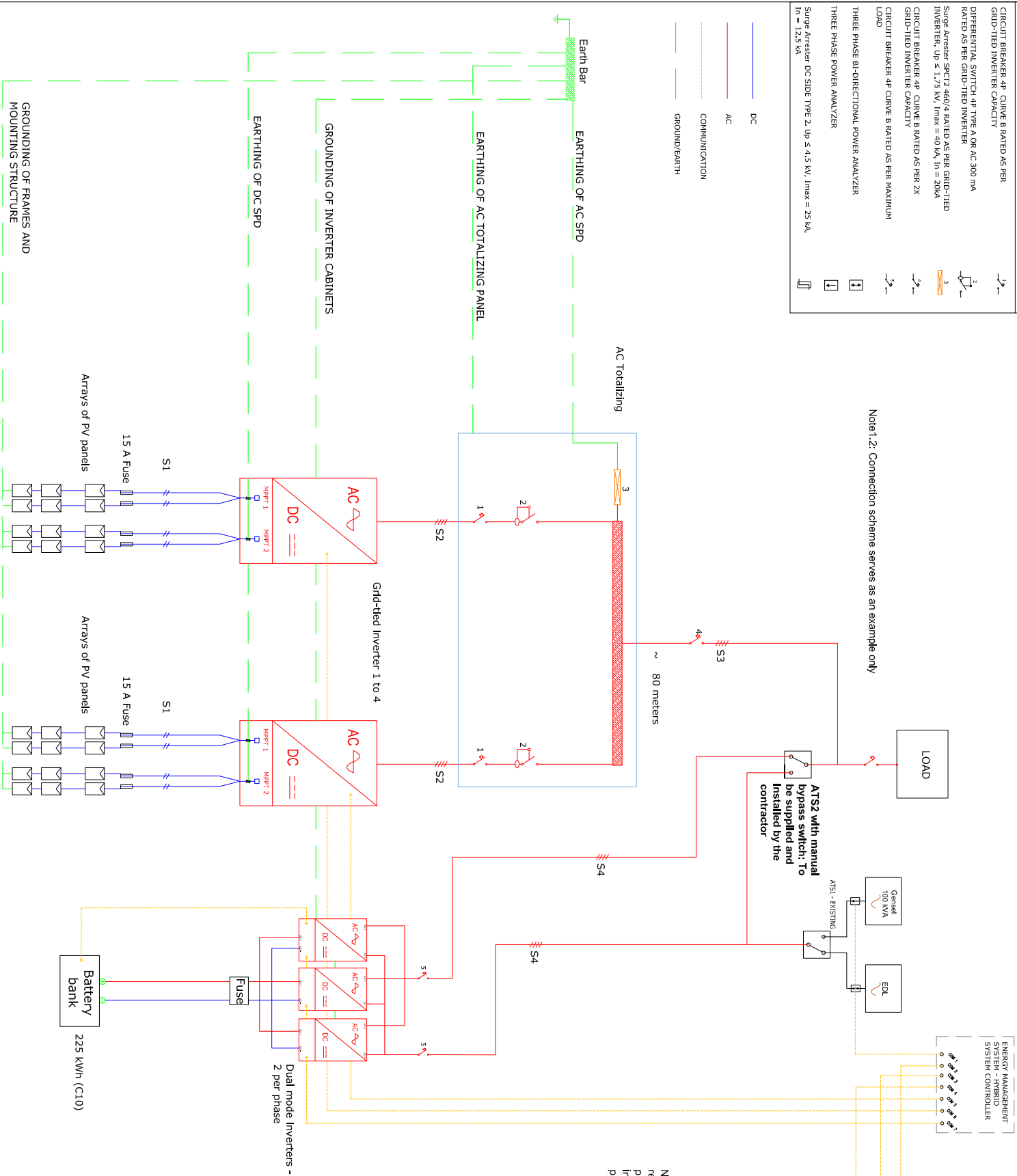


SYMBOLS	
CIRCUIT BREAKER 4P CURVE B RATED AS PER GRID-TIED INVERTER CAPACITY	
DIFFERENTIAL SWITCH 4P TYPE A OR AC 300 mA RATED AS PER GRID-TIED INVERTER	
Surge Arrester SPD12 460/4 RATED AS PER GRID-TIED INVERTER, Up ≤ 1.75 kV, Imax = 40 kA, In = 20kA	
CIRCUIT BREAKER 4P CURVE B RATED AS PER 2X GRID-TIED INVERTER CAPACITY	
CIRCUIT BREAKER 4P CURVE B RATED AS PER MAXIMUM LOAD	
THREE PHASE BI-DIRECTIONAL POWER ANALYZER	
THREE PHASE POWER ANALYZER	
Surge Arrester DC SIDE TYPE 2, Up ≤ 4.5 kV, Imax = 25 kA, In = 12.5 kA	

Note1.2: Connection scheme serves as an example only



Note1.1: Additional Type 2 SPDs for the DC stringings are required if the distance between the inverters and the PV panels is greater than 10 meters. These SPDs should be installed at a distance less than 10 meters from the PV panels.

Maximum Allowable Voltage Drop		
Cable		%ΔU
S1		0.50%
S2 & S3		2.00%
All cables must be UV and water resistant. DC cables shall be of the type Cu Rck 0.6/1 kV.		

SYSTEM DESCRIPTION	
THE SYSTEM IS A HYBRID SOLAR SYSTEM DESIGNED TO DECREASE THE UTILIZATION OF DIESEL AND ENERGY FROM THE GRID.	
MAIN COMPONENTS:	
PV CAPACITY: 90 kWp	
GRID-TIED INVERTER CAPACITY: 4 x 20 kW	
HYBRID INVERTER CAPACITY: 6 x 6 kVA	
BATTERY CAPACITY: 225 kWh AT 10 HOUR RATE (C10)	
BATTERY VOLTAGE: 48 V	
SYSTEM ARCHITECTURE: AC COUPLED SOLAR-STORAGE HYBRID SYSTEM	
INVERTERS IN DRAWINGS: SMA STP 20	
PV PANELS IN DRAWING: JINKO JKM 320 W	
NOTE: CONFIGURATION SERVERS TO BE AN EXAMPLE ONLY	

DRAWING: SINGLE LINE DIAGRAM
PROJECT: JDEIDET EL CHOUF WWTP PV SYSTEM
BENEFICIARY: JDEIDET EL CHOUF MUNICIPALITY
PVLB 2.1.1