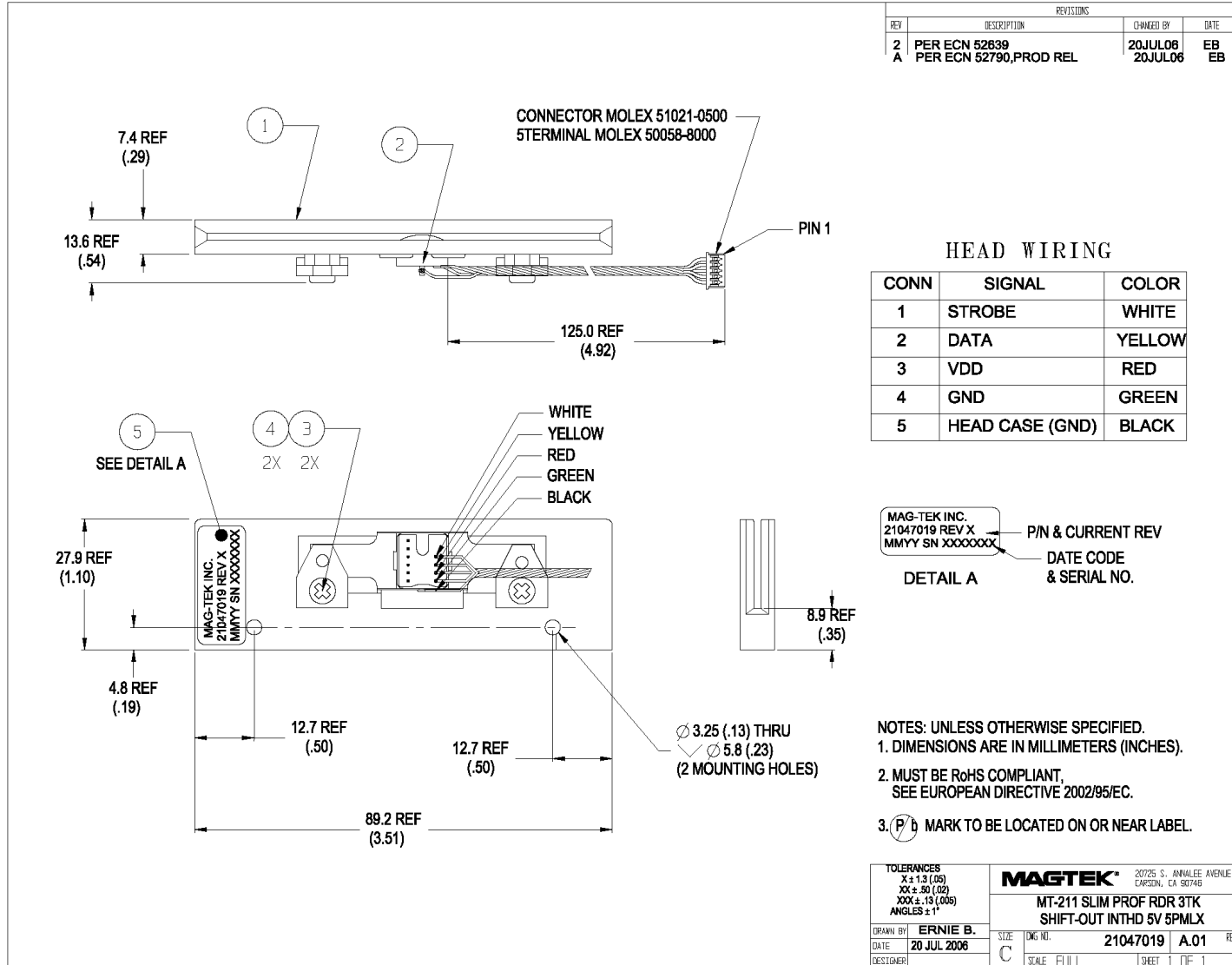


Figure H-1. 90mm Slim Profile 3-track Shift-Out IntelliHead 5V, 125mm wire & 5 pin Molex connector