

# APPENDIX 3

## PVC WIRING CABLES 300/500 V, 450/750 V AND 600/1000 V

Current ratings and volt drop for single and multicore cables to SABS 10142 2008.

| Conductor | Single core in/on a wall or<br>Multicore in a wall |               |                           |               |
|-----------|--|---------------|---------------------------|---------------|
|           | Single Phase a.c.                                  |               | 3-Phase a.c.              |               |
|           | Size<br>mm <sup>2</sup>                            | Rating<br>(A) | Volt Drop per<br>A/m (mV) | Rating<br>(A) |
| 1.0       | 12.5   | 44            | 10.5                      | 38            |
| 1.5       | 16   | 29            | 13.5                      | 25            |
| 2.5       | 22   | 18            | 18.5                      | 15            |
| 4         | 30   | 11            | 25                        | 9.5           |
| 6         | 38   | 7.3           | 32                        | 6.4           |
| 10        | 53   | 4.4           | 45                        | 3.8           |
| 16        | 71   | 2.8           | 61                        | 2.4           |
| 25        | 94   | 1.8           | 80                        | 1.55          |
| 35        | 117  | 1.3           | 100                       | 1.10          |
| 50        | 141  | 1.0           | 120                       | 0.85          |
| 70        | 180  | 0.72          | 154                       | 0.61          |
| 95        | 218  | 0.56          | 186                       | 0.48          |
| 120       | 252  | 0.47          | 215                       | 0.41          |
| 150       | 282  | 0.41          | 236                       | 0.36          |
| 185       | 320  | 0.37          | 267                       | 0.32          |

| Conductor | Multicore in trunking or conduit<br>surface mounted on a wall or floor |               |                           |               |
|-----------|--|---------------|---------------------------|---------------|
|           | Single Phase a.c.  |               | 3-Phase a.c.              |               |
|           | Size<br>mm <sup>2</sup>  | Rating<br>(A) | Volt Drop per<br>A/m (mV) | Rating<br>(A) |
| 1.0       | 12   | 44            | 10                        | 38            |
| 1.5       | 14.5   | 29            | 12.5                      | 25            |
| 2.5       | 19   | 18            | 17                        | 15            |
| 4         | 26   | 11            | 23                        | 9.5           |
| 6         | 31   | 7.3           | 29                        | 6.4           |
| 10        | 47   | 4.4           | 41                        | 3.8           |
| 16        | 63   | 2.8           | 55                        | 2.4           |
| 25        | 84   | 1.8           | 69                        | 1.55          |
| 35        | 103  | 1.3           | 85                        | 1.10          |
| 50        | 125  | 1.0           | 106                       | 0.85          |
| 70        | 157  | 0.72          | 134                       | 0.61          |
| 95        | 188  | 0.56          | 161                       | 0.48          |
| 120       | 218  | 0.47          | 185                       | 0.41          |
| 150       | 242  | 0.41          | 203                       | 0.36          |
| 185       | 276  | 0.37          | 230                       | 0.32          |

| Conductor | Single and multicore on a wall,<br>floor unperforated tray, under plaster |               |                           |               |
|-----------|---|---------------|---------------------------|---------------|
|           | Single Phase a.c.   |               | 3-Phase a.c.              |               |
|           | Size<br>mm <sup>2</sup>   | Rating<br>(A) | Volt Drop per<br>A/m (mV) | Rating<br>(A) |
| 1.0       | 14  | 44            | 12                        | 38            |
| 1.5       | 18  | 29            | 15.5                      | 25            |
| 2.5       | 24  | 18            | 21                        | 15            |
| 4         | 32  | 11            | 28                        | 9.5           |
| 6         | 43  | 7.3           | 37                        | 6.4           |
| 10        | 59  | 4.4           | 51                        | 3.8           |
| 16        | 79  | 2.8           | 68                        | 2.4           |
| 25        | 105   | 1.75          | 86                        | 1.55          |
| 35        | 129   | 1.25          | 107                       | 1.10          |
| 50        | 157   | 0.95          | 129                       | 0.82          |
| 70        | 200   | 0.66          | 166                       | 0.57          |
| 95        | 242   | 0.50          | 201                       | 0.43          |
| 120       | 281   | 0.41          | 233                       | 0.36          |
| 150       | 323   | 0.34          | 265                       | 0.30          |
| 185       | 368   | 0.25          | 307                       | 0.25          |

| Conductor | Single and multicore in free air or<br>on perforated racks and ladders |               |                           |               |
|-----------|--|---------------|---------------------------|---------------|
|           | Single Phase a.c.  |               | 3-Phase a.c.              |               |
|           | Size<br>mm <sup>2</sup>  | Rating<br>(A) | Volt Drop per<br>A/m (mV) | Rating<br>(A) |
| 1.0       | 15.5   | NA            | 13                        | NA            |
| 1.5       | 20.5   | NA            | 16.5                      | NA            |
| 2.5       | 28   | NA            | 22                        | NA            |
| 4         | 37   | NA            | 30                        | NA            |
| 6         | 47   | NA            | 38                        | NA            |
| 10        | 65   | NA            | 54                        | NA            |
| 16        | 88   | NA            | 72                        | NA            |
| 25        | 111  | 1.75          | 91                        | 1.55          |
| 35        | 139  | 1.25          | 113                       | 1.10          |
| 50        | 170  | 0.95          | 138                       | 0.82          |
| 70        | 218  | 0.66          | 176                       | 0.57          |
| 95        | 265  | 0.50          | 214                       | 0.43          |
| 120       | 308  | 0.47          | 249                       | 0.36          |
| 150       | 356  | 0.34          | 287                       | 0.30          |
| 185       | 407  | 0.29          | 328                       | 0.26          |

This information is given in good faith and we accept no responsibility for any errors.