# Product data sheet
## Characteristics

# ABL8REM24050
## Regulated Switch Power Supply, 1 or 2-phase, 100..240V AC, 24V, 5 A

To be discontinued

## Commercial status

To be discontinued on: 21 December 2020

End-of-service soon on: 21 December 2020

## Main

| | |
|---|---|
| Range of product | Modicon Power Supply |
| Product or component type | Power supply |
| Power supply type | Regulated switch mode |
| Nominal input voltage | 100...240 V AC phase to phase, terminal(s): L1-L2<br>100...240 V AC single phase, terminal(s): N-L1<br>110...220 V DC |
| Input voltage limits | 85...264 V AC<br>100...250 V AC |
| Rated power in W | 120 W |
| Output voltage | 24 V DC |
| Power supply output current | 5 A |

## Complementary

| | |
|---|---|
| Input protection type | Integrated fuse (not interchangeable) |
| Inrush current | 30 A |
| Power factor | 0.65 at 24 V DC |
| Efficiency | 85 % |
| Output voltage adjustment | 100...120 % adjustable |
| Power dissipation in W | 21.2 W |
| Current consumption | 1.2 A 240 V AC<br>1.9 A 100 V AC |
| Output protection type | Against overload, protection technology: 1.1 x In<br>Against overvoltage, protection technology: tripping if U > 1.5 x Un<br>Against short-circuits, protection technology: automatic reset<br>Against undervoltage, protection technology: tripping if U < 0.8 x Un |
| Connections - terminals | Screw type terminals: 2 x 0.14...2 x 2.5 mm², (AWG 26...AWG 14) for input connection<br>Screw type terminals: 4 x 0.14...4 x 2.5 mm², (AWG 26...AWG 14) for output connection<br>Screw type terminals: 1 x 0.14...1 x 2.5 mm², (AWG 26...AWG 14) for input ground connection<br>Screw type terminals: 2 x 0.14...2 x 2.5 mm², (AWG 26...AWG 14) for output ground connection |
| Status LED | 1 LED (green)output voltage |

| | |
|---|---|
| | 1 LED (orange)input voltage |
| Depth | 120 mm |
| Height | 120 mm |
| Width | 54 mm |
| Net weight | 1 kg |
| Output coupling | Series<br>Parallel |
| Marking | CE |
| Mounting support | 35 x 15 mm symmetrical DIN rail<br>75 x 7.5 mm symmetrical DIN rail<br>35 x 7.5 mm symmetrical DIN rail |
| Operating position | Vertical |

## Environment

| | |
|---|---|
| Standards | UL 508<br>CSA C22.2 No 60950-1 |
| Product certifications | RCM<br>EAC<br>KC<br>CCSAus<br>UL |
| Environmental characteristic | EMC conforming to EN 50081-1<br>EMC conforming to EN 50082-2<br>EMC conforming to EN 55024<br>Safety conforming to EN/IEC 60950<br>Safety conforming to SELV |
| Operating altitude | 2000 m |
| IP degree of protection | IP20 conforming to EN/IEC 60529 |
| Ambient air temperature for operation | 0…50 °C (without)<br>50…60 °C (with derating factor) |
| Ambient air temperature for storage | -25…70 °C |
| Relative humidity | 0…95 % without condensation or dripping water |
| Dielectric strength | 3000 V between input and ground<br>3000 V between input and output<br>500 V between output and ground<br>500 V between outputs |

## Packing Units

| | |
|---|---|
| Package 1 Weight | 0.803 kg |

## Offer Sustainability

| | |
|---|---|
| Sustainable offer status | Green Premium product |
| REACh Regulation | REACh Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope)<br>EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS declaration |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End of Life Information |
| PVC free | Yes |

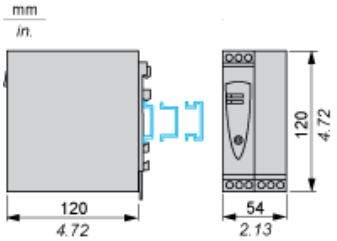
## Contractual warranty

| | |
|---|---|
| Warranty | 18 months |

## Regulated Switch Mode Power Supply

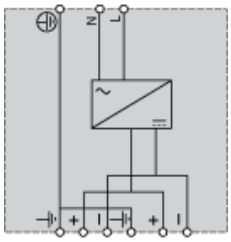
### Dimensions and Mounting

Mounting on 35 mm/1.37 in. or 75 mm/2.95 in. Rail



## Regulated Switch Mode Power Supply

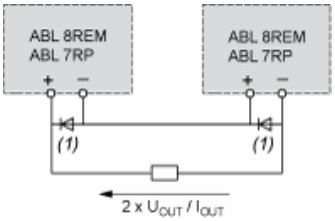
### Internal Wiring Diagram



## Regulated Switch Mode Power Supplies

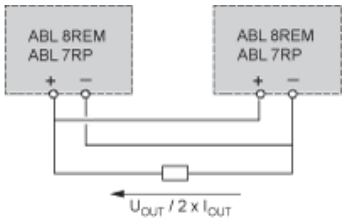
### Series or Parallel Connection

Series Connection




(1) Two Shottky diodes Imin = power supply In and Vmin = 50 V

Parallel Connection




| Family | Series | Parallel |
|---|---|---|
| ABL 8REM/7RP | 2 products max. | 2 products max. |

NOTE: Series or parallel connection is only recommended for products with identical references.

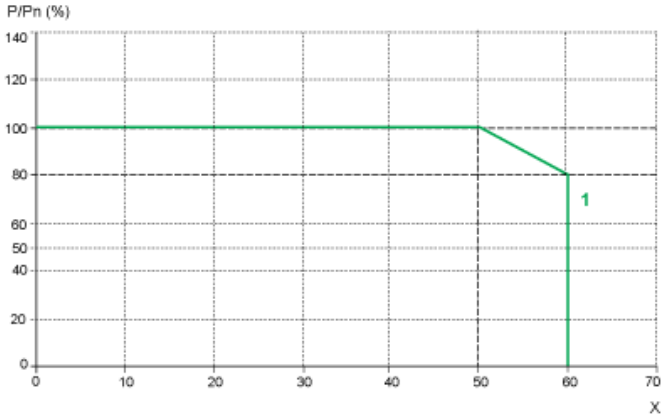
## Regulated Switch Mode Power Supplies

### Derating

The ambient temperature is a determining factor that limits the power an electronic power supply can deliver continuously. If the temperature around the electronic components is too high, their life will be significantly reduced.

The nominal ambient temperature for the Optimum range of Phaseo power supplies is 50 °C. Above this temperature, derating is necessary up to a maximum temperature of 60 °C.

The graph below shows the power as a percentage of the nominal power that the power supply can deliver continuously, depending on the ambient temperature.



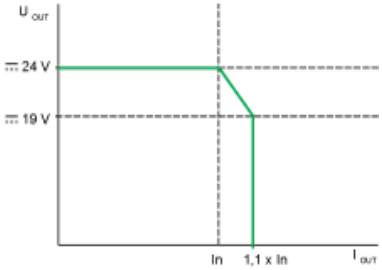

X Maximum operating temperature (°C)
(1) ABL 8REM, ABL 7RP mounted vertically

Derating should be considered in extreme operating conditions:

- Intensive operation (output current permanently close to the nominal current, combined with a high ambient temperature)
- Output voltage set above 24 Vdc (to compensate for line voltage drops, for example)
- Parallel connection to increase the total power

## Regulated Switch Mode Power Supply

### Load Limit



## Regulated Switch Mode Power Supply

### Temporary Overloads