# POWER-GATE ${ }^{\text {T }}$ Solid-State Devices OR'ing Non-Programmable Specification Sheet Generation 4.1 



## ABSOLUTE MAXIMUM RATINGS ${ }^{(1)}$

All devices (" $x$ " = don't care) , all amperages DC, all voltages DC and referenced to device ground, $" y "=1(2)$ for anode $1(2)$ terminal, respectively, or unless otherwise specified.

| Symbol | Parameter | Min. | Max. | Units |
| :---: | :---: | :---: | :---: | :---: |
| $V_{\text {KA }}$ | Cathode-to-Anode Voltage, Devices ORx41A-xxx |  | $21^{(2)}$ | V |
|  | Cathode-to-Anode Voltage, Devices ORx41B-xxx |  | $39^{(3)}$ | V |
| $\mathrm{V}_{\mathrm{KK}}$ | Cathode-to-Cathode Voltage, Devices ORx41A-xxx |  | $21^{(2)}$ | V |
|  | Cathode-to-Cathode Voltage, Devices ORx41B-xxx |  | $39^{(3)}$ | V |
| $\mathrm{V}_{\text {Ay }}$ | Anode Voltage, Devices ORx41A-xxx | $-21^{(4,6)}$ | $21^{(2,6)}$ | V |
|  | Anode Voltage, Devices ORx41B-xxx | $-39^{(5,6)}$ | $39^{(3,6)}$ | V |
| $V_{\mathrm{K}}$ | Cathode Voltage, Devices ORx41A-xxx | $-21^{(4,6)}$ | $21^{(2,6)}$ | V |
|  | Cathode Voltage, Devices ORx41B-xxx | $-39^{(5,6)}$ | $39^{(3,6)}$ | V |
| $I_{F, \text { gndfloat }}{ }^{(7)}$ | Forward Current (per rectifier, ground floating), Devices ORM41x-100 |  | 10 | A |
|  | Forward Current (per rectifier, ground floating), Devices ORM41x-150 |  | 15 | A |
|  | Forward Current (per rectifier, ground floating), Devices ORM41x-200 |  | 20 | A |
|  | Forward Current (per rectifier, ground floating), Devices ORM41x-250 |  | 25 | A |
|  | Forward Current (per rectifier, ground floating), Devices ORM41x-300 |  | 30 | A |
|  | Forward Current (per rectifier, ground floating), Devices ORL41x-400 |  | 40 | A |
|  | Forward Current (per rectifier, ground floating), Devices ORL41x-500 |  | 50 | A |
|  | Forward Current (per rectifier, ground floating), Devices ORL41x-600 |  | 60 | A |
| $\mathrm{T}_{\mathrm{A}}$ | Ambient Temperature | -45 | +110 | ${ }^{\circ} \mathrm{C}$ |
| $\mathrm{I}_{\text {STAT,MAX }}$ | Remote Status Maximum Sink Current |  | 50 | mA |
| $\mathrm{V}_{\text {STAT(OFF),MAX }}$ | Remote Status Maximum Off Voltage | -60 | 60 | V |

## RECOMMENDED OPERATING CONDITIONS

All devices ("x" = don't care) , all amperages DC, all voltages DC and referenced to device ground, $" y "=1(2)$ for anode $1(2)$ terminal, respectively, or unless otherwise specified.

| Symbol | Parameter | Min. | Max. | Units |
| :---: | :--- | :---: | :---: | :---: |
| $\mathrm{V}_{\mathrm{Ay}}$ | Anode Voltage, Devices ORx41A-xxx | 5.6 | 18 | V |
|  | Anode Voltage, Devices ORx41B-xxx | 5.6 | 36 | V |
| $\mathrm{~V}_{\mathrm{K}}$ | Cathode Voltage (anode voltage at min.), Devices ORx41A-xxx | 5.5 | 18 | V |
|  | Cathode Voltage (anode voltage at min.), Devices ORx41B-xxx | 5.5 | 36 | V |
| $\mathrm{~T}_{\mathrm{A}}$ | Ambient Temperature | -40 | +105 | ${ }^{\circ} \mathrm{C}$ |

All devices (" $x$ " = don't care), all amperages DC, all voltages DC and referenced to ground, "I ${ }_{F}$ " $=$ rectifier forward current, " $y$ " $=1(2)$ for anode $1(2)$ terminal, respectively, $T_{A}=+25 \pm 3{ }^{\circ} \mathrm{C}, 5.6 \mathrm{~V} \leq \mathrm{VA}_{y}(\mathrm{ORx} 41 \mathrm{~A}-\mathrm{xxx}) \leq 18 \mathrm{~V}, 5.6 \mathrm{~V} \leq \mathrm{VA}_{y}(\mathrm{ORx} 41 \mathrm{~B}-\mathrm{xxx}) \leq 36 \mathrm{~V}$, all LEDs enabled, unless otherwise specified.

| Symbol | Parameter | Min. | Typ. | Max. | Units | Conditions | Test Setup Figure |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{I}_{\mathrm{F}, \mathrm{MAX}}$ | Maximum Forward Forward Continuous Current (per rectifier) |  |  | 100 | A | Devices ORM41x-100, $-40^{\circ} \mathrm{C} \leq \mathrm{T}_{\mathrm{A}} \leq+100^{\circ} \mathrm{C}$ |  |
|  |  |  |  | 150 | A | Devices ORM41x-150, $-40^{\circ} \mathrm{C} \leq \mathrm{T}_{\mathrm{A}} \leq+100^{\circ} \mathrm{C}$ |  |
|  |  |  |  | 200 | A | Devices ORM41x-200, $-40^{\circ} \mathrm{C} \leq \mathrm{T}_{\mathrm{A}} \leq+100^{\circ} \mathrm{C}$ |  |
|  |  |  |  | 250 | A | Devices ORM41x-250, $-40^{\circ} \mathrm{C} \leq \mathrm{T}_{\mathrm{A}} \leq+100^{\circ} \mathrm{C}$ |  |
|  |  |  |  | 300 | A | Devices ORM41x-300, $-40^{\circ} \mathrm{C} \leq \mathrm{T}_{\mathrm{A}} \leq+100^{\circ} \mathrm{C}$ |  |
|  |  |  |  | 400 | A | Devices ORL41x-400, $-40{ }^{\circ} \mathrm{C} \leq \mathrm{T}_{\mathrm{A}} \leq+105^{\circ} \mathrm{C}$ |  |
|  |  |  |  | 500 | A | Devices ORL41x-500, $-40^{\circ} \mathrm{C} \leq \mathrm{T}_{\mathrm{A}} \leq+105^{\circ} \mathrm{C}$ |  |
|  |  |  |  | 600 | A | Devices ORL41x-600, $-40{ }^{\circ} \mathrm{C} \leq \mathrm{T}_{\mathrm{A}} \leq+105{ }^{\circ} \mathrm{C}$ |  |
| $\mathrm{I}_{\text {SURGE,MAX }}$ | Maximum Surge Current (per rectifier) |  |  | $5 \times \mathrm{I}_{\mathrm{F}, \mathrm{MAX}}$ | A | Pulse width $=2 \mathrm{~s},-40^{\circ} \mathrm{C} \leq \mathrm{T}_{\mathrm{A}} \leq+105{ }^{\circ} \mathrm{C}$ |  |
| $V_{F}$ | Forward Voltage Drop ${ }^{(8)}$ |  | 30 |  | mV | ORM41A-100, $I_{F}=I_{F, M A X}$ | 1 |
|  |  |  | 42 | 45 | mV | ORM41A-100, $I_{F}=I_{F, M A X}, T_{A}=+100^{\circ} \mathrm{C}$ |  |
|  |  |  | 34 |  | mV | ORM41A-150, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 46 | 49 | mV | ORM41A-150, $I_{F}=I_{F, M A X}, T_{A}=+100^{\circ} \mathrm{C}$ |  |
|  |  |  | 34 |  | mV | ORM41A-200, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 45 | 48 | mV | ORM41A-200, $I_{F}=I_{F, M A X}, T_{A}=+100^{\circ} \mathrm{C}$ |  |
|  |  |  | 36 |  | mV | ORM41A-250, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 48 | 51 | mV | ORM41A-250, $I_{F}=I_{F, M A X}, T_{A}=+100^{\circ} \mathrm{C}$ |  |
|  |  |  | 41 |  | mV | ORM41A-300, $I_{F}=I_{F, \text { MAX }}$ |  |
|  |  |  | 53 | 56 | mV | ORM41A-300, $I_{F}=I_{F, M A X}, T_{A}=+100^{\circ} \mathrm{C}$ |  |
|  |  |  | 39 |  | mV | ORL41A-400, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 51 | 56 | mV | ORL41A-400, $I_{F}=I_{F, M A X}, T_{A}=+100^{\circ} \mathrm{C}$ |  |
|  |  |  | 44 |  | mV | ORL41A-500, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 57 | 63 | mV | ORL41A-500, $\mathrm{I}_{\mathrm{F}}=\mathrm{I}_{\mathrm{F}, \mathrm{MAX}}, \mathrm{T}_{\mathrm{A}}=+100^{\circ} \mathrm{C}$ |  |
|  |  |  | 51 |  | mV | ORL41A-600, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 66 | 73 | mV | ORL41A-600, $\mathrm{I}_{\mathrm{F}}=\mathrm{I}_{\mathrm{F}, \mathrm{MAX}}, \mathrm{T}_{\mathrm{A}}=+105^{\circ} \mathrm{C}$ |  |
|  |  |  | 33 |  | mV | ORM41B-100, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 48 | 51 | mV | ORM41B-100, $\mathrm{I}_{\mathrm{F}}=\mathrm{I}_{\mathrm{F}, \mathrm{MAX}}, \mathrm{T}_{\mathrm{A}}=+100^{\circ} \mathrm{C}$ |  |
|  |  |  | 31 |  | mV | ORM41B-150, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 45 | 48 | mV | ORM41B-150, $I_{F}=I_{F, M A X}, T_{A}=+105^{\circ} \mathrm{C}$ |  |
|  |  |  | 38 |  | mV | ORM41B-200, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 55 | 58 | mV | ORM41B-200, $I_{F}=I_{F, M A X}, T_{A}=+100^{\circ} \mathrm{C}$ |  |
|  |  |  | 45 |  | mV | ORM41B-250, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 65 | 68 | mV | ORM41B-250, $I_{F}=I_{F, M A X}, T_{A}=+100^{\circ} \mathrm{C}$ |  |
|  |  |  | 49 |  | mV | ORM41B-300, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 72 | 76 | mV | ORM41B-300, $I_{F}=I_{F, M A X}, T_{A}=+100^{\circ} \mathrm{C}$ |  |
|  |  |  | 44 |  | mV | ORL41B-400, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 62 | 68 | mV | ORL41B-400, $I_{F}=I_{F, M A X}, T_{A}=+105{ }^{\circ} \mathrm{C}$ |  |
|  |  |  | 52 |  | mV | ORL41B-500, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 74 | 81 | mV | ORL41B-500, $\mathrm{I}_{\mathrm{F}}=\mathrm{I}_{\mathrm{F}, \mathrm{MAX}}, \mathrm{T}_{\mathrm{A}}=+105{ }^{\circ} \mathrm{C}$ |  |
|  |  |  | 59 |  | mV | ORL41B-600, $I_{F}=I_{F, M A X}$ |  |
|  |  |  | 83 | 91 | mV | ORL41B-600, $\mathrm{I}_{\mathrm{F}}=\mathrm{I}_{\mathrm{F}, \mathrm{MAX}}, \mathrm{T}_{\mathrm{A}}=+105{ }^{\circ} \mathrm{C}$ |  |

All devices ("x" = don't care), all amperages DC, all voltages DC and referenced to ground, "IF" = rectifier forward current, "y" $=1(2)$ for anode $1(2)$ terminal, respectively, $\mathrm{T}_{\mathrm{A}}=+25 \pm 3^{\circ} \mathrm{C}, 5.6 \mathrm{~V} \leq \mathrm{VA}_{\mathrm{y}}(\mathrm{ORx} 41 \mathrm{~A}-\mathrm{xxx}) \leq 18 \mathrm{~V}, 5.6 \mathrm{~V} \leq \mathrm{VA}_{\mathrm{y}}(\mathrm{ORx} 41 \mathrm{~B}-\mathrm{xxx}) \leq 36 \mathrm{~V}$, all LEDs enabled, unless otherwise specified.

| Symbol | Parameter | Min. | Typ. | Max. | Units | Conditions | Test Setup Figure |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{I}_{\text {over,trip }}$ | Forward Over-current Indicator Trip |  | $1.2 \times \mathrm{I}_{\mathrm{F}, \mathrm{MAX}}$ |  | A | $-40^{\circ} \mathrm{C} \leq \mathrm{T}_{\mathrm{A}} \leq+105^{\circ} \mathrm{C}$ | 1 |
| $\mathrm{l}_{\text {over,reset }}$ | Forward Over-current Indicator Reset |  | $\mathrm{I}_{\text {over,trip }}-10$ |  | A | $-40^{\circ} \mathrm{C} \leq \mathrm{T}_{\mathrm{A}} \leq+105^{\circ} \mathrm{C}$ | 1 |
| $I_{\text {s }}$ | Operating Current ${ }^{(9)}$ |  | 0.7 |  | mA | $\mathrm{V}_{\mathrm{K}}=5.5 \mathrm{~V}$, Anodes floating, Combine not active, 1 minute after power application | 2 |
|  |  |  | 0.8 |  | mA | $\mathrm{V}_{\mathrm{K}}=12.0 \mathrm{~V}$, Anodes floating, Combine not active, 1 minute after power application |  |
|  |  |  | 0.9 |  | mA | $\mathrm{V}_{\mathrm{K}}=18.0 \mathrm{~V}$, Anodes floating, Combine not active, 1 minute after power application |  |
|  |  |  | 1.0 |  | mA | Devices ORx41B-xxx, $\mathrm{V}_{\mathrm{K}}=24.0 \mathrm{~V}$, Anodes floating, Combine not active, 1 minute after power application |  |
|  |  |  | 1.3 |  | mA | Devices ORx41B-xxx, $\mathrm{V}_{\mathrm{K}}=36.0 \mathrm{~V}$, Anodes floating, Combine not active, 1 minute after power application |  |
|  |  |  | 44 |  | mA | $\mathrm{V}_{\mathrm{Ay}}=5.5 \mathrm{~V}$, Cathode and other anode floating, Combine not active | 3 |
|  |  |  | 45 |  | mA | $\mathrm{V}_{\mathrm{Ay}}=12.0 \mathrm{~V}$, Cathode and other anode floating, Combine not active |  |
|  |  |  | 47 |  | mA | $\mathrm{V}_{\mathrm{Ay}}=18.0 \mathrm{~V}$, Cathode and other anode floating, Combine not active |  |
|  |  |  | 48 |  | mA | Devices ORx41B-xxx, $\mathrm{V}_{\mathrm{Ay}}=24.0 \mathrm{~V}$, Cathode and other anode floating, Combine not active |  |
|  |  |  | 51 |  | mA | Devices ORx41B-xxx, $\mathrm{V}_{\mathrm{Ay}}=36.0 \mathrm{~V}$, Cathode and other anode floating, Combine not active |  |
|  |  |  | 57 |  | mA | $\mathrm{V}_{\mathrm{Ay}}=12.0 \mathrm{~V}$, Cathode and other anode floating, Combine active (COMBINE+ and COMBINE- shorted) |  |
|  |  |  | 64 |  | mA | Devices ORx41B-xxx, $\mathrm{V}_{\mathrm{Ay}}=24.0 \mathrm{~V}$, Cathode and other anode floating, Combine active (COMBINE+ and COMBINE- shorted) |  |

## Continued on next page...

All devices (" $x$ " $=$ don't care), all amperages $D C$, all voltages $D C$ and referenced to ground, " $I_{F}=$ rectifier forward current, " $y$ " $=1(2)$ for anode $1(2)$ terminal, respectively, $\mathrm{T}_{\mathrm{A}}=+25 \pm 3{ }^{\circ} \mathrm{C}, 5.6 \mathrm{~V} \leq \mathrm{VA}_{y}(\mathrm{ORx} 41 \mathrm{~A}-\mathrm{xxx}) \leq 18 \mathrm{~V}, 5.6 \mathrm{~V} \leq \mathrm{VA}_{y}(\mathrm{ORx} 41 \mathrm{~B}-\mathrm{xxx}) \leq 36 \mathrm{~V}$, all LEDs enabled, unless otherwise specified.

| Symbol | Parameter | Min. | Typ. | Max. | Units | Conditions | Test Setup Figure |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $I_{R}$ | Reverse Leakage Current (per rectifier) |  |  | 10 | $\mu \mathrm{A}$ | $\mathrm{V}_{\mathrm{K}}=5.5 \mathrm{~V}, \mathrm{~V}_{\mathrm{Ay}}=0 \mathrm{~V}$, Other anode floating | 4 |
|  |  |  |  | 20 | $\mu \mathrm{A}$ | $\mathrm{V}_{\mathrm{K}}=12.0 \mathrm{~V}, \mathrm{~V}_{\mathrm{AY}}=0 \mathrm{~V}$, Other anode floating |  |
|  |  |  |  | 20 | $\mu \mathrm{A}$ | Devices ORM41A-100, ORM41A-150, and ORx41B-xxx, $V_{K}=18.0 \mathrm{~V}, \mathrm{~V}_{\mathrm{Ay}}=0 \mathrm{~V}$, Other anode floating |  |
|  |  |  |  | 65 | $\mu \mathrm{A}$ | Devices ORM41A-200, ORM41A-250, and ORM41A-300, $\mathrm{V}_{\mathrm{K}}=18.0 \mathrm{~V}, \mathrm{~V}_{\mathrm{Ay}}=0 \mathrm{~V}$, Other anode floating |  |
|  |  |  |  | 45 | $\mu \mathrm{A}$ | Devices $\mathrm{ORx} 41 \mathrm{~B}-\mathrm{xxx}, \mathrm{V}_{\mathrm{K}}=24.0 \mathrm{~V}, \mathrm{~V}_{\mathrm{Ay}}=0 \mathrm{~V}$, <br> Other anode floating |  |
|  |  |  |  | 20 | $\mu \mathrm{A}$ | Devices ORM41B-100 and ORM41B-150, $\mathrm{V}_{\mathrm{K}}=$ $36.0 \mathrm{~V}, \mathrm{~V}_{\mathrm{Ay}}=0 \mathrm{~V}$, Other anode floating |  |
|  |  |  |  | 350 | $\mu \mathrm{A}$ | Devices ORM41B-200, ORM41B-250, and ORM41B-300 $\mathrm{V}_{\mathrm{K}}=36.0 \mathrm{~V}, \mathrm{~V}_{\mathrm{Ay}}=0 \mathrm{~V}$, Other anode floating |  |
|  |  |  |  | 800 | $\mu \mathrm{A}$ | Device ORL41B-400, $\mathrm{V}_{\mathrm{K}}=36.0 \mathrm{~V}, \mathrm{~V}_{\mathrm{Ay}}=0 \mathrm{~V}$, <br> Other anode floating |  |
|  |  |  |  | 20 | $\mu \mathrm{A}$ | Device ORL41B-500, $\mathrm{V}_{\mathrm{K}}=36.0 \mathrm{~V}, \mathrm{~V}_{\mathrm{Ay}}=0 \mathrm{~V}$, <br> Other anode floating |  |
|  |  |  |  | 5000 | $\mu \mathrm{A}$ | Device ORL41B-600, $\mathrm{V}_{\mathrm{K}}=36.0 \mathrm{~V}, \mathrm{~V}_{\mathrm{Ay}}=0 \mathrm{~V}$, <br> Other anode floating |  |
| $\mathrm{I}_{\text {combine }}$ | Combine Trigger Current |  | 33 |  | $\mu \mathrm{A}$ | COMBINE+ and COMBINE- shorted together | 5 |
| $\mathrm{V}_{\text {COMBİE }+}$ | COMBINE+ Floating Voltage |  | 3.3 |  | V |  |  |
| $\mathrm{V}_{\text {comb,on }}$ | COMBINE+ Trigger On Voltage |  | $\begin{gathered} \mathrm{V}_{\text {Сомв }, \text { OFF }}- \\ 0.02 \\ \hline \end{gathered}$ |  | V |  |  |
| $\mathrm{V}_{\text {comb,OFF }}$ | COMBINE+ Trigger Off <br> Voltage |  | 2 |  | V |  |  |
| $\mathrm{t}_{\mathrm{RR}}$ | Rectifier Reverse Recovery Time ${ }^{(10)}$ |  |  | 1.3 | ms | Devices ORx41A-xxx, $\mathrm{I}_{\mathrm{F}}=120 \mathrm{~mA}$ | 6 |
|  |  |  |  | 1.5 | ms | Devices ORx41B-xxx, $I_{F}=120 \mathrm{~mA}$ |  |
| $\mathrm{t}_{\text {Fet, Start }}$ | MOSFET Start-up Time ${ }^{(11)}$ |  | 130 |  | ms | $\mathrm{V}_{\mathrm{Ay}}=0$ to 12 V , Cathode and other anode floating | 7 |
|  |  |  |  | 5 | ms | $\mathrm{V}_{\mathrm{K}}=14 \mathrm{~V}$ to floating, $\mathrm{V}_{\mathrm{Ay}}=12 \mathrm{~V}$, Other anode floating | 8 |

## NOTES

1. Stresses beyond those listed under absolute maximum ratings may cause permanent damage to the device. Exposure to any absolute maximum rating condition for extended periods may affect device reliability and lifetime.
2. Transient-protected to 40 V . Additional external protection may be required in some applications.
3. Transient-protected to 60 V . Additional external protection may be required in some applications.
4. Transient-protected to -40 V. Additional external protection may be required in some applications.
5. Transient-protected to -60 V . Additional external protection may be required in some applications.
6. Limits may vary depending upon $\mathrm{V}_{\mathrm{KA}}$ and $\mathrm{V}_{\mathrm{KK}}$ voltages. For example, on $O R x 41 \mathrm{~A}-\mathrm{xxx}$ ( $O R x 41 \mathrm{~B}-\mathrm{xxx}$ ) devices, if $\mathrm{V}_{\mathrm{A} 1}=-12 \mathrm{~V}(-24 \mathrm{~V})$, then $\mathrm{V}_{\mathrm{A} 2, \max }=9 \mathrm{~V}(15 \mathrm{~V})$, respectively.


Figure 1: Forward Voltage Drop


Figure 2: Operating Current $\left(\mathrm{V}_{\mathrm{K}}>\mathrm{V}_{\mathrm{A} 1}\right.$ and $\left.\mathrm{V}_{\mathrm{A} 2}\right)$


Figure 3: Operating Current $\left(\mathrm{V}_{\mathrm{Ay}}>\mathrm{V}_{\mathrm{K}}\right)$


Figure 4: Reverse Leakage Current


Figure 5: Combine Trigger Current


Figure 6: Reverse Recovery Time


Figure 7: MOSFET Start-up Time (Unpowered)


Figure 8: MOSFET Start-up Time (Powered)



## PACKAGE CHARACTERISTICS:

- Injection molded high temperature polycarbonite shell
- Dow Corning Sylgard - aerospace electronics grade
- Six integrated LED's for visual status and diagnostics
- Four integrated reinforced mounting points
- Machined brass connection posts with provided brass washers, and nylon insert nuts. Mounting torque not to exceed 15 newton-meters
- 6-32 brass ground post with provided ring terminal
- Molex top-mounted control harness (if needed) and expansion
post for remote monitoring display
- Vinyl post insulators
- Two enclosure size options, current depending
- Typical weight post-encapsulation including provided hardware:

Medium Package
23.5 ounces (+ / - 10\%)

Large Package
58 ounces (+ / - 10\%)

The POWER-GATE Non-Programmable OR'ing is designed to selectively OR one of two sources to a load. The device will automatically conduct current from the source with higher voltage (relative to device ground) to the load. When the primary source drops below the secondary source, the device will "flip," and current from the secondary will drive the load. The orientation of the internal MOSFET arrays insures there will be no disruption in power driving the load, even when transitioning from one source to another.

If source voltage levels are sufficiently close enough, dynamic voltage sag/rise of one source in response to the opposing source sag/rise can cause oscillation or rapid-switching between the sources. In this case, the "Programmable" OR'ing should be considered. Contact engineering for assistance.


Revision History

| Rev | Date | Description | Page Number(s) |
| :---: | :---: | :--- | :---: |
| 0 | $11 / 7 / 2023$ | Original Release | - |

## DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO

| HAZARD OF <br> ELECTRIC <br> SHOCK, <br> EXPLOSION, <br> OR ARC FLASH. <br> - Disconnect all power before installing or working with this equipment. <br> - Verify all connections and replace all covers before turning on power. <br> Failure to follow these instructions will result in death or serious injury. | RIESGO DE DESCARGA ELECTRICA O EXPLOSION. <br> - Desconectar todos los suministros de energia a este equipo antes de trabajar con este equipo. <br> - Verificar todas las conexiones y colocar todas las tapas antes de energizer el equipo. <br> EI <br> incumplimiento <br> de estas <br> instrucciones <br> puede provocar <br> la muerte o <br> lesiones serias. | RISQUE DE <br> DESCHARGE <br> ELECTRIQUE <br> OU EXPLOSION <br> - Eteindre toutes les sources d'énergie de cet appareil avant de travailler dessus de cet appareil <br> - Vérifier tous connections, et remettre tous couverts en olace avant de mettre sous <br> De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses sérieuses. | GEFAHR EINES <br> ELEKTRISCHE <br> N SCHLAGES <br> ODER EINER <br> EXPLOSION. <br> - Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen <br> - Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren. <br> Unterlassung <br> dieser <br> Anweisungen <br> können zum <br> Tode oder zu <br> schweren <br> Verletzungen führen. | RISCHIO DI SCOSSA <br> ELETTRICA O DELL'ESPLOSI ONE. <br> - Spenga tutta l'alimentazion e che fornisce questa apparecchiatu ra prima del lavorare a questa apparecchiatu ra <br> - Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazi one <br> L'omissione di seguire queste istruz ioni provocherà la morte o di lesioni serie | RISCO DE <br> DESCARGA <br> ELÉTTRICA OU <br> EXPLOSÃO <br> - Desconectar o equipamento de toda á energia antes de instalar ou trabalhar com este equipamen to <br> - Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento <br> O não cumprimento destas instruções pode levar á morte ou lesões sérias. |
| :---: | :---: | :---: | :---: | :---: | :---: |

