

Trise vs. conductor size

| Number of cables | 1579 mA               |         |                  |         | Temperature rise (°C) |         |        |         |        |         |        |         |        |         |        |         |        |         |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
|------------------|-----------------------|---------|------------------|---------|-----------------------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|------|--|
|                  | Temperature rise (°C) |         |                  |         | 0.32                  |         | 0.32   |         | 0.4    |         | 0.4    |         | 0.51   |         | 0.51   |         | 0.57   |         | 0.57   |         | 0.65   |         | 0.65   |         | 0.81   |         | 0.81   |         | 1.02   |         | 1.02 |  |
|                  | SP1-1000 (18 AWG)     |         | SP1-400 (23 AWG) |         | 28 AWG                | 28 AWG  | 26 AWG | 26 AWG  | 24 AWG | 24 AWG  | 23 AWG | 23 AWG  | 22 AWG | 22 AWG  | 20 AWG | 20 AWG  | 18 AWG | 18 AWG  | 18 AWG | 18 AWG  | 18 AWG | 18 AWG  | 18 AWG | 18 AWG  | 18 AWG | 18 AWG  | 18 AWG | 18 AWG  | 18 AWG | 18 AWG  |      |  |
|                  | Air                   | Conduit | Air              | Conduit | Air                   | Conduit | Air    | Conduit | Air    | Conduit | Air    | Conduit | Air    | Conduit | Air    | Conduit | Air    | Conduit | Air    | Conduit | Air    | Conduit | Air    | Conduit | Air    | Conduit | Air    | Conduit | Air    | Conduit |      |  |
| 1                | 0.7                   | 1.1     | 2.3              | 3.4     | 2.5                   | 3.4     | 4.7    | 7.0     | 2.9    | 4.3     | 2.3    | 3.4     | 1.8    | 2.6     | 1.1    | 1.7     | 0.7    | 1.1     |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 7                | 2.0                   | 2.9     | 6.4              | 9.4     | 7.7                   | 9.4     | 13.1   | 19.0    | 8.0    | 11.7    | 6.4    | 9.4     | 5.0    | 7.2     | 3.2    | 4.6     | 2.0    | 2.9     |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 19               | 3.5                   | 5.0     | 11.2             | 15.9    | 14.8                  | 15.9    | 22.8   | 32.3    | 14.0   | 19.9    | 11.2   | 15.9    | 8.7    | 12.2    | 5.6    | 7.9     | 3.5    | 5.0     |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 24               | 4.0                   | 5.6     | 12.9             | 18.0    | 17.3                  | 18.0    | 26.1   | 36.6    | 16.1   | 22.5    | 12.9   | 18.0    | 9.9    | 13.9    | 6.4    | 8.9     | 4.0    | 5.6     |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 37               | 5.2                   | 7.1     | 16.6             | 22.9    | 23.5                  | 22.9    | 33.7   | 46.4    | 20.7   | 28.6    | 16.6   | 22.9    | 12.8   | 17.6    | 8.2    | 11.3    | 5.2    | 7.1     |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 48               | 6.1                   | 8.3     | 19.4             | 26.4    | 28.3                  | 26.4    | 39.4   | 53.7    | 24.2   | 33.0    | 19.4   | 26.4    | 14.9   | 20.3    | 9.6    | 13.1    | 6.1    | 8.3     |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 52               | 6.4                   | 8.6     | 20.4             | 27.6    | 30.1                  | 27.6    | 41.4   | 56.1    | 25.4   | 34.5    | 20.4   | 27.6    | 15.7   | 21.3    | 10.1   | 13.7    | 6.4    | 8.6     |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 61               | 7.0                   | 9.4     | 22.5             | 30.2    | 33.8                  | 30.2    | 45.6   | 61.4    | 28.1   | 37.8    | 22.5   | 30.2    | 17.3   | 23.3    | 11.1   | 15.0    | 7.0    | 9.4     |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 64               | 7.2                   | 9.7     | 23.1             | 31.1    | 35.1                  | 31.1    | 47.0   | 63.1    | 28.9   | 38.8    | 23.1   | 31.1    | 17.8   | 23.9    | 11.5   | 15.4    | 7.2    | 9.7     |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 74               | 7.9                   | 10.5    | 25.3             | 33.7    | 39.1                  | 33.7    | 51.4   | 68.5    | 31.6   | 42.2    | 25.3   | 33.7    | 19.5   | 25.9    | 12.5   | 16.7    | 7.9    | 10.5    |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 91               | 9.0                   | 11.9    | 28.9             | 38.0    | 45.8                  | 38.0    | 58.6   | 77.2    | 36.0   | 47.5    | 28.9   | 38.0    | 22.2   | 29.2    | 14.3   | 18.8    | 9.0    | 11.9    |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 97               | 9.4                   | 12.3    | 30.1             | 39.4    | 48.1                  | 39.4    | 61.0   | 80.1    | 37.5   | 49.3    | 30.1   | 39.4    | 23.1   | 30.3    | 14.9   | 19.5    | 9.4    | 12.3    |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 100              | 9.6                   | 12.5    | 30.6             | 40.1    | 49.3                  | 40.1    | 62.2   | 81.5    | 38.3   | 50.1    | 30.6   | 40.1    | 23.6   | 30.9    | 15.2   | 19.9    | 9.6    | 12.5    |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 127              | 11.2                  | 14.4    | 35.8             | 46.2    | 59.4                  | 46.2    | 72.6   | 93.7    | 44.7   | 57.7    | 35.8   | 46.2    | 27.5   | 35.5    | 17.7   | 22.9    | 11.2   | 14.4    |        |         |        |         |        |         |        |         |        |         |        |         |      |  |
| 169              | 13.5                  | 17.1    | 43.2             | 54.7    | 74.7                  | 54.7    | 87.7   | 111.1   | 53.9   | 68.4    | 43.2   | 54.7    | 33.2   | 42.1    | 21.4   | 27.1    | 13.5   | 17.1    |        |         |        |         |        |         |        |         |        |         |        |         |      |  |