



Pre-printed Solar Installation Labels

HellermannTyton

NEC 690 LABEL APPLICATIONS

NEC690.31(E)(3)

For use on EMT conduit, raceways, enclosures, and combiner boxes.

PHOTOVOLTAIC POWER SOURCE

1980-006

NEC690.4(F)

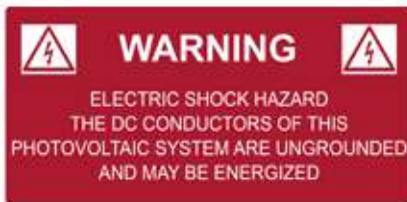
For use on shingled roofs where circuits are embedded.



1980-031

NEC690.35(F)

A PV power source shall be labeled at each junction box, combiner box or disconnect, and device where energized circuits may be exposed during service.



1980-032

NEC690.5(C)

A label shall appear on the utility interactive inverter or be applied by the installer near the ground fault indicator at a visible location. Typically only used on ungrounded systems.



1980-012

NEC690.17

Where all terminals of the disconnecting means may be energized in the open position, a warning label shall be mounted on adjacent to the disconnecting means. For use on AC/DC disconnects, junction boxes or breaker panel.



1980-010



1980-011

NEC110.27(C) or OSHA 1910.145(f)(7)

Warning labels are used to represent a hazard. For use on the breaker panel, main disconnect as well as junction and combiner boxes.



1980-013

NEC690.14(2) and NEC690.1(C)(2)

1980-030



1980-021

1980-024



1980-023

1980-017



NEC690.15

If equipment is energized from more than one source, the disconnecting means must be grouped and identified. In this case of the labels shown, a printer can be used to print the breaker series or disconnect means in the white middle portion of each label.

1980-015



1980-016

NEC690.53(D)

1980-029



NEC690.16(B)

Non-load-break-rated disconnect mean shall be marked "Do Not Open Under Load."



NEC690.33(E)(2)

Interruption current – be a type that requires the use of a tool to open will be marked “Do Not Disconnect Under Load.”



1980-022

NEC690.54

All interactive points of interconnection with other sources shall be marked at an accessible location at the disconnecting means as the power source with the rated AC output current and nominal AC operating voltage.



1980-017

NEC690.55

PV power systems employing energy storage shall also be marked with the maximum operating voltage including any equalization voltage and the polarity of the grounded circuit conductor.

**NEC705.12(D)(4) and NEC690.64**

Equipment containing overcurrent devices in circuits supplying power to a busbar or conductor supplied from multiple sources shall be marked to indicate the presence of all sources. Typically used on the breaker panel.



1980-009



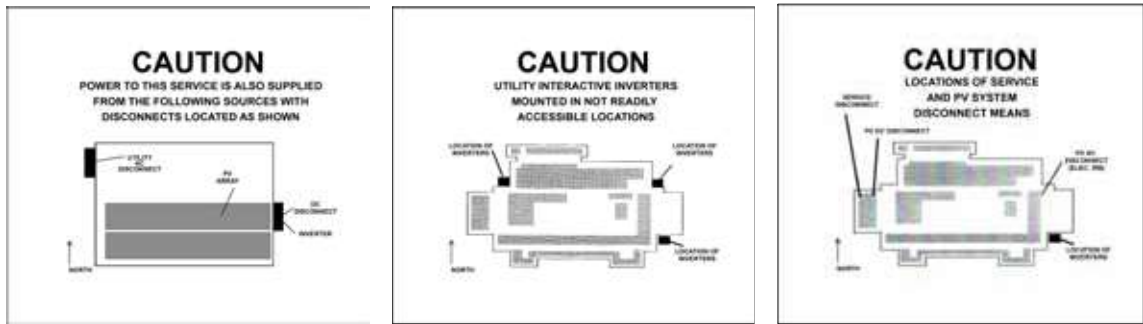
1980-014

Individual breakers should also be marked.



NEC690.56(A), NEC690.4(H) and NEC690.14(D)(4)

A large 4" wide continuous vinyl roll, printed and cut to size, using a label printing program to create directory labels or plaques for buildings and structures. Typical examples include:



NEC690.10(C)

Single 120-volt supply label for panel breakers in a stand-a-lone PV system where only 120-volt service is installed.



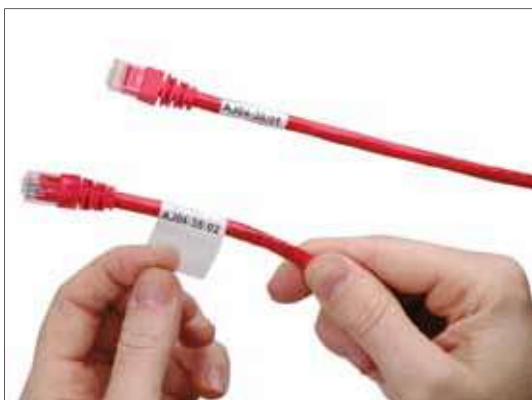
NEC690.7(E)(3)

Bipolar source and output circuits on all DC equipment typically found on most larger solar farms.

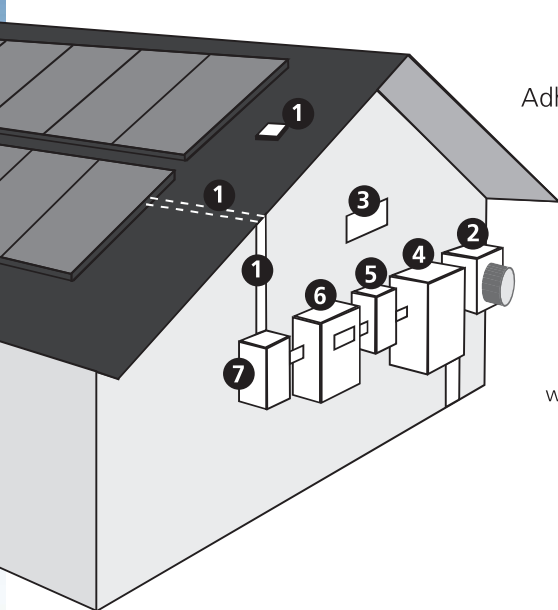


NEC690.4

Where conductors of more than one PV system occupy the same junction box, raceway or equipment, the conductors of each system shall be identified at all terminations and splice points. Cables can be marked using UL969 approved self-laminating vinyl labels.



Always check local codes before defining labeling formats.



Adhesive fastened signs may be acceptable if properly adhered.
Vinyl signs to be weather resistant.
IFC 605.11.1.3

The markings shall be of sufficient durability to withstand the environment involved. NEC 110.21

1 Combiner Box, Circuits / EMT / Conduit Combiner Box / Enclosures / Raceways



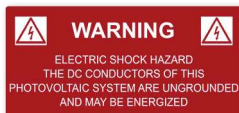
1980-011 PER NEC 690.17(4)



1980-013 PER NEC 110.27(C) & OSHA 1910.145(f)(7)



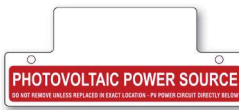
1980-025 PER NEC 690.31(E)(3) & IFC 605.11.1.2



1980-032 PER NEC 690.35(F)



1980-006 PER NEC 690.31(E)(3) & IFC 605.11.1.2



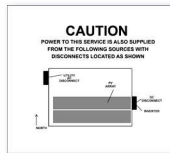
1980-031 PER NEC 690.4(F)

2 Net Meter



1980-012 PER NEC 690.5(C)

3 Building / Structure



PER NEC 690.56(B)

4 Main Service Disconnect



1980-030 PER NEC 690.14(C)(2), IFC 605.11.1, IFC 605.11.1.4, NEC 690.15 & NEC 690.53



1980-023 PER NEC 690.14(C)(2), IFC 605.11.1, IFC 605.11.1.4, NEC 690.15 & NEC 690.53



1980-013 PER NEC 110.27(C) & OSHA 1910.145(f)(7)



1980-011 PER NEC 690.17(4)



1980-024 PER IFC 605.11.1



1980-021 PER NEC 690.14(C)(2), IFC 605.11.1, IFC 605.11.1.4, NEC 690.15 & NEC 690.53

NEC 690.31(E)(3), IFC 605.11.1.2
Labels shall appear at every section of the wiring system that is separated by enclosures, walls, partitions, ceilings or floors. Spacing between labels not to exceed 10 feet (3M).

NEC 690.35(F)
A PV power source shall be labeled at each junction box, combiner box or disconnect, and device where energized, ungrounded circuits may be exposed during service.

NEC 690.4(F)
Where circuits are embedded in build up, laminate or membrane roofing materials not covered by PV modules and associated equipment, the location of the circuits shall be clearly marked.

NEC 690.5(C)
A label shall appear on the utility interactive inverter or be applied by the installer near the ground fault indicator at a visible location.

NEC 690.17(4)
Where all terminals of the disconnecting means may be energized in the open position, a warning label shall be mounted on or adjacent to the disconnecting means.

NEC 110.27(C)
Entrances to rooms or other guarded locations that contain exposed live parts shall be marked with conspicuous warning signs forbidding unqualified persons to enter.

OSHA 1910.145(F)(7)
Warning tags are used to represent a hazard level between "Caution" and "Danger".

4 Breaker Panel / Pull Boxes



1980-012 PER NEC 690.5(C)



1980-011 PER NEC 690.17(4)



1980-013 PER NEC 110.27(C) & OSHA 1910.145(f)(7)

5 AC Disconnect / Breaker / Points of Connection



1980-015 PER IFC 605.11.1, IFC 605.11.1.4, NEC 690.15 & NEC 690.14(C)(2)



1980-011 PER NEC 690.17(4)



1980-028 PER NEC 690.52



1980-017 PER NEC 690.14(C)(2)

6 Inverter

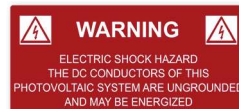


1980-012 PER NEC 690.5(C)



1980-017 PER NEC 690.54

7 DC Disconnect / Breaker



1980-032 PER NEC 690.35(F)



1980-016 PER IFC 605.11.1, IFC 605.11.1.4, NEC 690.15 & NEC 690.14(C)(2)



1980-010 PER NEC 690.17(4)



1980-018 FOR MARKING DC BACKUP SYSTEMS



1980-019 NEC 690.53



1980-029 NEC 690.53

IFC 605.11.1, IFC 605.11.1.4 & NEC 690.15
If the equipment is energized from more than one source, the disconnecting means must be grouped and identified.

NEC 690.14(C)(2)
Each photovoltaic system disconnecting means shall be permanently marked to identify it as a photovoltaic system disconnect.

NEC 690.53
A permanent label for the direct-current PV power source shall be provided by the installer at the PV disconnecting means.

NEC 690.16(B)
Non-load break rated disconnect means shall be marked.

NEC 690.33(E)(2)
Interruption current - be a type that requires the use of a tool to open will be marked "Do Not Disconnect Under Load".

NEC 690.54
All interactive system points of interconnection with other sources shall be marked at an accessible location at the disconnecting means as the power source and with the rated AC output current and the nominal operating AC voltage.

NEC 690.55
PV power systems employing energy storage shall also be marked with the maximum operating voltage, including any equalization voltage and polarity of the grounded circuit conductor.

AC Disconnect Before and After



DC Disconnect Label Locations

