

Introduction

| | |
|---|---|
| Benefits of Eaton’s circuit protection solutions..... | 2 |
|---|---|

Protecting PV Systems

| | |
|--|-----|
| Circuit breaker and fuse protected PV distribution network overviews | 4-5 |
| PV System standards | 6 |
| PV Fuses | 6 |
| PV Molded case circuit breakers | 6 |
| PV Array construction | 6 |
| PV Source circuits..... | 6 |

Protecting PV Systems — Source Circuits

| | |
|--|---|
| PV Source circuit protection overview | 7 |
| NEC® 2014 article 690.12 Rapid Shutdown..... | 7 |
| Component standards and ratings | 8 |
| How to select fuses for PV source circuits | 8 |
| Example..... | 9 |

Protecting PV Systems — Output Circuits

| | |
|---|----|
| PV output circuit and inverter input circuit protection overview..... | 10 |
| How to select fuses for PV output circuits..... | 10 |
| Example..... | 11 |
| How to select PV circuit breakers for PV output circuits and inverter input circuits..... | 12 |
| Examples..... | 13 |

PV Product Overview

| | |
|---------------------------------|----|
| PV fuse product offerings | 14 |
| PV fuse holders and blocks..... | 15 |

600V PV Fuses

| | |
|-----------------------------------|----|
| 10x38mm PVM — 600Vdc, 4-30A..... | 16 |
| RK5 PVS-R — 600Vdc, 20-400A | 17 |
| CUBEFuse™ — 600Vdc, 35-100A | 18 |

1000V PV Fuses

| | |
|--|----|
| 10x38mm — 1000Vdc, 1-30A..... | 19 |
| 14x51mm — 1000/1100Vdc, 15-32A..... | 20 |
| NH Sizes 1, 2 & 3 — 1000Vdc, 32-400A..... | 21 |
| XL Sizes 01, 1, 2, L3 — 1000Vdc, 63-630A | 22 |

1500V PV Fuses

| | |
|--|----|
| 14x65mm — 1300/1500Vdc, 2.25-4A & 15-32A | 23 |
| XL Sizes 01, 1, 2, L3 — 1500Vdc, 50-400A | 24 |

In-Line PV Fuses

| | |
|---|----|
| HPV fuse assembly — 1000Vdc, 1-20A..... | 25 |
|---|----|

DC Molded Case Circuit Breakers & Switches

| | |
|--|-------|
| 600Vdc & 1000Vdc PV molded case circuit breakers..... | 26-28 |
| 600Vdc General purpose molded case circuit breakers..... | 29-30 |

DIN-Rail PV Surge Protective Devices

| | |
|---|-------|
| 600/1000/1200Vdc Overvoltage SPDs, 1000Vdc Lightning arrester SPD | 31-33 |
|---|-------|

Eaton Reference Materials

| | |
|--|----|
| Bussmann and Eaton product reference materials and application guides..... | 34 |
|--|----|

More Eaton Products for PV Systems

| | |
|--|----|
| Balance of system products for PV systems..... | 35 |
|--|----|

Protecting PV Systems

How PV power systems work

PV Cells are made from semi-conductor materials, such as polycrystalline silicon or thin film, that convert the sun's light into DC electricity. PV Cells are connected in series to create a PV module and increase voltage.

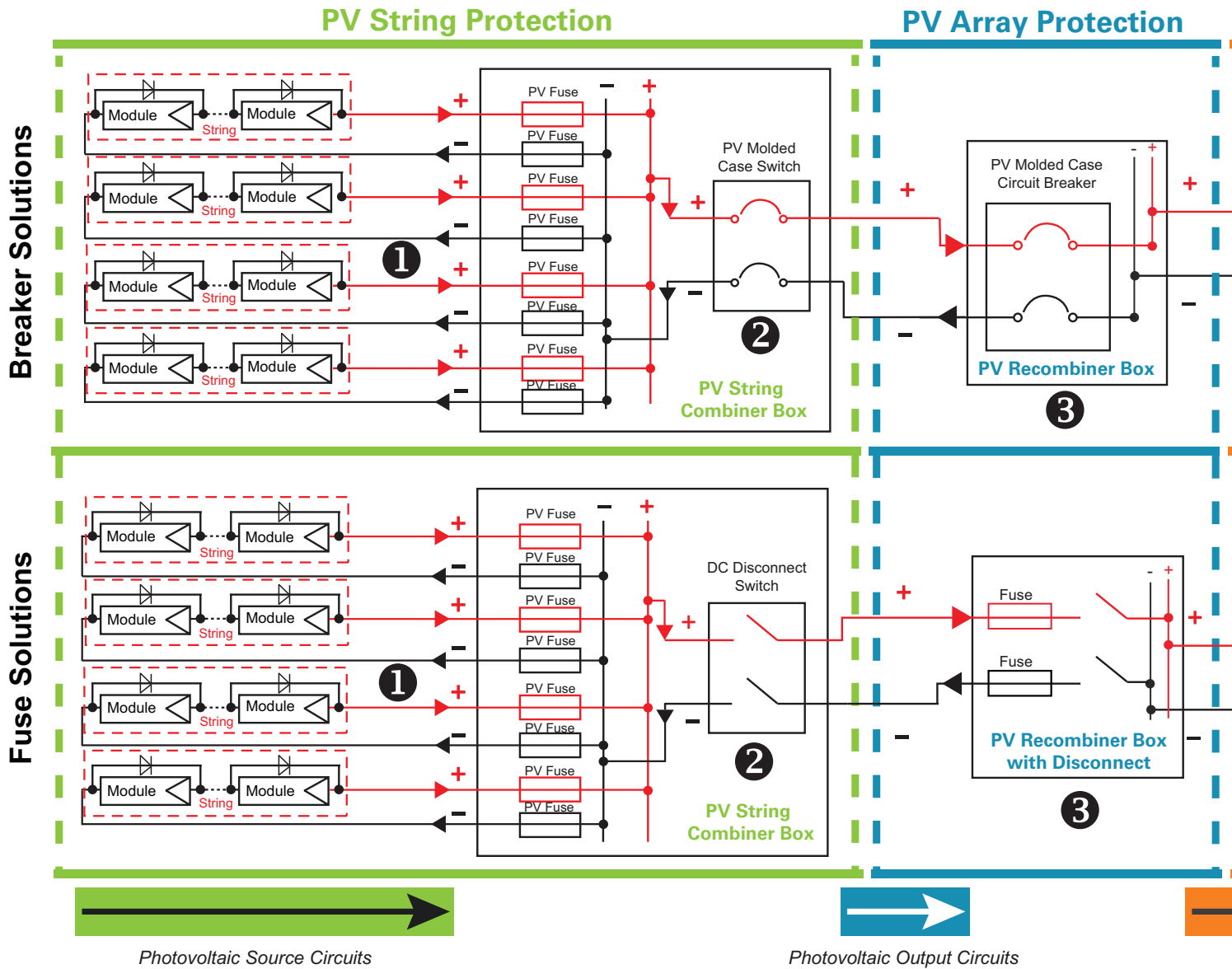


Figure 1: PV powered distribution network with NEC® defined circuits designated by arrows.

