

A safe, reliable and high-performance solution for power factor correction in standard operating conditions.

PEB0131.eps



PEB0130.eps

VarplusCan SDuty

## Operating conditions

- For networks with insignificant non-linear loads: ( $N_{LL} \leq 10\%$ ).
- Standard voltage disturbances.
- Standard operating temperature up to 55 °C.
- Normal switching frequency up to 5000 /year.
- Maximum current (including harmonics) is  $1.5 \times I_N$ .

## Technology

Constructed internally with three single-phase capacitor elements assembled in an optimized design. Each capacitor element is manufactured with metallized polypropylene film as the dielectric having features such as heavy edge metallization and special profiles which enhance the "self-healing" properties.

The active capacitor elements are encapsulated in a specially formulated biodegradable, non-PCB, PUR (soft) resin which ensures thermal stability and heat removal from inside the capacitor.

The unique finger-proof CLAMPTITE termination is fully integrated with discharge resistors and allows suitable access to tightening and ensures cable termination without any loose connections.

Once tightened, the design guarantees that the tightening torque is always maintained.

For lower ratings, double fast-on terminals with wires are provided.

## Benefits

- Safety:
  - self-healing
  - pressure-sensitive disconnecter on all three phases
  - discharge resistor.
- Life expectancy up to 100,000 hours.
- Economic benefits and easy installation due to its compact size and low weight.
- Easy maintenance thanks to its unique finger-proof termination to ensure tightening.
- Also available in small power ratings from 1 to 5 kvar.

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## Technical specifications

### General characteristics

|                       |   |                                      |
|-----------------------|---|--------------------------------------|
| Standards             | IEC 60831-1/-2  |                                      |
| Voltage range         | 230 to 525 V  |                                      |
| Frequency             | 50 / 60 Hz  |                                      |
| Power range           | 1 to 30 kvar  |                                      |
| Losses (dielectric)   | < 0.2 W/kvar  |                                      |
| Losses (total)        | < 0.5 W/kvar  |                                      |
| Capacitance tolerance | -5 %, +10 %   |                                      |
| Voltage test          | Between terminals   | 2.15 x U <sub>N</sub> (AC), 10 s     |
|                       | Between terminal & container  | 3 kV (AC), 10 s or 3.66 kV (AC), 2 s |
|                       | Impulse voltage   | 8 kV                                 |
| Discharge resistor    | Fitted, standard discharge time 60 s<br>Discharge time 180 s on request |                                      |

### Working conditions

|                             |   |
|-----------------------------|---|
| Ambient temperature         | -25 / 55 °C (Class D)                     |
| Humidity                    | 95 %                                      |
| Altitude                    | 2,000 m above sea level                   |
| Overvoltage                 | 1.1 x U <sub>N</sub> 8 h in every 24 h    |
| Overcurrent                 | Up to 1.5 x I <sub>N</sub>                |
| Peak inrush current         | 200 x I <sub>N</sub>                      |
| Switching operations (max.) | Up to 5,000 switching operations per year |
| Mean Life expectancy        | Up to 100,000 hrs                         |
| Harmonic content            | N <sub>LL</sub> ≤ 10 %                    |

### Installation characteristics

|                   |  |
|-------------------|--|
| Mounting position | Indoor, upright  |
| Fastening         | Threaded M12 stud at the bottom  |
| Earthing          |  |
| Terminals         | CLAMPTITE - three-way terminal with electric shock protection (finger-proof) & double fast-on terminal in lower kvar |

### Safety features

|            |   |
|------------|---|
| Safety     | Self-healing + Pressure-sensitive disconnecter + Discharge device |
| Protection | IP20  |

### Construction

|              |  |
|--------------|--|
| Casing       | Extruded Aluminium Can                         |
| Dielectric   | Metallized polypropylene film with Zn/Al alloy |
| Impregnation | Biodegradable, Non-PCB, PUR (soft) resin       |

| Rated Voltage 240/260 V |       |       |                             |                       |       |       |                             |         |           |                  |
|-------------------------|-------|-------|-----------------------------|-----------------------|-------|-------|-----------------------------|---------|-----------|------------------|
| 50 Hz                   |       |       |                             | 60 Hz                 |       |       |                             | μF (X3) | Case Code | Reference Number |
| Q <sub>N</sub> (kvar)   |       |       | I <sub>N</sub> (A) at 260 V | Q <sub>N</sub> (kvar) |       |       | I <sub>N</sub> (A) at 260 V |         |           |                  |
| 230 V                   | 240 V | 260 V |                             | 230 V                 | 240 V | 260 V |                             |         |           |                  |
| 1.9                     | 2.1   | 2.5   | 5.5                         | 2.3                   | 2.5   | 3     | 6.6                         | 38.7    | HC        | BLRCS021A025B24  |
| 2.5                     | 2.7   | 3.2   | 7.1                         | 3.0                   | 3.3   | 3.8   | 8.5                         | 50.1    | HC        | BLRCS027A033B24  |
| 3.9                     | 4.2   | 4.9   | 10.9                        | 4.6                   | 5     | 6     | 13.1                        | 77.3    | HC        | BLRCS042A050B24  |
| 5.0                     | 5.4   | 6.4   | 14                          | 6.0                   | 6.5   | 7.7   | 17.0                        | 100     | LC        | BLRCS054A065B24  |
| 5.8                     | 6.3   | 7.4   | 16.4                        | 6.9                   | 7.5   | 8.8   | 19.5                        | 116     | NC        | BLRCS063A075B24  |
| 7.6                     | 8.3   | 9.7   | 21.6                        | 9.2                   | 10    | 11.7  | 26.1                        | 152     | NC        | BLRCS083A100B24  |
| 10                      | 10.9  | 12.8  | 28.4                        | 12                    | 13    | 15.3  | 34.1                        | 200     | SC        | BLRCS109A130B24  |

| Rated Voltage 380/400/415 V |       |       |                             |                       |       |       |                             |         |           |                  |
|-----------------------------|-------|-------|-----------------------------|-----------------------|-------|-------|-----------------------------|---------|-----------|------------------|
| 50 Hz                       |       |       |                             | 60 Hz                 |       |       |                             | μF (X3) | Case Code | Reference Number |
| Q <sub>N</sub> (kvar)       |       |       | I <sub>N</sub> (A) at 400 V | Q <sub>N</sub> (kvar) |       |       | I <sub>N</sub> (A) at 400 V |         |           |                  |
| 380 V                       | 400 V | 415 V |                             | 380 V                 | 400 V | 415 V |                             |         |           |                  |
| 0.7                         | 0.8   | 0.9   | 1.2                         | 0.9                   | 1     | 1.1   | 1.4                         | 5.3     | EC        | BLRCS008A010B40  |
| 0.9                         | 1     | 1.1   | 1.4                         | 1.1                   | 1.2   | 1.3   | 1.7                         | 6.6     | EC        | BLRCS010A012B40  |
| 1.5                         | 1.7   | 1.8   | 2.5                         | 1.8                   | 2     | 2.2   | 2.9                         | 11.3    | DC        | BLRCS017A020B40  |
| 1.8                         | 2     | 2.2   | 2.9                         | 2.2                   | 2.4   | 2.6   | 3.5                         | 13.3    | DC        | BLRCS020A024B40  |
| 2.3                         | 2.5   | 2.7   | 3.6                         | 2.7                   | 3     | 3.2   | 4.3                         | 16.6    | DC        | BLRCS025A030B40  |
| 2.7                         | 3     | 3.2   | 4.3                         | 3.2                   | 3.6   | 3.9   | 5.2                         | 19.9    | DC        | BLRCS030A036B40  |
| 3.0                         | 3.3   | 3.6   | 4.8                         | 3.6                   | 4     | 4.3   | 5.7                         | 21.9    | DC        | BLRCS033A040B40  |
| 3.6                         | 4     | 4.3   | 5.8                         | 4.3                   | 4.8   | 5.2   | 6.9                         | 26.5    | DC        | BLRCS040A048B40  |
| 3.8                         | 4.2   | 4.5   | 6.1                         | 4.5                   | 5     | 5.4   | 7.3                         | 27.8    | DC        | BLRCS042A050B40  |
| 4.5                         | 5     | 5.4   | 7.2                         | 5.4                   | 6     | 6.5   | 8.7                         | 33.1    | HC        | BLRCS050A060B40  |
| 5.6                         | 6.3   | 6.8   | 9.1                         | 6.8                   | 7.5   | 8.1   | 10.8                        | 41.8    | HC        | BLRCS063A075B40  |
| 6.8                         | 7.5   | 8.1   | 10.8                        | 8.1                   | 9     | 9.7   | 13                          | 49.7    | HC        | BLRCS075A090B40  |
| 7.5                         | 8.3   | 8.9   | 12                          | 9                     | 10    | 10.7  | 14.4                        | 55.0    | LC        | BLRCS083A100B40  |
| 9.4                         | 10.4  | 11.2  | 15                          | 11.3                  | 12.5  | 13.4  | 18                          | 68.9    | MC        | BLRCS104A125B40  |
| 11.3                        | 12.5  | 13.5  | 18                          | 13.5                  | 15    | 16.1  | 21.7                        | 82.9    | NC        | BLRCS125A150B40  |
| 13.5                        | 15    | 16.1  | 21.7                        | 16.2                  | 18    | 19.4  | 26                          | 99.4    | NC        | BLRCS150A180B40  |
| 15.1                        | 16.7  | 18    | 24.1                        | 18.1                  | 20    | 21.6  | 28.9                        | 111     | SC        | BLRCS167A200B40  |
| 18.1                        | 20    | 21.5  | 28.9                        | 21.7                  | 24    | 25.8  | 34.6                        | 133     | SC        | BLRCS200A240B40  |
| 18.8                        | 20.8  | 22.4  | 30                          | 22.5                  | 25    | 26.9  | 36                          | 138     | SC        | BLRCS208A250B40  |
| 22.6                        | 25    | 26.9  | 36.1                        | 27.1                  | 30    | 32.3  | 43.3                        | 166     | SC        | BLRCS250A300B40  |

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| Rated Voltage 440 V   |                    |                       |                    |         |           |                  |
|-----------------------|--------------------|-----------------------|--------------------|---------|-----------|------------------|
| 50 Hz                 |                    | 60 Hz                 |                    | μF (X3) | Case Code | Reference Number |
| Q <sub>N</sub> (kvar) | I <sub>N</sub> (A) | Q <sub>N</sub> (kvar) | I <sub>N</sub> (A) |         |           |                  |
| 1                     | 1.3                | 1.2                   | 1.6                | 5.5     | EC        | BLRCS010A012B44  |
| 2                     | 2.6                | 2.4                   | 3.1                | 11      | FC        | BLRCS020A024B44  |
| 3                     | 3.9                | 3.6                   | 4.7                | 16.4    | DC        | BLRCS030A036B44  |
| 4                     | 5.2                | 4.8                   | 6.3                | 21.9    | DC        | BLRCS040A048B44  |
| 5                     | 6.6                | 6                     | 7.9                | 27.4    | HC        | BLRCS050A060B44  |
| 7.5                   | 9.8                | 9                     | 11.8               | 41.1    | HC        | BLRCS075A090B44  |
| 10                    | 13.1               | 12                    | 15.7               | 54.8    | LC        | BLRCS100A120B44  |
| 11.2                  | 14.7               | 13.4                  | 17.6               | 61.4    | NC        | BLRCS112A134B44  |
| 12.5                  | 16.4               | 15                    | 19.7               | 68.5    | NC        | BLRCS125A150B44  |
| 14.3                  | 18.8               | 17.2                  | 22.5               | 78.3    | NC        | BLRCS143A172B44  |
| 15                    | 19.7               | 18                    | 23.6               | 82.2    | NC        | BLRCS150A180B44  |
| 16.9                  | 22.2               | 20.3                  | 26.6               | 92.6    | SC        | BLRCS169A203B44  |
| 18.2                  | 23.9               | 21.8                  | 28.7               | 99.7    | SC        | BLRCS182A218B44  |
| 20                    | 26.2               | 24                    | 31.5               | 110     | SC        | BLRCS200A240B44  |
| 22.5                  | 29.5               | 27                    | 35.4               | 123     | SC        | BLRCS225A270B44  |
| 25                    | 32.8               | 30                    | 39.4               | 137     | SC        | BLRCS250A300B44  |
| 28.5                  | 37.4               | 34.2                  | 44.9               | 156     | SC        | BLRCS285A342B44  |
| 30.3                  | 39.8               | 36.4                  | 47.7               | 166     | SC        | BLRCS303A364B44  |

| Rated Voltage 480 V   |                    |                       |                    |         |           |                  |
|-----------------------|--------------------|-----------------------|--------------------|---------|-----------|------------------|
| 50 Hz                 |                    | 60 Hz                 |                    | μF (X3) | Case Code | Reference Number |
| Q <sub>N</sub> (kvar) | I <sub>N</sub> (A) | Q <sub>N</sub> (kvar) | I <sub>N</sub> (A) |         |           |                  |
| 4.2                   | 5.1                | 5                     | 6.1                | 19.3    | DC        | BLRCS042A050B48  |
| 6.7                   | 8.1                | 8                     | 9.7                | 30.8    | HC        | BLRCS067A080B48  |
| 7.5                   | 9.0                | 9.0                   | 10.8               | 34.5    | HC        | BLRCS075A090B48  |
| 8.8                   | 10.6               | 10.6                  | 12.7               | 40.5    | LC        | BLRCS088A106B48  |
| 10.4                  | 12.5               | 12.5                  | 15                 | 47.9    | MC        | BLRCS104A125B48  |
| 11.3                  | 13.6               | 13.6                  | 16.3               | 52      | MC        | BLRCS113A136B48  |
| 12.5                  | 15                 | 15                    | 18                 | 57.5    | NC        | BLRCS125A150B48  |
| 13.6                  | 16.4               | 16.3                  | 19.6               | 62.6    | NC        | BLRCS136A163B48  |
| 14.4                  | 17.3               | 17.3                  | 20.8               | 66.3    | NC        | BLRCS144A173B48  |
| 15.5                  | 18.6               | 18.6                  | 22.4               | 71.4    | NC        | BLRCS155A186B48  |
| 17                    | 20.4               | 20.4                  | 24.5               | 78.3    | NC        | BLRCS170A204B48  |
| 20.8                  | 25.0               | 25                    | 30                 | 95.7    | SC        | BLRCS208A250B48  |
| 25.8                  | 31.0               | 31                    | 37.2               | 119     | SC        | BLRCS258A310B48  |
| 28.8                  | 34.6               | 34.6                  | 41.6               | 133     | VC        | BLRCS288A346B48  |
| 31.5                  | 37.9               | 37.8                  | 45.5               | 145     | VC        | BLRCS315A378B48  |
| 33.9                  | 40.8               | 40.7                  | 48.9               | 156     | XC        | BLRCS339A407B48  |

| Rated Voltage 525 V   |                    |                       |                    |         |           |                  |
|-----------------------|--------------------|-----------------------|--------------------|---------|-----------|------------------|
| 50 Hz                 |                    | 60 Hz                 |                    | μF (X3) | Case Code | Reference Number |
| Q <sub>N</sub> (kvar) | I <sub>N</sub> (A) | Q <sub>N</sub> (kvar) | I <sub>N</sub> (A) |         |           |                  |
| 5                     | 5.5                | 6                     | 6.6                | 19.2    | HC        | BLRCS050A060B52  |
| 8                     | 8.8                | 9.6                   | 10.6               | 30.8    | HC        | BLRCS080A096B52  |
| 8.8                   | 9.7                | 10.6                  | 11.6               | 33.9    | LC        | BLRCS088A106B52  |
| 10.6                  | 11.7               | 12.7                  | 14.0               | 40.8    | MC        | BLRCS106A127B52  |
| 12.5                  | 13.7               | 15                    | 16.5               | 48.1    | NC        | BLRCS125A150B52  |
| 13.5                  | 14.8               | 16.2                  | 17.8               | 51.9    | NC        | BLRCS135A162B52  |
| 15.4                  | 16.9               | 18.5                  | 20.3               | 59.3    | NC        | BLRCS154A185B52  |
| 17.2                  | 18.9               | 20.6                  | 22.7               | 66.2    | NC        | BLRCS172A206B52  |
| 18.5                  | 20.3               | 22.2                  | 24.4               | 71.2    | SC        | BLRCS185A222B52  |
| 20                    | 22                 | 24                    | 26.4               | 77      | SC        | BLRCS200A240B52  |
| 25                    | 27.5               | 30                    | 33                 | 96.2    | SC        | BLRCS250A300B52  |
| 27.5                  | 30.2               | 33                    | 36.3               | 106     | SC        | BLRCS275A330B52  |