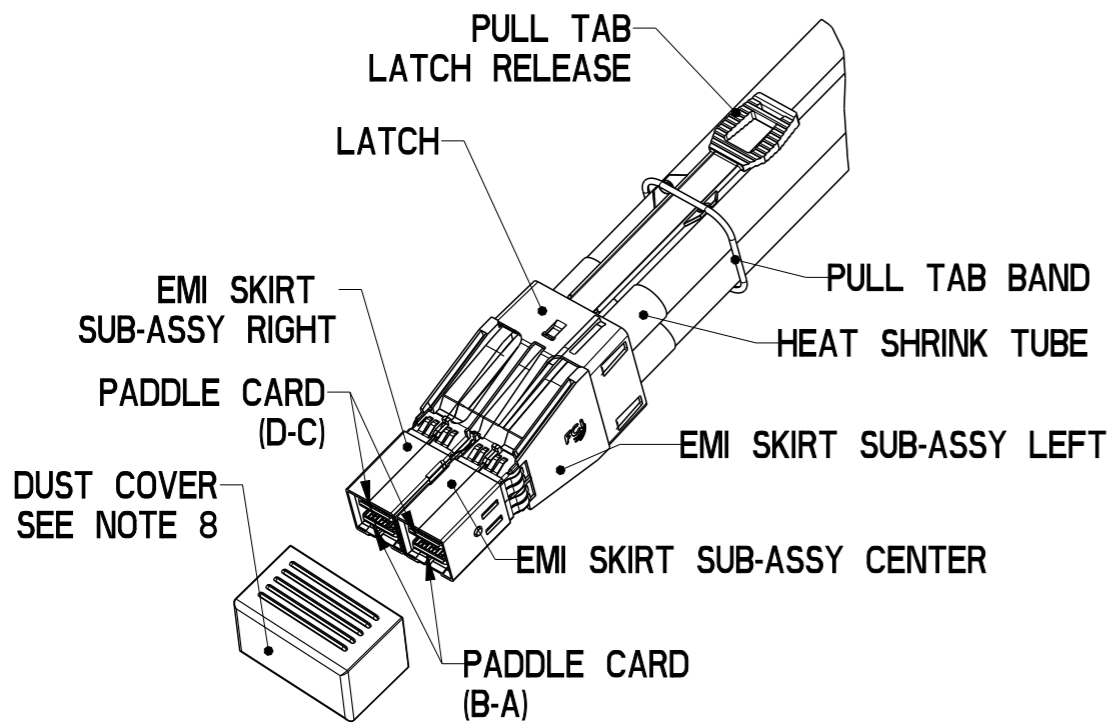
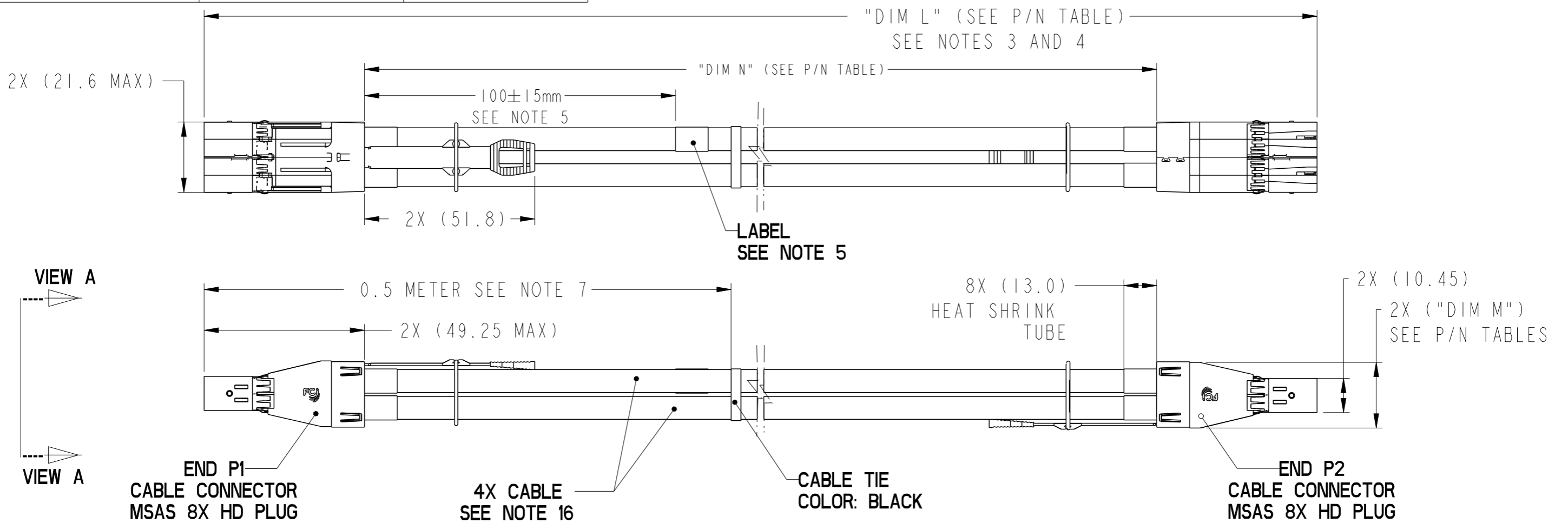


| PRODUCT NUMBER   | DESCRIPTION      | NOTES      |
|------------------|------------------|------------|
| 10117950-XXXXLF  | NON-HF           | SEE SHT. 3 |
| 10117950-XXXXHLF | HALOGEN FREE (H) | SEE SHT. 3 |



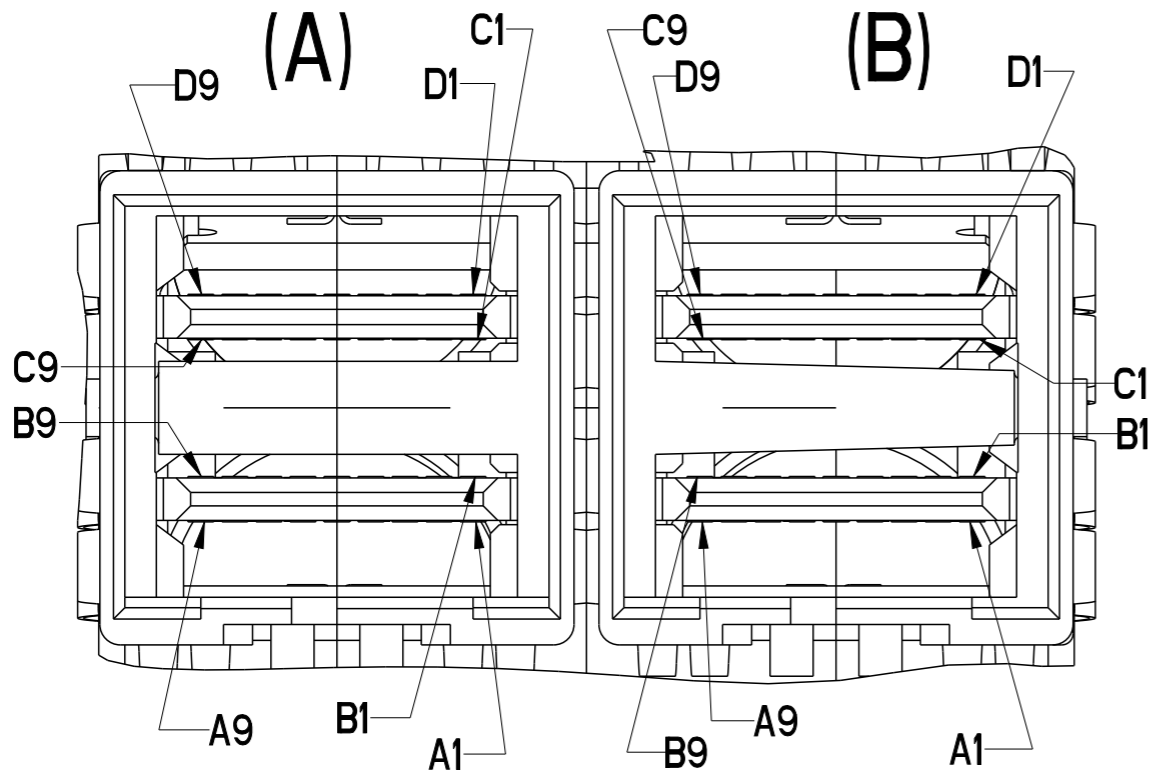
|  |                |   |                |     |                        |                 |              |     |
|--|----------------|---|----------------|-----|------------------------|-----------------|--------------|-----|
| dr   | Deborah Ingram | 2011/11/16  | projection     | mm  | size                   | A3              | scale        | 4:5 |
| eng  | Tom Feng       | 2016/06/15  |                |     | ecn no                 | ELX-N-24288-1   |              |     |
| chr  | -              | -   |                |     | rel level              | Released        |              |     |
| appr   | Michael Zhou   | 2016/09/22  | product family | C&A |                        |                 |              |     |
| <b>Amphenol FCI</b>                          |                | FINAL ASSEMBLY (PASSIVE)<br>MSAS HD 8X ASSEMBLY (12 Gbps) |                |     | dwg no<br>10117950     | rev<br><b>E</b> |              |     |
| <a href="http://www.fci.com">www.fci.com</a> |                | cat. no.  | -              |     | Product - Customer Drw |                 | sheet 1 of 4 |     |

|                  |                  |
|------------------|------------------|
| PRODUCT NUMBER   | DESCRIPTION      |
| 10117950-XXXXLF  | NON-HF           |
| 10117950-XXXXHLF | HALOGEN FREE (H) |

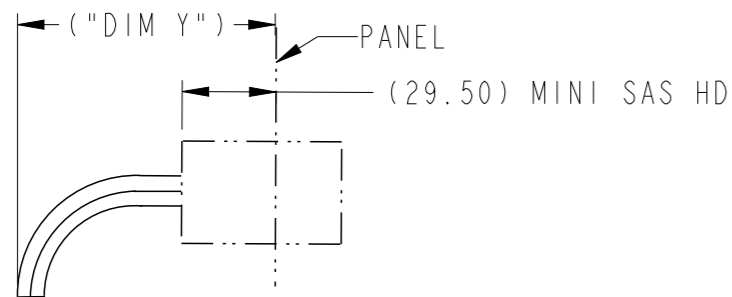
P1-(A) TO P2-(A)  
P1-(B) TO P2-(B)

WIRING LIST (SEE NOTE 6)

| END P1 / (A) (B) |          | END P2 / (A) (B) |          |
|------------------|----------|------------------|----------|
| POSITION         | SYMBOL   | POSITION         | SYMBOL   |
| D9               | GROUND   | B9               | GROUND   |
| D8               | Tx2-     | B8               | Rx2-     |
| D7               | Tx2+     | B7               | Rx2+     |
| D6               | GROUND   | B6               | GROUND   |
| D5               | Tx0-     | B5               | Rx0-     |
| D4               | Tx0+     | B4               | Rx0+     |
| D3               | GROUND   | B3               | GROUND   |
| D2               | Vman     | B2               | ModPrsL  |
| D1               | Vact     | B1               | Vact     |
| C1               | SCL      | A1               | Reserved |
| C2               | SDA      | A2               | IntL     |
| C3               | GROUND   | A3               | GROUND   |
| C4               | Tx1+     | A4               | Rx1+     |
| C5               | Tx1-     | A5               | Rx1-     |
| C6               | GROUND   | A6               | GROUND   |
| C7               | Tx3+     | A7               | Rx3+     |
| C8               | Tx3-     | A8               | Rx3-     |
| C9               | GROUND   | A9               | GROUND   |
| B9               | GROUND   | D9               | GROUND   |
| B8               | Rx2-     | D8               | Tx2-     |
| B7               | Rx2+     | D7               | Tx2+     |
| B6               | GROUND   | D6               | GROUND   |
| B5               | Rx0-     | D5               | Tx0-     |
| B4               | Rx0+     | D4               | Tx0+     |
| B3               | GROUND   | D3               | GROUND   |
| B2               | ModPrsL  | D2               | Vman     |
| B1               | Vact     | D1               | Vact     |
| A1               | Reserved | C1               | SCL      |
| A2               | IntL     | C2               | SDA      |
| A3               | GROUND   | C3               | GROUND   |
| A4               | Rx1+     | C4               | Tx1+     |
| A5               | Rx1-     | C5               | Tx1-     |
| A6               | GROUND   | C6               | GROUND   |
| A7               | Rx3+     | C7               | Tx3+     |
| A8               | Rx3-     | C8               | Tx3-     |
| A9               | GROUND   | C9               | GROUND   |



VIEW A (END P1)  
SCALE 6:1



BEND RADIUS  
TOP VIEW OF CONNECTOR

| MINI SAS HD<br>MINIMUM CABLE BEND TABLE |                 |                       |
|---|-----------------|-----------------------|
| CABLE                                   | ("DIM Y")<br>HF | ("DIM Y")<br>(NON-HF) |
| 24 AWG                                  | 101.2           | 101.2                 |
| 26 AWG                                  | 95              | 92.2                  |
| 28 AWG                                  | 88              | 85.2                  |
| 30 AWG                                  | 83.8            | 79.6                  |

LENGEND:

|  |                                      |
|--|--------------------------------------|
|  | HIGH-SPEED SERIAL DIFFERENTIAL PAIRS |
|  | SIGNAL RETURN                        |
|  | POWER AND MANAGEMENT INTERFACE       |

SHIELD-----SHIELD

|                                |                |            |                               |     |        |                 |           |                       |                        |   |
|--------------------------------|----------------|------------|-------------------------------|-----|--------|-----------------|-----------|-----------------------|------------------------|---|
| dr                             | Deborah Ingram | 2011/11/16 | projection                    | mm  | size   | A3              | scale     | 1:1                   |                        |   |
| eng                            | Tom Feng       | 2016/06/15 |                               | ← → | ecn no | ELX-N-24288-1   | rel level | Released              |                        |   |
| chr                            | -              | -          |                               |     |        |                 |           |                       |                        |   |
| appr                           | Michael Zhou   | 2016/09/22 | product family                | C&A |        |                 |           |                       |                        |   |
| Amphenol FCI                   |                |            | FINAL ASSEMBLY (PASSIVE)      |     |        | dwg no          |           | 10117950              | rev                    | E |
| www.fci.com                    |                |            | MSAS HD 8X ASSEMBLY (12 Gbps) |     |        | cat. no.        |           | -                     | Product - Customer Drw |   |
| Creo File - REV E - 2016-02-12 |                |            | PDS: Rev :E                   |     |        | STATUS:Released |           | Printed: Sep 22, 2016 |                        |   |

| △ PART NUMBER<br>(NON-HALOGEN FREE)<br>SEE NOTE 12 AND 16 | LENGTH "DIM L"<br>(Meters) | LENGTH "DIM N"<br>(Meters) | ("DIM M")<br>(mm) | AWG |
|---|----------------------------|----------------------------|-------------------|-----|
| 10117950-2004LF   | (0.43)                     | 0.33                       | 17.3              | 30  |
| 10117950-2005LF   | 0.5                        |                            | 17.3              | 30  |
| 10117950-2010LF   | 1.0                        |                            | 17.3              | 30  |
| 10117950-2015LF   | 1.5                        |                            | 17.3              | 30  |
| 10117950-2020LF   | 2.0                        |                            | 17.3              | 30  |
| 10117950-3010LF   | 1.0                        |                            | 17.3              | 28  |
| 10117950-3015LF   | 1.5                        |                            | 17.3              | 28  |
| 10117950-3020LF   | 2.0                        |                            | 17.3              | 28  |
| 10117950-3025LF   | 2.5                        |                            | 17.3              | 28  |
| 10117950-3030LF   | 3.0                        |                            | 17.3              | 28  |
| 10117950-4010LF   | 1.0                        |                            | 20.1              | 26  |
| 10117950-4015LF   | 1.5                        |                            | 20.1              | 26  |
| 10117950-4020LF   | 2.0                        |                            | 20.1              | 26  |
| 10117950-4025LF   | 2.5                        |                            | 20.1              | 26  |
| 10117950-4030LF   | 3.0                        |                            | 20.1              | 26  |
| 10117950-4035LF   | 3.5                        |                            | 20.1              | 26  |
| 10117950-4040LF   | 4.0                        |                            | 20.1              | 26  |
| 10117950-4045LF   | 4.5                        |                            | 20.1              | 26  |
| 10117950-4050LF   | 5.0                        |                            | 20.1              | 26  |
| 10117950-4055LF   | 5.5                        |                            | 20.1              | 26  |
| 10117950-4060LF   | 6.0                        |                            | 20.1              | 26  |
| 10117950-5010LF   | 1.0                        |                            | 20.1              | 24  |
| 10117950-5015LF   | 1.5                        |                            | 20.1              | 24  |
| 10117950-5020LF   | 2.0                        |                            | 20.1              | 24  |
| 10117950-5025LF   | 2.5                        |                            | 20.1              | 24  |
| 10117950-5030LF   | 3.0                        |                            | 20.1              | 24  |
| 10117950-5035LF   | 3.5                        |                            | 20.1              | 24  |
| 10117950-5040LF   | 4.0                        |                            | 20.1              | 24  |
| 10117950-5045LF   | 4.5                        |                            | 20.1              | 24  |
| 10117950-5050LF   | 5.0                        |                            | 20.1              | 24  |
| 10117950-5055LF   | 5.5                        |                            | 20.1              | 24  |
| 10117950-5060LF   | 6.0                        |                            | 20.1              | 24  |
| 10117950-5065LF   | 6.5                        |                            | 20.1              | 24  |
| 10117950-5070LF   | 7.0                        |                            | 20.1              | 24  |
| 10117950-5075LF   | 7.5                        |                            | 20.1              | 24  |
| 10117950-5080LF   | 8.0                        |                            | 20.1              | 24  |

| △ PART NUMBER<br>(HALOGEN FREE)<br>SEE NOTE 11 AND 16                            | LENGTH "DIM L"<br>(Meters) | LENGTH "DIM N"<br>(Meters) | ("DIM M")<br>(mm) | AWG |
|--|----------------------------|----------------------------|-------------------|-----|
| 10117950-2004HLF   | (0.43)                     | 0.33                       | 17.3              | 30  |
| 10117950-2005HLF   | 0.5                        |                            | 17.3              | 30  |
| 10117950-2010HLF   | 1.0                        |                            | 17.3              | 30  |
| 10117950-2015HLF   | 1.5                        |                            | 17.3              | 30  |
| 10117950-2020HLF   | 2.0                        |                            | 17.3              | 30  |
| 10117950-3010HLF   | 1.0                        |                            | 17.3              | 28  |
| 10117950-3015HLF   | 1.5                        |                            | 17.3              | 28  |
| 10117950-3020HLF   | 2.0                        |                            | 17.3              | 28  |
| 10117950-3025HLF   | 2.5                        |                            | 17.3              | 28  |
| 10117950-3030HLF   | 3.0                        |                            | 17.3              | 28  |
| 10117950-4010HLF   | 1.0                        |                            | 20.1              | 26  |
| 10117950-4015HLF   | 1.5                        |                            | 20.1              | 26  |
| 10117950-4020HLF   | 2.0                        |                            | 20.1              | 26  |
| 10117950-4025HLF   | 2.5                        |                            | 20.1              | 26  |
| 10117950-4030HLF   | 3.0                        |                            | 20.1              | 26  |
| 10117950-4035HLF   | 3.5                        |                            | 20.1              | 26  |
| 10117950-4040HLF   | 4.0                        |                            | 20.1              | 26  |
| 10117950-4045HLF   | 4.5                        |                            | 20.1              | 26  |
| 10117950-4050HLF   | 5.0                        |                            | 20.1              | 26  |
| 10117950-4055HLF   | 5.5                        |                            | 20.1              | 26  |
| 10117950-4060HLF   | 6.0                        |                            | 20.1              | 26  |
| 10117950-5010HLF   | 1.0                        |                            | 20.1              | 24  |
| 10117950-5015HLF   | 1.5                        |                            | 20.1              | 24  |
| 10117950-5020HLF   | 2.0                        |                            | 20.1              | 24  |
| 10117950-5025HLF   | 2.5                        |                            | 20.1              | 24  |
| 10117950-5030HLF   | 3.0                        |                            | 20.1              | 24  |
| 10117950-5035HLF   | 3.5                        |                            | 20.1              | 24  |
| 10117950-5040HLF   | 4.0                        |                            | 20.1              | 24  |
| 10117950-5045HLF   | 4.5                        |                            | 20.1              | 24  |
| 10117950-5050HLF   | 5.0                        |                            | 20.1              | 24  |
| 10117950-5055HLF   | 5.5                        |                            | 20.1              | 24  |
| 10117950-5060HLF   | 6.0                        |                            | 20.1              | 24  |
| 10117950-5065HLF   | 6.5                        |                            | 20.1              | 24  |
| 10117950-5070HLF   | 7.0                        |                            | 20.1              | 24  |
| 10117950-5075HLF   | 7.5                        |                            | 20.1              | 24  |
| 10117950-5080HLF   | 8.0                        |                            | 20.1              | 24  |
| 10117950-5090HLF<br>ONLY USE EXT MSHD INTERFACE<br>DON'T MEET SAS3.0 APPLICATION | 9.0                        |                            | 20.1              | 24  |
| 10117950-5100HLF<br>ONLY USE EXT MSHD INTERFACE<br>DON'T MEET SAS3.0 APPLICATION | 10.0                       |                            | 20.1              | 24  |

|                     |                |   |                        |            |                    |          |
|---------------------|----------------|---|------------------------|------------|--------------------|----------|
| dr                  | Deborah Ingram | 2011/11/16  | projection<br>         | size<br>A3 | scale<br>1:1       |          |
| eng                 | Tom Feng       | 2016/06/15  |                        |            |                    |          |
| chr                 | -              | -   |                        |            |                    |          |
| appr                | Michael Zhou   | 2016/09/22  | product family         | C&A        | rel level          | Released |
| <b>Amphenol FCI</b> |                | FINAL ASSEMBLY (PASSIVE)<br>MSAS HD 8X ASSEMBLY (12 Gbps) |                        |            | dwg no<br>10117950 | rev<br>E |
| www.fci.com         |                | cat. no.  | Product - Customer Drw |            | sheet 3 of 4       |          |

Amphenol FCI

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|                  |                  |
|------------------|------------------|
| PRODUCT NUMBER   | DESCRIPTION      |
| 10117950-XXXXLF  | NON-HF           |
| 10117950-XXXXHLF | HALOGEN FREE (H) |

NOTES:

- MATERIAL:  
 BACK SHELLS: ZINC ALLOY/ COPPER UNDERPLATE/ NICKEL OVERPLATE  
 PULL TAB: THERMOPLASTIC POLYMER  
 LATCH : STAINLESS STEEL  
 FERRULE: BRASS  
 EMI SKIRT: STAINLESS STEEL  
 LOCTITE  
 PADDLE CARD: PRINTED CIRCUIT SUBSTRATE  
 HEAT SHRINK TUBE: POLYOLEFIN
- THIS PRODUCT MEETS THE RESTRICTION OF HAZARDOUS SUBSTANCES IN ELECTRICAL AND ELECTRONIC EQUIPMENT (RoHS) DIRECTIVE (2011/65/EU)

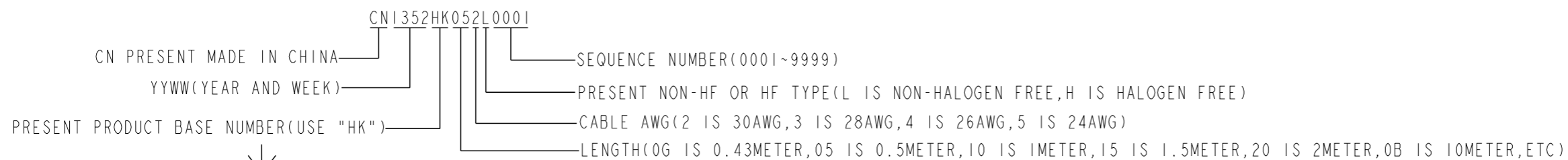
- THIS DIMENSION IS A FINISHED PRODUCT LENGTH.
- UNLESS OTHERWISE SPECIFIED ASSEMBLED LENGTH TOLERANCE IS TO BE:  
 "DIM L" < 1 METER = ±25mm  
 "DIM L" 1 METER TO 4 METERS = ± 2% OF "DIM L"  
 "DIM L" > 4 METERS = +0.00/-4% OF "DIM L"

5. LABEL DETAILS:

|        |                               |                |
|--------|-------------------------------|----------------|
| △<br>D | MANUFACTURER CODE OR NAME     | COUNTRY ORIGIN |
|        | FCI P/N                       |                |
|        | FCI CUSTOMER DRAWING REVISION |                |
|        | FCI SERIAL NUMBER             |                |
|        | BAR CODE OF SERIAL NUMBER     |                |

FONT SHALL BE CLEARLY VISIBLE AND BLACK IN COLOR.

SERIAL NUMBER IS ONLY USED FOR TRACKING PRODUCT,DETAIL IS AS BELOW :



CABLE LABEL EXAMPLE:

|                  |       |
|------------------|-------|
| FCI              | CHINA |
| 10117950-2005LF  |       |
| REV.E            |       |
| CN1352HK052L0001 |       |
|                  |       |

- ALL CABLE ASSEMBLIES 100% TESTED FOR CONTINUITY AS DEFINED IN WIRING LIST.
- PLACE A CABLE TIE EVERY 0.5 METER ON ALL ASSEMBLIES, UNLESS OTHERWISE SPECIFIED. IN CASE OF 0.5 METER CABLE ASSEMBLY, CABLE TIE IS TO BE APPLIED AT THE MIDWAY POINT.
- OTHER TESTING PERFORMED AS REQUIRED BY PRODUCT SPECIFICATION: GS-12-651.
- PACKAGING OF LEAD FREE PRODUCTS MEETS LABELING AND PACKAGING PER SPECIFICATION GS-14-920. PACKAGE CABLE ASSEMBLIES PER GS-14-1272. DUST COVERS ARE TO BE ASSEMBLED PRIOR TO PACKAGING. FCI PACKAGE TRACKING BAG LABEL IS ONLY FOR REFERENCE.

NOTES CONTINUED:

- A "△" SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION. THE CURRENT REVISION WILL BE SHOWN IN THE SYMBOL.
- "H" PRODUCT NUMBERS DESIGNATE THE USE OF HALOGEN FREE RAW CABLE.
- HALOGEN FREE RAW CABLE CAN BE USED AS A SUBSTITUTE ON NON-HF PRODUCT NUMBERS.
- CABLE ASSEMBLY CAN MEET SAS 3.0 SPECIFICATION.
- MATES TO SERIES: 10112626 or 10112627 Or 10112628
- EEPROM INFORMATION REFER TO FCI LATEST PRODUCT SPEC. GS-12-651.
- CABLE IS OPTIONAL,WHICH HAD BEEN QUALIFIED BY FCI AND MEET FCI PRODUCT SPEC. GS-12-651.

|              |                |                          |                |                        |           |               |       |     |
|--------------|----------------|--------------------------|----------------|------------------------|-----------|---------------|-------|-----|
| dr           | Deborah Ingram | 2011/11/16               | projection<br> | mm<br>←→               | size      | A3            | scale | 1:2 |
| eng          | Tom Feng       | 2016/06/15               |                |                        | ecn no    | ELX-N-24288-1 |       |     |
| chr          | -              | -                        |                |                        | rel level | Released      |       |     |
| appr         | Michael Zhou   | 2016/09/22               | product family | C&A                    |           |               |       |     |
| Amphenol FCI |                | FINAL ASSEMBLY (PASSIVE) |                |                        | dwg no    | 10117950      | rev   | E   |
| www.fci.com  |                | cat. no.                 | -              | Product - Customer Drw |           | sheet 4 of 4  |       |     |



## Стандарт Электрон Связь

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

### Наши контакты:

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**Электронная почта:** [sales@st-electron.ru](mailto:sales@st-electron.ru)

**Адрес:** 198099, Санкт-Петербург,  
Промышленная ул, дом № 19, литера Н,  
помещение 100-Н Офис 331