©2025 TVET CDACC

072203T4SPV

SOLAR PV INSTALLATION LEVEL3

ENG/OS/SPV/CR/03/3

Install Solar PV system

July/August 2025

TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION COUNCIL (TVET CDACC)

kenyatvet.com

PRACTICAL ASSESSMENT

INSTRUCTIONS TO ASSESSOR

1. Ensure all the materials and equipment are provided.
2. Assess the candidate as the practical progresses observing the critical areas
3. You are required to mark the practical as the candidate perform the tasks
4. Ensure the candidate has a name tag and registration code at the back and front

Candidate's Name & Registration Code			
Assessors Name & Registration Code			
Venue of Assessment			
Date of Assessment			
Items to be Evaluated: *Please award marks as appropriate. Give a brief comment on your observation.*	**Marks Available**	**Marks Obtained**	**Comments**
OBSERVATION CHECKLIST			
1. Observed safety awareness i. Worn overall/ dust coat ii. Safety shoes iii. Hard hat hell mate iv. Proper handling of tools *(Award 1 mark or 0 for each)*	 1 1 1 1		
Sub-Total 1	**4**		
TASK 1: Drawing of wiring diagrams			
2. Drew wiring diagram correctly as in Figure 1 i. Lighting circuit *(Award 2 Marks or 0)* ii. Power circuit *(Award 1 mark or 0)* iii. Sequence of solar PV : *(Award $^1/_2$ or 0 for any 4)*	 2 1 2		
Sub-Total 2	**5**		
TASK 2: Installation of solar PV system			
3. Work space management i. Work space should be free from obstacles ii. Correct waste management and disposal *(Award 1mark or 0 for each)*	 1 1		
4. Dimensions (**±2 mm**) (Award any 5x1) (a) Vertical			

eslimet.com

i. 100 ii. 300 iii. 350 (b)Horizontal i. 300 ii. 300	1 1 1 1 1		
5. Fixed components firmly and level *(Award 1 mark or 0 for any 6 components)*	6		
6. Cable terminations (firm, folded) and correct connection at: i. Charge controller $(Award\ 1)$ ii. Inverter $(Award\ 1)$ iii. CCU $(Award\ 2)$ iv. Switch $(Award\ 1)$ v. Lamp $(Award\ 1)$ vi. Socket $(Award\ 1)$	 1 1 2 1 1 1		
7. PVC minitrunking runs firm and level i. Vertical $\left(Award\ any\ 4 \times \frac{1}{2}\right)$ ii. Horizontal $\left(Award\ any\ 2 \times \frac{1}{2}\right)$ iii. Joint box cable termination $\left(Award\ any\ 2 \times \frac{1}{2}\right)$ iv. 90^0 Angle bend **($\pm 1^0$)** *(Award 1or 0)*	 2 1 1 1		
8. Performing component tests: i. Solar **battery voltage** and **current output** *(Award 1 mark each or 0)* ii. Socket continuity test for the earth terminal *(Award 1 marks or 0)*	 2 1		
9. Tested the circuit for correct functionality i. Lighting circuit *(Award 1 Mark or 0 for each of the 2 lighting points)* ii. Socket circuit *(Award 1marks or 0)* iii. Solar components *(Award 2 or 0 marks)* iv. C.C.U components *(Award $\frac{1}{2}$ or 0 for any two components*	 2 1 2 1		

easytvet.com

v. Circuit protective devices *(Award $\frac{1}{2}$ or 0 for any 4 components)*	2		
10. Correct colour code *(Award 2 or 0)*	2		
11. Performed earthing *(Award 1or 0)*	1		
12. Performed the following tests i. Polarity test ii. continuity test *(Award 1 or 0 for each of the two)*	1 1		
Sub-Total 3	**41**		
GRAND TOTAL	**50**		
$\frac{X}{50}$x 100			

ASSESSMENT OUTCOME

easytvet.com

The candidate was found to be:

Competent ☐ Not yet Competent ☐

(Please tick as appropriate)

(The candidate is competent if the candidate obtains at least 50%)

Feedback from the Candidate:

Feedback to the Candidate:

Candidate Signature **Date:**

_____ _____

Assessor's Signature	Date
_____	_____

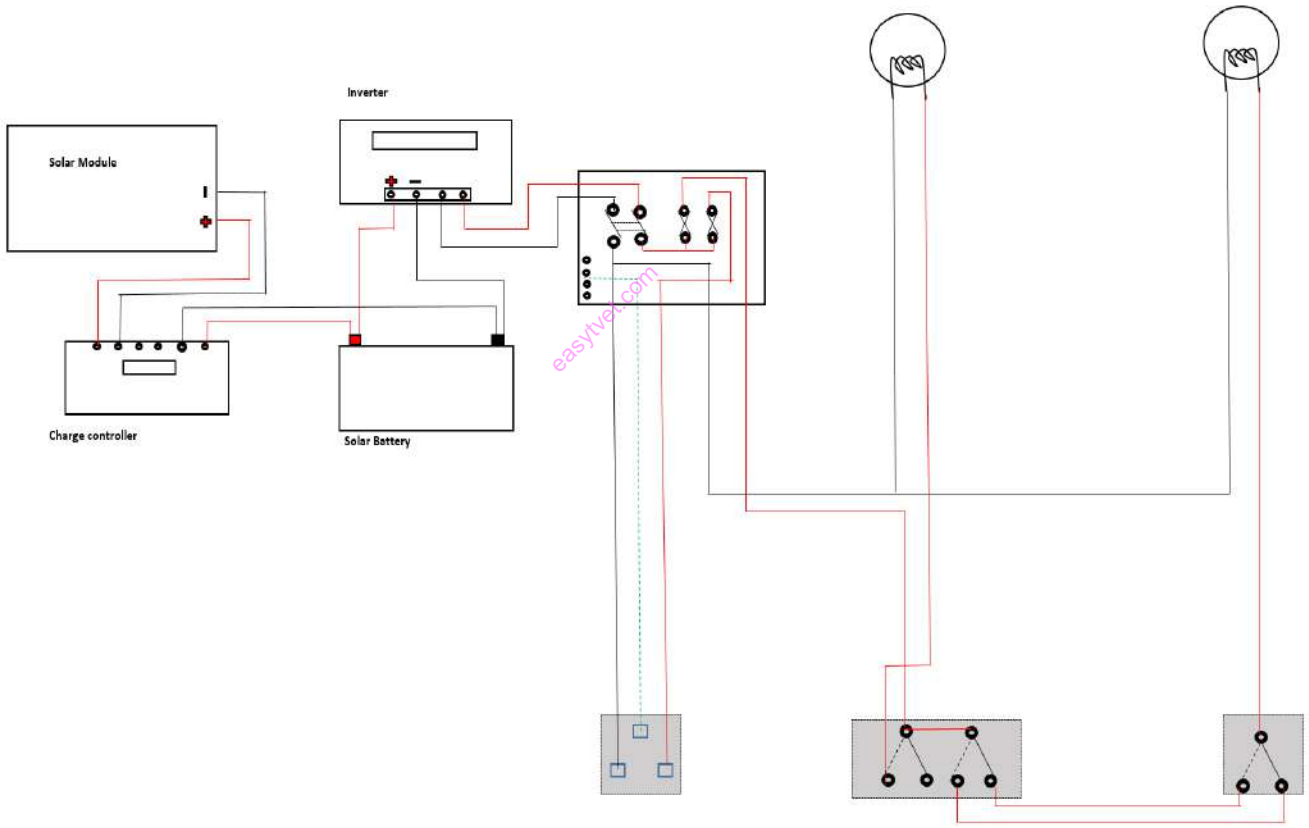


Figure 1: Wiring diagram of solar PV system