

Technical Brief - Bill of Materials to Use Load Control

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USING THIS DOCUMENT

This document shows 3 of the options for the Ensemble Contactor Box that can be used to shed PV Circuits or Home Loads.

BEST PRACTICES: Before going to the job site complete these steps from the office

- To ensure a consistent installation process and predictable installations times, make sure to ensemble the system contactor box at the warehouse, before going to the job site.
- Have sufficient inventory to build enough boxes for several projects at a time.
- Bring spare parts to the job site, including Fuses, Contactors and Transformers.
- Time to Assemble and install the Box on Site: 1hr.
- Time to install the Pre-Assemble Box on site: 30 min

| Load Control Type | Bill of Materials | | |
|---|---|-----|--|
| | Item | Qty | Description |
| Excess Solar or Load Shedding for (1) 20A Circuit | Control transformer | 1 | Endurance Pro EP4031OF 24V 40VA |
| | Fuse Retainer | 1 | Bussmann BP/HMK-RP fuse holder |
| | Fuse | 1 | NTC 74-6SG1A-C 1A 250V glass fuse |
| | Contactor | 1 | Eaton C25BNB220T 20A |
| | Box | 1 | Gratry Junction Box, Hinged Cover Stainless Steel Clip IP67 Waterproof Plastic Enclosure for Electrical Project Includes Mounting Plate and Wall Bracket 290×190×140mm (11.4"×7.5"×5.5") |
| | Quick Disconnects/Fast on Terminals/Receptacle lug (required for contactors without screw on terminals) | 1 | PIDG, Quick Disconnects, Receptacle, 22 – 18AWG Wire Size TE Internal #: 640911-1 |
| Excess Solar or load Shedding for (2) 30A Circuit | Control transformer | 1 | Fiada B07RDBS6NK |
| | Fuse Retainer | 2 | Eaton BP/HMK-RP fuse holder |
| | Fuse | 2 | Eaton BP-AGC-1-RP 250 V glass fuse |
| | Contactor | 2 | Square D 8910DP32V14 30A |
| | Box | 1 | Gratry Junction Box, Hinged Cover Stainless Steel Clip IP67 Waterproof Plastic Enclosure for Electrical Project Includes Mounting Plate and Wall Bracket 290×190×140mm (11.4"×7.5"×5.5") |
| | Quick Disconnects/Fast on Terminals/Receptacle lug (required for contactors without screw-on terminals) | 1 | PIDG, Quick Disconnects, Receptacle, 22 – 18AWG Wire Size TE Internal #: 640911-1 |
| Excess Solar or Load Shedding for (1) 60A Circuit | Control transformer | 1 | Fiada B07RDBS6NK |
| | Fuse Retainer | 1 | Littelfuse Universal Fuse Retainer Part No: 150145 |
| | Fuse | 1 | NTC 74-6SG1A-C 1 A 250V glass fuse |
| | Contactor | 1 | Square D 8910DPA63V14 60 A |
| | Box | 1 | 6X6 PVC box rated for outdoor use (NEMA 3R or better) (Carlton junction box , for example) |

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| | Quick Disconnects/Fast on Terminals/Receptacle lug (required for contactors without screw on terminals) | 1 | PIDG, Quick Disconnects, Receptacle, 22 – 18AWG Wire Size TE Internal #: 640911-1 |
| Excess Load or PV shedding for (1) 120A circuit | DC power supply | 1 | 12V 1A APV-12-12 Meanwell AC-DC Switching Power Supply |
| | Power Relay | 1 | Schneider Electric Relays W9AS5D52-12 |
| | Contactors | 1 | 120 Amp Contactor C25HNE3120A Eaton / Cutler Hammer • 3 Pole • 110 120 V Coil |
| | Box | 1 | QILIPSU Hinged Cover Stainless Steel Latch 370x270x150mm Junction Box with Mounting Plate, ABS Plastic DIY Electrical Project Case IP67 Waterproof Dustproof Enclosure Grey (14.6"x10.6"x5.9") |
| | Quick Disconnects/Fast on Terminals/Receptacle lug (required for contactors without screw on terminals) | 1 | PIDG, Quick Disconnects, Receptacle, 22 – 18AWG Wire Size TE Internal #: 640911-1 |