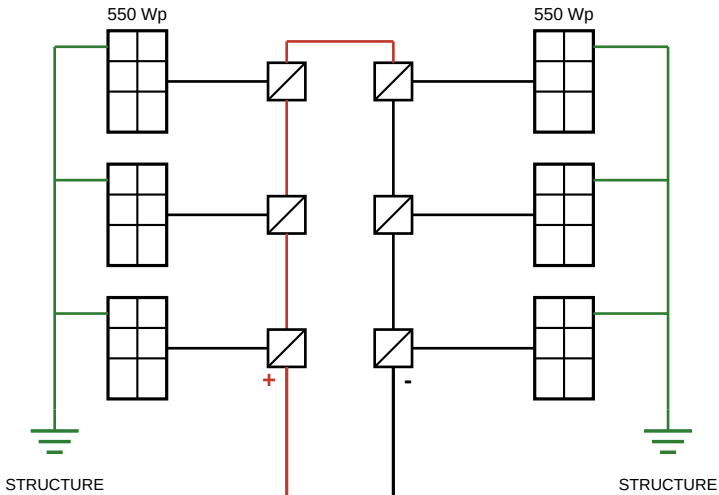
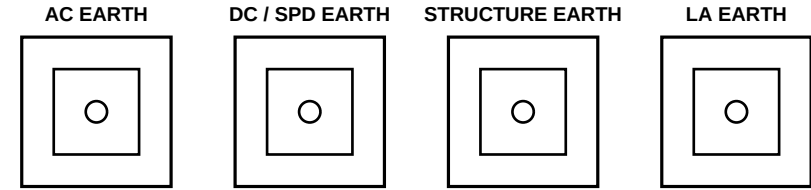


PV ARRAY: 6 x 550 Wp = 3.30 kWp, 1 STRING x 6 S-SERIE OPTIMISERS (1:1)

S-Series optimisers with SE3000H: 6 to 25 optimisers per string, max 6840 W per string, one module per optimiser

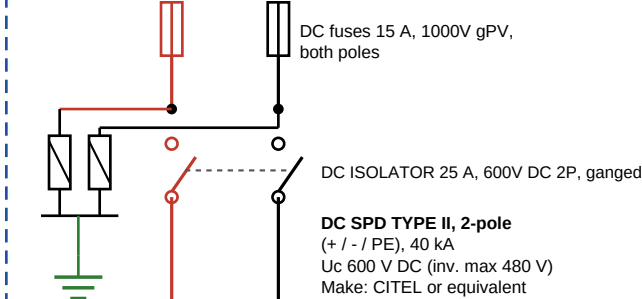


Earth pits: GI pipe 40 mm dia x 2.5 m (or Cu-bonded rod), chemical backfill; 16 sq.mm Cu / 25x3 GI; LA 50 sq.mm Al. LA earth kept separate; AC, DC and structure earths interconnected. Earth resistance < 5 ohm (CEA Reg. 41).

FROM KSEB SUPPLY, 230 V 1-PH

50 sq.mm Al down conductor to dedicated LA earth pit
LIGHTNING ARRESTER as per IS/IEC 62305

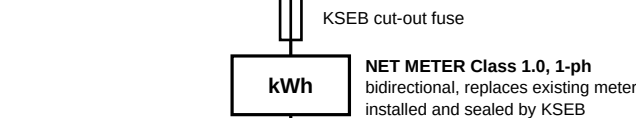
DCDB



SolarEdge

GRID-TIE INVERTER SE3000H, 1-PH
3000 VA / 230 V / 50 Hz, max AC 14 A
max DC 4500 W, DC input 1 x MC4 pair
anti-islanding IEC 62116 / IS 16169, AFCI, DC switch

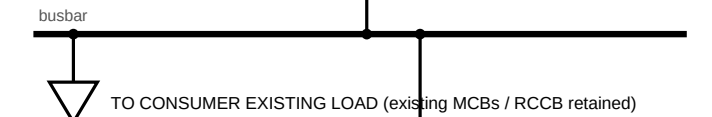
CONSUMER METER BOX



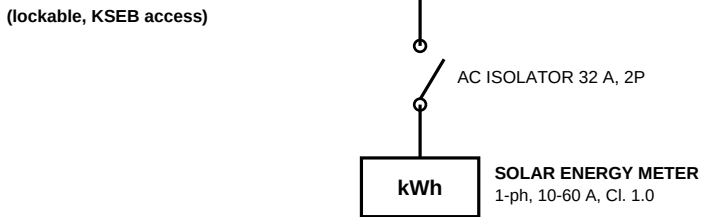
LOCKABLE ENCLOSURE



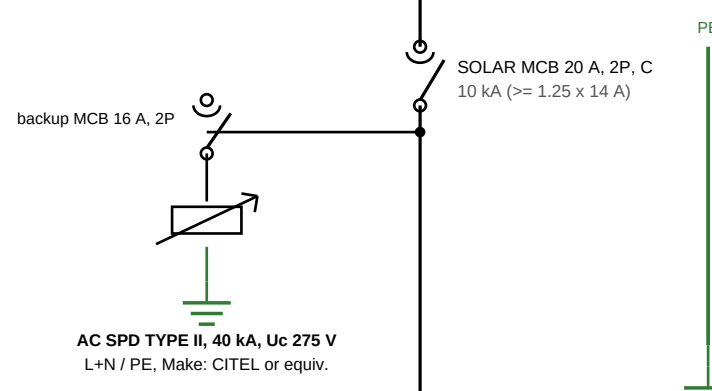
CONSUMER MAIN DB / LT PANEL (existing)



1-PH SOLAR METER BOX (lockable, KSEB access)



ACDB



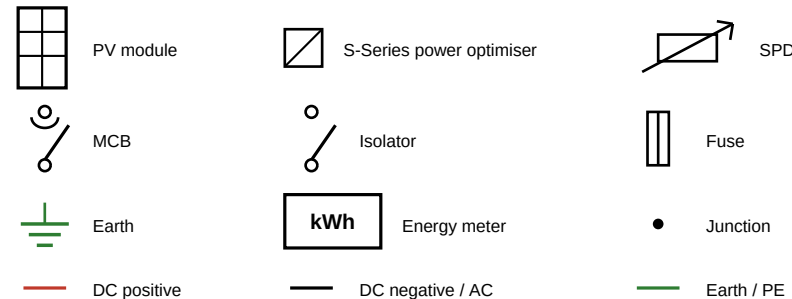
GENERAL NOTES

1. Scheme: KSEB net metering under PM Surya Ghar: Muft Bijli Yojana. Solar capacity shall not exceed the sanctioned connected load; prior feasibility approval from KSEB section office.
2. Single-phase net metering normally limited to 5 kW; above that a 3-ph connection is required.
3. Inverter: grid-interactive, anti-islanding, BIS IS 16221 / IS 16169, IEC 61727 / 62116 compliant.
4. Modules: ALMM-listed, DCR (domestic cells and modules) as required for central subsidy.
5. Net meter (bidirectional) supplied / tested / sealed by KSEB; solar generation meter Class 1.0 installed in a separate lockable box with KSEB access (MNRE requirement).
6. Lockable AC isolator accessible to KSEB staff; 'DUAL SUPPLY - SOLAR PV' warning labels at consumer DB, meter box and ACDB (CEA Safety Regulations 2010 / 2023).
7. Earthing: separate pits for AC, DC/SPD, structure and LA; < 5 ohm; LA down conductor 50 sq.mm Al, LA earth not bonded to others (IS/IEC 62305). Earth electrodes as per IS 3043.
8. If an RCD is called for by the Electrical Inspectorate, use Type A, trip >= 100 mA (SolarEdge).
9. Module mounting structure hot-dip galvanised, designed for wind load per IS 875 (Part 3).
10. DC cables 1.1 kV UV-resistant XLPE in UPVC conduit; AC cables FRLS PVC/XLPE; voltage drop <= 2%.
11. One S-Series optimiser per module; string length and power within SolarEdge limits; no mixing.
12. Installation to CEA Technical Standards for Connectivity (2013, as amended) and KSEB Soura norms.
13. Internet (Wi-Fi/Ethernet) for SolarEdge monitoring; commissioning via SetApp; O&M per schedule.

DESIGN DATA - SE3000H (3 kW) WITH S-SERIE OPTIMISERS

PV modules	6 x 550 Wp = 3.30 kWp (DC/AC ratio 1.10)
Optimiser	SolarEdge S-Series: 1100 W in, module Voc <= 125 V, 15 A in, 18 A / 80 V max out
String	1 string, 6 optimisers (min 6, max 25); 3300 W <= 6840 W
Inverter AC	3000 VA, 230 V 1-ph, 50 Hz, max 14 A continuous
Inverter DC	max 4500 W, 480 V max, 380 V nominal, max 9 A
DC fuses	15 A, 1000V gPV, both poles (>= 1.25 x 9 A)
DC isolator	25 A, 600V DC 2P, ganged
DC SPD	Type II, 2-pole, Uc 600 V DC, 40 kA
DC cable	4 sq.mm x 1C solar XLPE Cu, 1.1 kV, UV rated
String voltage	380 V fixed in operation (inverter regulated); never above 480 V inverter max; 1 V/optimiser when off
AC MCB	20 A, 2P, C-curve, 10 kA (>= 1.25 x 14 A)
AC SPD	Type II, 40 kA, Uc 275 V, backup MCB 16 A, 2P, C
AC cable	4 sq.mm x 3C (L,N,E) Cu
AC isolator	32 A, 2P, lockable, in solar meter box
Gen. meter	1-ph, 10-60 A, Class 1.0, in-line
Earthing	4 pits: AC, DC/SPD, structure: 16 sq.mm Cu or 25x3 GI strip; LA: 50 sq.mm Al
Bonding	10 SWG bare Cu: module frames to structure and frame-to-frame jumpers

LEGEND



CUSTOMER / SITE DETAILS

Customer name	
Consumer number	
Site address / KSEB section	

SOLAREGE ON-GRID PV SYSTEM - 3 kW SINGLE PHASE
SE3000H HD-WAVE + S-SERIE OPTIMISERS - SINGLE LINE DIAGRAM
PROVISIONAL - VERIFY BEFORE USE

Drawing No. JSS/SE/SLD/1PH/3KW/01	Revision 00	Scale NONE	Size A3
Originated by	Checked by	Approved by	Date