

# Dissipated power, Impedance and Voltage drop (cont.)

## Multi 9 products

The following table indicates the average dissipated power per pole in W for a current equal to the rating of the device and at the operating voltage.

| Rating (A)                      | 0.5              | 1   | 1.6 | 2   | 2.5 | 3   | 4    | 6   | 6.3  | 10  | 12.5 | 13  | 16  | 20  | 25  | 32  | 40  | 50  | 63  | 80  | 100 | 125 |
|---------------------------------|------------------|-----|-----|-----|-----|-----|------|-----|------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Circuit breakers</b>         |                  |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| DPN                             |                  | 2.5 |     | 1.9 |     | 2.1 | 2.6  | 2.7 |      | 2.7 |      | 3.3 | 3.2 | 4.7 | 4.7 | 4.6 | 5.8 |     |     |     |     |     |
| C60/C60H-DC                     | 2.2              | 2.3 |     | 2.6 |     | 2.2 | 2.4  | 2.7 |      | 1.8 |      | 2.5 | 2.5 | 3   | 3.1 | 3.5 | 4.3 | 4.8 | 6.1 |     |     |     |
| C120                            |                  |     |     |     |     |     |      |     |      | 1.3 |      |     | 2.1 | 2.3 | 2.5 | 3.2 | 3.1 | 3.2 | 3   | 3.2 | 2   | 4.1 |
| NG125                           |                  |     |     |     |     |     |      |     |      | 1.7 |      |     | 2.4 | 2.7 | 2.7 | 3.8 | 3.8 | 4.2 | 4   | 5.6 | 5.2 | 8   |
| C60L-MA                         |                  |     | 2.4 |     | 2.5 |     | 2.4  |     | 3    | 2   | 2.5  |     | 2.6 |     | 3   |     | 4.6 |     |     |     |     |     |
| NG125L-MA                       |                  |     |     |     |     |     | 0.15 |     | 0.15 | 0.2 | 0.4  |     | 0.3 |     | 0.6 |     | 1.4 |     | 2   | 2.7 |     |     |
| <b>RCCB</b>                     |                  |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| ID Type A/AC                    |                  |     |     |     |     |     |      |     |      |     |      |     |     |     | 1.4 |     | 3.6 |     | 4.4 | 7.2 | 18  | 28  |
| ID Type B                       |                  |     |     |     |     |     |      |     |      |     |      |     |     |     | 1.2 |     | 2.9 |     | 7.2 | 12  | 18  | 28  |
| <b>Contactors</b>               |                  |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| CT/CT+ Power circuit            |                  |     |     |     |     |     |      |     |      |     |      |     | 0.9 |     |     |     | 1.4 |     |     |     |     |     |
| Control circuit                 | See module 92020 |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| <b>Impulse relays</b>           |                  |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| TL/TL+ Power circuit            |                  |     |     |     |     |     |      |     |      |     |      |     | 0.9 |     |     | 1.4 |     |     |     |     |     |     |
| Control circuit                 | See module 92011 |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| <b>Push-buttons</b>             |                  |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| PB                              |                  |     |     |     |     |     |      |     |      |     |      |     |     | 0.6 |     |     |     |     |     |     |     |     |
| <b>Selector switches</b>        |                  |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| CM                              |                  |     |     |     |     |     |      |     |      |     |      |     |     | 0.8 |     |     |     |     |     |     |     |     |
| CMA/CMB/CMC/CMD/<br>CMV         |                  |     |     |     |     |     |      |     | 0.4  |     |      |     |     |     |     |     |     |     |     |     |     |     |
| <b>Switch-disconnectors</b>     |                  |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| I                               |                  |     |     |     |     |     |      |     |      |     |      |     |     | 0.8 |     | 1.3 | 1.1 |     | 1.8 |     | 3.4 | 4.2 |
| I-NA                            |                  |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     | 3.2 |     | 3.2 |     |     |     |
| NG125NA                         |                  |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     | 2   | 2.7 | 4   | 7   |
| <b>Indication auxiliaries</b>   |                  |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| OF, SD, OF+SD/OF                | See module 92605 |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| <b>Tripping auxiliaries</b>     |                  |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| MN, MNs, MNx, MX+OF,<br>MX, MSU | See module 92605 |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| <b>Indicator lights</b>         |                  |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |
| V                               | 0.3              |     |     |     |     |     |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |

Note: When the enclosure's thermal balance, consider the 4P devices load is only on 3 phases

### Impedance calculation:

$$Z = P / I^2$$

Z: impedance in Ohms

P: dissipated power in Watts (table values)

I: rating in Amperes

### Voltage drop calculation:

$$U = P / I$$

U: voltage drop in Volts

P: dissipated power in Watts (table values)

I: rating in Amperes