

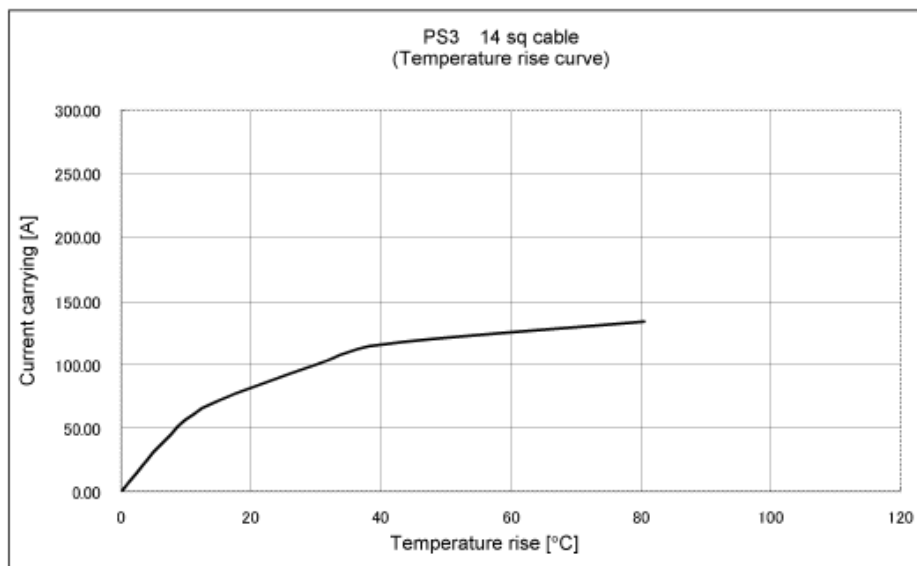
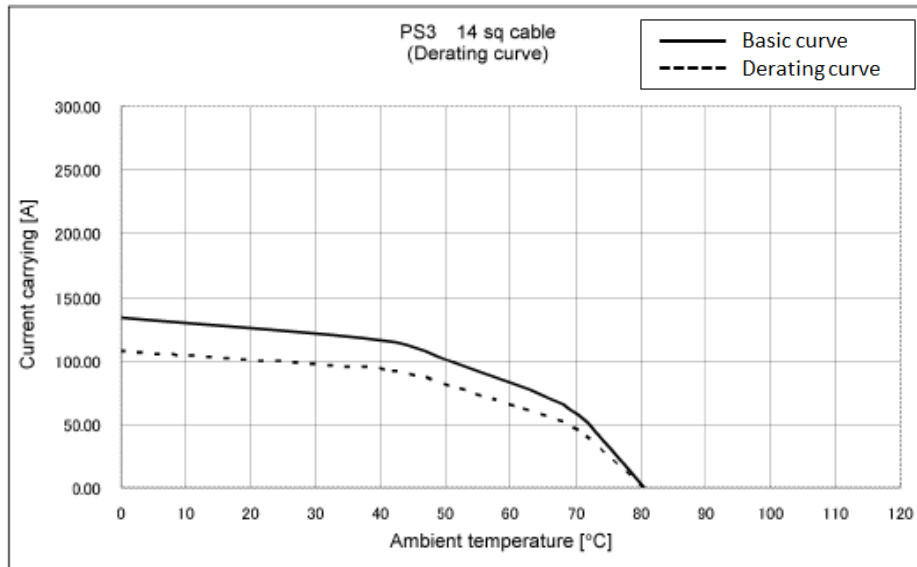
| APPLICABLE STANDARD   |  |  |   |  |                    |            |
|---|--|--|---|--|--------------------|------------|
| RATING  | Operating Temperature Range  | −40 °C TO +105 °C (Note 1)<br>(Included temperature rise caused by current-carrying) | Storage Temperature Range   | −40 °C TO +60 °C (Note 2)  |                    |            |
|   | Voltage  | Power: 1000 V<br>Signal: AC, DC 250 V  | Current   | Power: 150A<br>210A (Derating curve: 25°C)<br>(Appendix 1)<br>Signal: 1A<br>※The Rating Current for each applicable wire size can be found in table 3. |                    |            |
|   | Applicable Wire  | 14sq to 50sq<br>(AWG#5 to AWG#1/0)   |   |  |                    |            |
| SPECIFICATIONS  |  |  |   |  |                    |            |
| ITEM  |  | TEST METHOD  |   | REQUIREMENTS   | QT                 | AT         |
| CONSTRUCTION  |  |  |   |  |                    |            |
| General Examination   |  | Visually and by measuring instrument.  |   | According to drawing.  | X                  | X          |
| Marking   |  | Confirmed visually.  |   |  | X                  | X          |
| ELECTRICAL CHARACTERISTICS  |  |  |   |  |                    |            |
| Contact Resistance  | Power: DC 1 A<br>Signal: 100 mA (DC OR 1000Hz) MAX.  |  | Power: 0.3 mΩ MAX.<br>Signal: 60 mΩ MAX. (Note 3)<br>(Assurance test is only signal)  |  | X                  | X          |
| Insulation Resistance   | 250 V DC   |  | 5000 MΩ MIN.  |  | X                  | —          |
| Voltage Proof   | Power: 2000 V AC. for 1 min.<br>Signal: 650 V AC. for 1 min.   |  | No flashover or breakdown.<br>(Assurance test is only signal)   |  | X                  | X          |
| MECHANICAL CHARACTERISTICS  |  |  |   |  |                    |            |
| Mating and Unmating Forces  | Measured by applicable connector at a speed of 30 mm ± 3 mm/min.   |  | Mating force: 137.2 N MAX.  |  | X                  | —          |
|   |  |  | Unmating force: 137.2 N MAX.  |  | X                  | —          |
| Mechanical Operation  | 100 times insertions and extractions at a speed of 600 times/hour.<br>(GT8E of signal part: 30 times insertions and extractions)   |  | ① Contact resistance change: Power 0.5 mΩ MAX.<br>Signal 40 mΩ MAX. (Note 3)<br>② No damage, crack and looseness of parts.  |  | X                  | —          |
| Vibration   | Frequency: 10 to 55 Hz, single amplitude 0.75 mm, at 5 min/cycle, 10 cycles each in 3 axial directions. 30 cycles in total.  |  | ① No electrical discontinuity of 10 μs.<br>② No damage, crack and looseness of parts.   |  | X                  | —          |
| Shock   | 490 m/s <sup>2</sup> duration of pulse 11 ms for 3 times in 3 both axial directions.   |  |   |  | X                  | —          |
| ENVIRONMENTAL CHARACTERISTICS   |  |  |   |  |                    |            |
| Rapid Change of Temperature   | Temperature −40 → 105 °C<br>Time 30 → 30 min<br>Chamber transfer time is 2 to 3 min.<br>Conduct 5 cycles of above cycles (mated) and exposed in the room temperature for 1 to 2 hours. |  | ① Contact resistance change: Power 0.5 mΩ MAX.<br>Signal 40 mΩ MAX. (Note 3)<br>② Insulation resistance: 1000 MΩ MIN.<br>③ No damage, crack and looseness of parts. |  | X                  | —          |
| Humidity Life   | After exposure at temperature 40±2 °C, humidity 90 to 95 %, for 96 h (mated), exposed at room temperature for 1 to 2 hour.   |  | ① Contact resistance change: Power 0.5 mΩ MAX.<br>Signal 40 mΩ MAX. (Note 3)<br>② Insulation resistance: 1000 MΩ MIN.<br>③ No damage, crack and looseness of parts. |  | X                  | —          |
| Heat Resistance   | After exposure at temperature 105±2 °C, humidity for 96 h (mated), exposed at room temperature for 1 to 2 hour.  |  | ① Contact resistance change: Power 0.5 mΩ MAX.<br>Signal 40 mΩ MAX. (Note 3)<br>② Insulation resistance: 1000 MΩ MIN.<br>③ No damage, crack and looseness of parts. |  | X                  | —          |
| COUNT   | DESCRIPTION OF REVISIONS   |  | DESIGNED  |  | CHECKED            | DATE       |
| △   | 1  | DIS-E-00000869   | TA. TORIHARA  |  | AH. KODAMA         | 17. 04. 14 |
| REMARK<br>(Note 1) The operation temperature includes the temperature rise by current carrying.<br>(Note 2) Storage temperature range shows storage condition for unused products including packing materials. Follow the operating temperature range for storage condition after mounting.<br>(Note 3) Contact resistance of signal parts are the value that contains GT8E connector.<br><br>Unless otherwise specified, refer to IEC 60512. |  |  | APPROVED  | RI. TAKAYASU   | 15. 12. 244        |            |
|   |  |  | CHECKED   | NM. NISHIMATSU   | 15. 12. 244        |            |
|   |  |  | DESIGNED  | WR. YAMADA   | 15. 12. 222        |            |
|   |  |  | DRAWN   | WR. YAMADA   | 15. 12. 22         |            |
| Note QT: Qualification Test AT: Assurance Test X: Applicable Test   |  |  | DRAWING NO.   |  | ELC-129145-00-00   |            |
| HRS   | SPECIFICATION SHEET  |  | PART NO.  |  | PS3-2US/12S/16S-FA |            |
|   | HIROSE ELECTRIC CO., LTD.  |  | CODE NO   |  | CL236-1079-0-00    | △ 1/7      |

| ITEM   |   | TEST METHOD  | REQUIREMENTS       | QT | AT  |
|--|---|--|--------------------|----|-----|
| ENVIRONMENTAL CHARACTERISTICS                                  |   |  |                    |    |     |
| Cold Resistance  | After exposure at -40±3 °C, 96 h (mated) exposed at room temperatrur for 1 to 2 hour.   | ① Contact resistance change:Power 0.5 mΩ MAX.<br>Signal 40 mΩ MAX. (Note 3)<br>② Insulation resistance: 1000 MΩ MIN.<br>③ No damage, crack and looseness of parts. | X                  | —  |     |
| Corrosion Salt Mist  | After exposure in 35±2°C, 5±1% salt water spray for 48±4 h (mated), washed with water, dried at normal temperature and humidity for 24 hours. | No heavy corrosion that lose function.   | X                  | —  |     |
|  |   |  |                    |    |     |
|  |   |  |                    |    |     |
|  |   |  |                    |    |     |
|  |   |  |                    |    |     |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test |   | DRAWING NO   | ELC-129145-00-00   |    |     |
| HRS  | SPECIFICATION SHEET   | PART NO  | PS3-2US/12S/16S-FA |    |     |
|  | HIROSE ELECTRIC CO., LTD.   | CODE NO*   | CL236-1079-0-00    | △  | 2/7 |

Accompanying drawing

Appendix 1. Derating curve (reference)

i. 14 sq cable



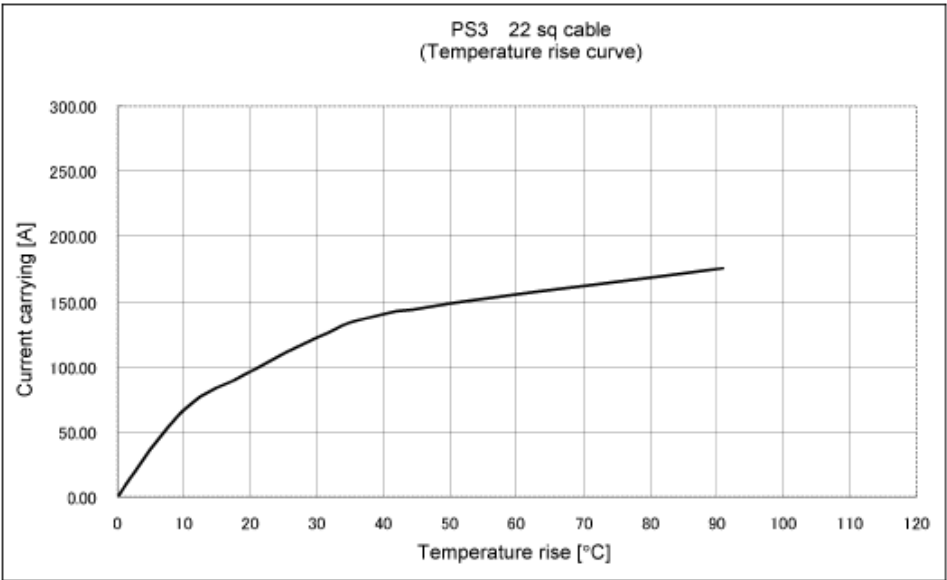
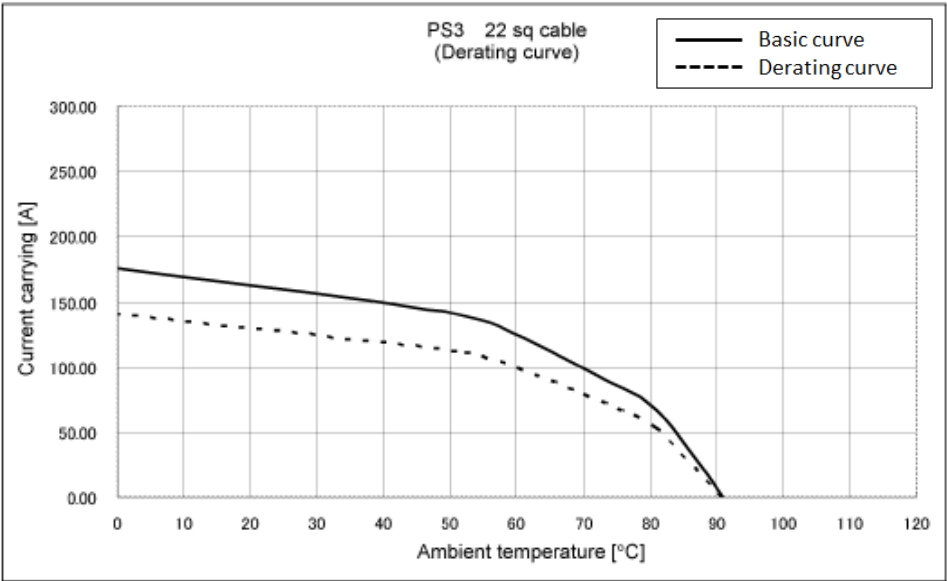
- Note 1 : Derating curve takes manufacturing tolerances into consideration as well as uncertainties in temperature measurement and the measuring set up and is derived from the base curve multiplied by 0.8 calculation.
- 2 : The value of rated current differs depending on the ambient temperature.  
It is recommended to use the product within the derating curve zone.
- 3 : Measurement method of derating curve is shown below.
- Test specimen : PS3-2US (female contact side connector, using the same contacts as the here handled PS3-2US/12S/16S-FA)  
PS3-2UP (male contact side connector)
  - Test cable spec : 14 mm<sup>2</sup> (AWG#5)
  - Test condition : Turn on electricity under the static state and measure.  
(Test report # TR0236E-20255)

|  |                           |            |                  |                    |     |
|--|---------------------------|------------|------------------|--------------------|-----|
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test |                           | DRAWING NO | ELC-129145-00-00 |                    |     |
|  | SPECIFICATION SHEET       |            | PART NO          | PS3-2US/12S/16S-FA |     |
|  | HIROSE ELECTRIC CO., LTD. |            | CODE NO*         | CL236-1079-0-00    | 3/7 |

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Appendix 1. Derating curve (reference)

ii. 22 sq cable



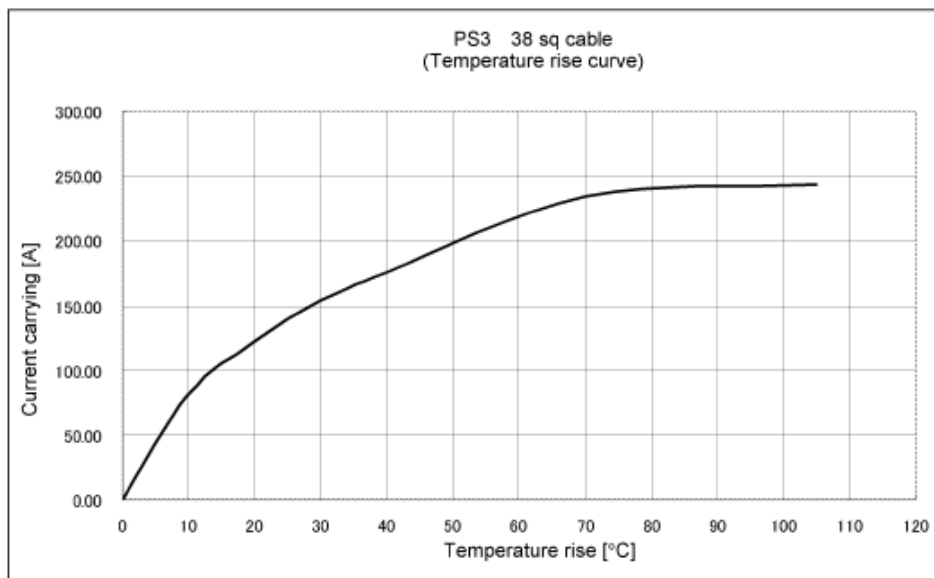
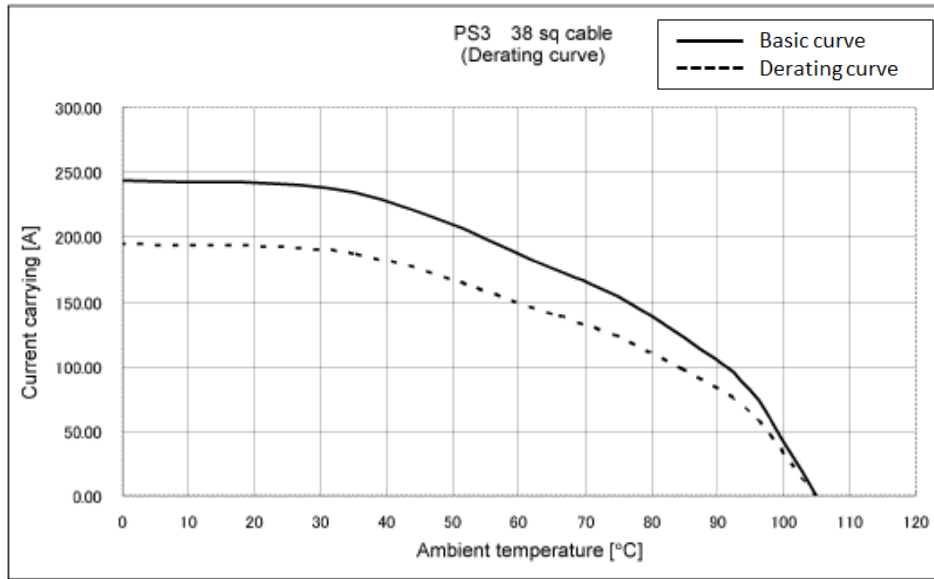
- Note 1 : Derating curve takes manufacturing tolerances into consideration as well as uncertainties in temperature measurement and the measuring set up and is derived from the base curve multiplied by 0.8 calculation.
- 2 : The value of rated current differs depending on the ambient temperature.  
It is recommended to use the product within the derating curve zone.
- 3 : Measurement method of derating curve is shown below.
- Test specimen : PS3-2US (female contact side connector, using the same contacts as the here handled PS3-2US/12S/16S-FA)  
PS3-2UP (male contact side connector)
  - Test cable spec : 22 mm<sup>2</sup> (AWG#3)
  - Test condition : Turn on electricity under the static state and measure.  
(Test report # TR0236E-20255)

|  |                           |            |                  |                    |     |
|--|---------------------------|------------|------------------|--------------------|-----|
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test |                           | DRAWING NO | ELC-129145-00-00 |                    |     |
|  | SPECIFICATION SHEET       |            | PART NO          | PS3-2US/12S/16S-FA |     |
|  | HIROSE ELECTRIC CO., LTD. |            | CODE NO*         | CL236-1079-0-00    | 4/7 |

Accompanying drawing

Appendix 1. Derating curve (reference)

iii. 38 sq cable



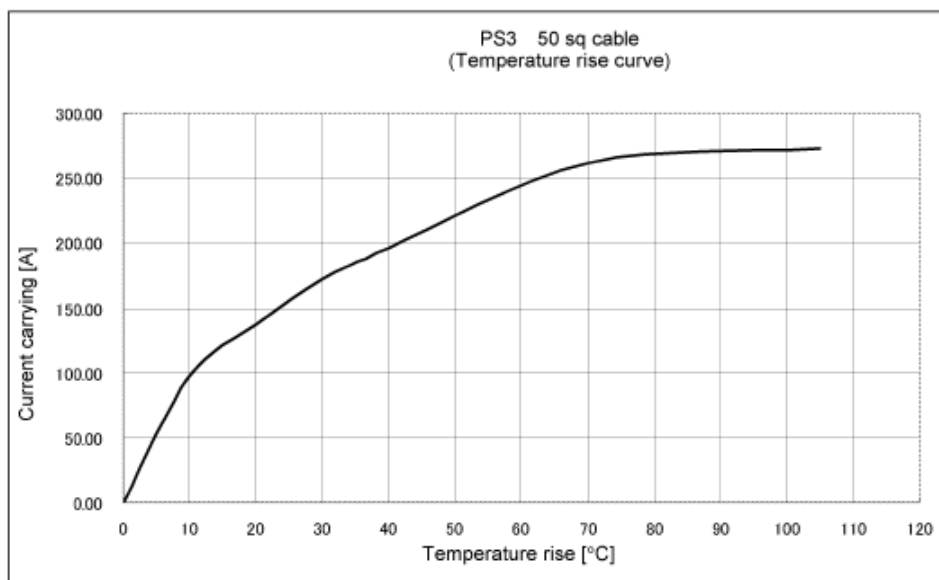
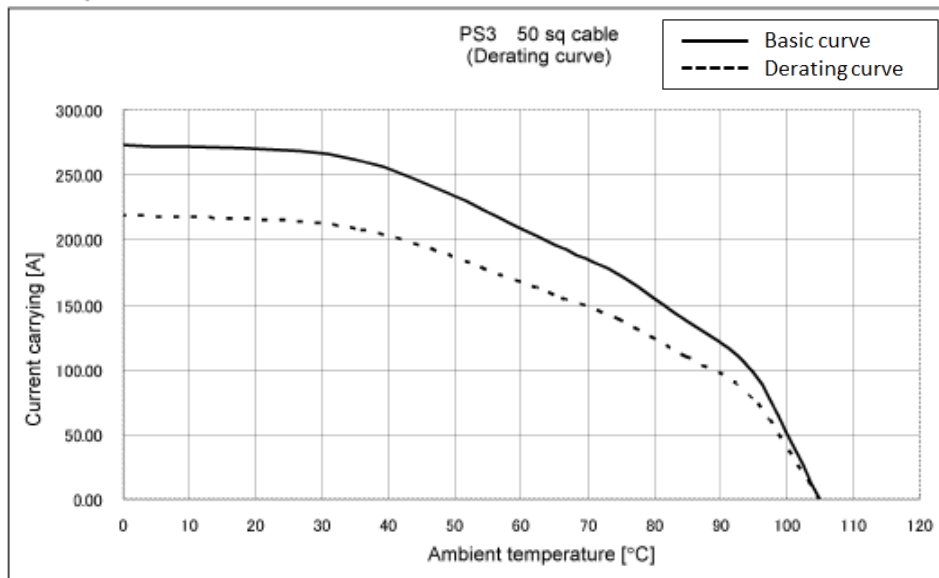
- Note 1 : Derating curve takes manufacturing tolerances into consideration as well as uncertainties in temperature measurement and the measuring set up and is derived from the base curve multiplied by 0.8 calculation.
- 2 : The value of rated current differs depending on the ambient temperature.  
It is recommended to use the product within the derating curve zone.
- 3 : Measurement method of derating curve is shown below.
- Test specimen : PS3-2US (female contact side connector, using the same contacts as the here handled PS3-2US/12S/16S-FA)  
PS3-2UP (male contact side connector)
  - Test cable spec : 38 mm<sup>2</sup> (AWG#1)
  - Test condition : Turn on electricity under the static state and measure.  
(Test report # TR0236E-20255)

|  |                           |            |                  |                    |     |
|--|---------------------------|------------|------------------|--------------------|-----|
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test |                           | DRAWING NO | ELC-129145-00-00 |                    |     |
|  | SPECIFICATION SHEET       |            | PART NO          | PS3-2US/12S/16S-FA |     |
|  | HIROSE ELECTRIC CO., LTD. |            | CODE NO*         | CL236-1079-0-00    | 5/7 |



Accompanying drawing

Appendix 1. Derating curve (reference)

iv. 50 sq cable



- Note 1 : Derating curve takes manufacturing tolerances into consideration as well as uncertainties in temperature measurement and the measuring set up and is derived from the base curve multiplied by 0.8 calculation.
- 2 : The value of rated current differs depending on the ambient temperature.  
It is recommended to use the product within the derating curve zone.
- 3 : Measurement method of derating curve is shown below.
- Test specimen : PS3-2US (female contact side connector, using the same contacts as the here handled PS3-2US/12S/16S-FA)  
PS3-2UP (male contact side connector)
  - Test cable spec : 50 mm<sup>2</sup> (AWG#1/0)
  - Test condition : Turn on electricity under the static state and measure.  
(Test report # TR0236E-20255)



|   |                           |            |                  |                    |   |
|---|---------------------------|------------|------------------|--------------------|---|
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test                      |                           | DRAWING NO | ELC-129145-00-00 |                    |   |
|  | SPECIFICATION SHEET       |            | PART NO          | PS3-2US/12S/16S-FA |   |
|   | HIROSE ELECTRIC CO., LTD. |            | CODE NO*         | CL236-1079-0-00    |  6/7 |

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Accompanying drawing

Table 3. List of the rated current for each applicable wire size.

| <div>COMPANY INTERN STANDARD</div> <div>Applicable wire</div> | Derataing curve<br>Ambient temperature 25°C<br>(Appendix 1) |
|---|---|
| 14mm <sup>2</sup> , AWG#5                                     | 100A  |
| 22mm <sup>2</sup> , AWG#3                                     | 125A  |
| 38mm <sup>2</sup> , AWG#1                                     | 190A  |
| 50mm <sup>2</sup> , AWG#1/0                                   | 210A  |

|   |                           |            |                  |                    |   |
|---|---------------------------|------------|------------------|--------------------|---|
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test                      |                           | DRAWING NO | ELC-129145-00-00 |                    |   |
|  | SPECIFICATION SHEET       |            | PART NO          | PS3-2US/12S/16S-FA |   |
|   | HIROSE ELECTRIC CO., LTD. |            | CODE NO*         | CL236-1079-0-00    |  7/7 |