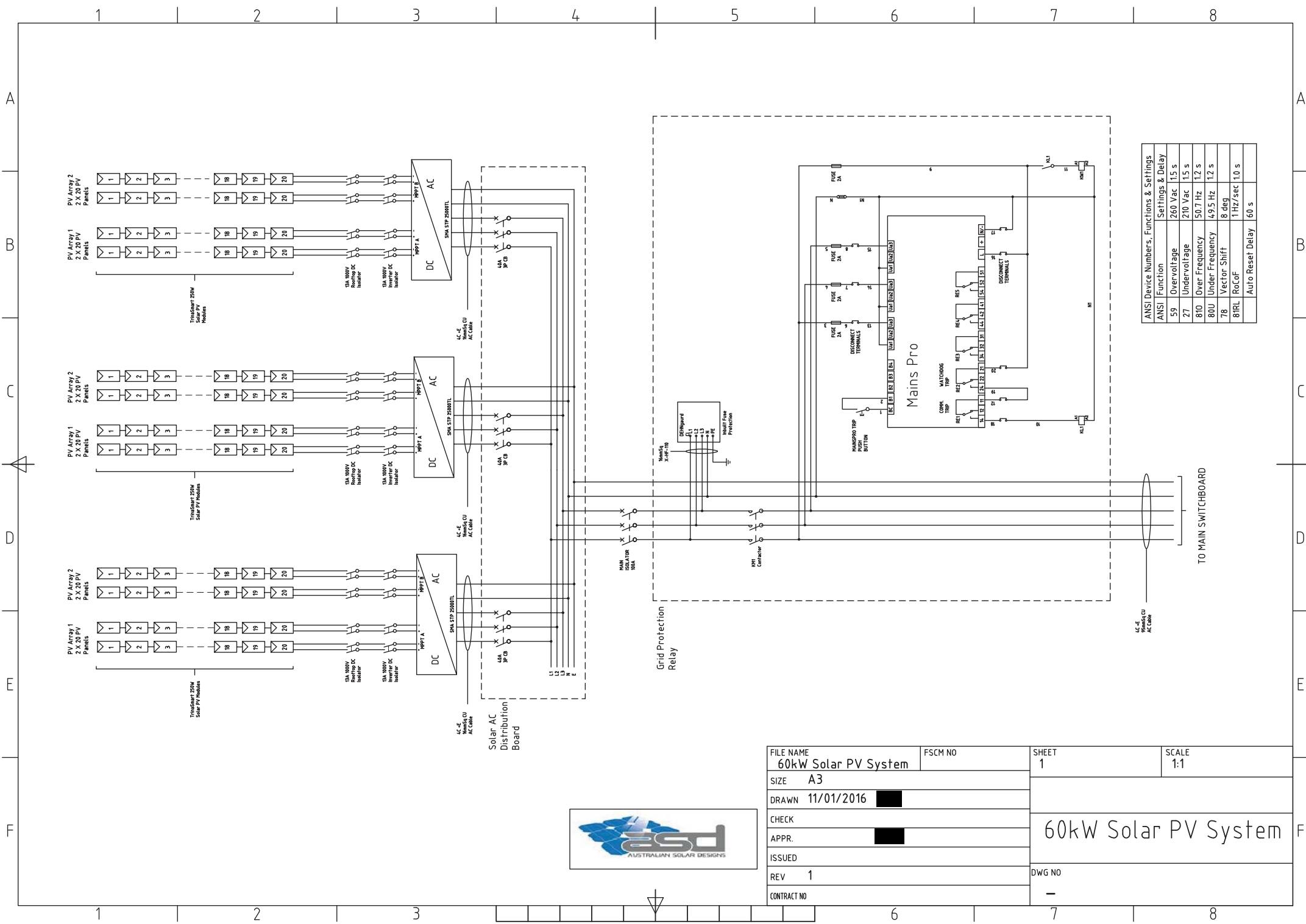1. Technology: Solar PV
2. Maximum Power: 60 kW
3. Contribution to fault levels: N/A
4. Size & rating of the relevant Transformer: N/A
5. Single line diagram: refer to following page
6. Protection Systems & Communication Systems: refer to following page
7. Voltage Control and reactive power capability: N/A
8. Details specific to the location of facility: N/A

PV Array 2
2 X 20 PV
Panels

PV Array 1
2 X 20 PV
Panels

TrinaSmart 250W
Solar PV Modules

13A 1000V
Rooftop DC
Isolator

13A 1000V
Inverter DC
Isolator

MPPT B

MPPT A

AC

DC

SMA STP 25000TL

4C-E
16mmSq CU
AC Cable

40A
3P CB

PV Array 2
2 X 20 PV
Panels

PV Array 1
2 X 20 PV
Panels

TrinaSmart 250W
Solar PV Modules

MPPT B

MPPT A

AC

DC

SMA STP 25000TL

4C-E
16mmSq CU
AC Cable

40A
3P CB

PV Array 2
2 X 20 PV
Panels

PV Array 1
2 X 20 PV
Panels

TrinaSmart 250W
Solar PV Modules

MPPT B

MPPT A

AC

DC

SMA STP 25000TL

4C-E
16mmSq CU
AC Cable

40A
3P CB

Solar AC
Distribution
Board

L1
L2
L3
N
E

DEHNguard
L1
L2
L3
N
PE

16mmSq
X-HF-110

Inbuilt Fuse
Protection

FUSE
2A

FUSE
2A

FUSE
2A

FUSE
2A

FUSE
2A

DISCONNECT
TERMINALS

DISCONNECT
TERMINALS

Mains Pro

WATCHDOG
TRIP

COMM.
TRIP

MAINSPRO TRIP
PUSH
BUTTON

MAIN
ISOLATOR
100A

KM1
Contactor

Grid Protection
Relay

TO MAIN SWITCHBOARD

4C-E
95mmSq CU
AC Cable

ANSI Device Numbers, Functions & Settings		
ANSI	Function	Settings & Delay
59	Overvoltage	260 Vac	1.5 s
27	Undervoltage	210 Vac	1.5 s
81O	Over Frequency	50.7 Hz	1.2 s
81U	Under Frequency	49.5 Hz	1.2 s
78	Vector Shift	8 deg	
81RL	RoCoF	1 Hz/sec	1.0 s
	Auto Reset Delay	60 s	

FILE NAME 60kW Solar PV System	FSCM NO	SHEET 1	SCALE 1:1
SIZE A3			
DRAWN 11/01/2016			
CHECK		60kW Solar PV System	
APPR.			
ISSUED			
REV 1		DWG NO	
CONTRACT NO		—	

asd
AUSTRALIAN SOLAR DESIGNS

Library of Setpoints

For Mainspro

		DEFAULT SETTINGS	INSTALL SETTINGS
Uin		230/400	
System		3PH	
DispT [min]		2 mins	
Auto FR		Disabled	
Auto FR Del [s]		0	
Start Trip		Disabled	
Imp Len [s]		I	
Bak Trp Del [s]		0	
Ext		Enable	
F.R		Enable	
Alt		Disable	
Disable		Disabled	
V>		270V	260V
V> Del		1 sec	1·5 SECS
V>>		0	
V>> Del		0 sec	
V<		203V	210V
V< Del		1.5 sec	1·5 SECS
V<<		0	
V<< Del		0 sec	
Avg V> [V]		0	
RstV>, V>> [%V>]		0	
RstV<, V<< [%V<]		0	
V unb, A.V unb [V]		0	
V< pos, A.V < pos [V]		0	
V> neg, A.V> neg [V]		0	
Du del, A.dU del [s]		0	

		DEFAULT SETTINGS	INSTALL SETTINGS
F>		50.7 Hz	50.7 HZ
F>	Del	1 sec	1.2 SECS
F<		49.5 Hz	49.5 HZ
F<	Del	1 sec	1.2 SECS
F>>		0	
F>>	Del	0	
Rstf>, f>> [%f>]		0	
RSTF<, f<<		0	
VS lim, A.VS lim [⁰]		12	8
ROCOF, A.ROCOF [Hz/s]		1 Hz	1 HZ / SEC
ROCOF filt, A.ROCOF Filt [-]		50	
LOM Init Del, A.LOM Init Del[s]		2 sec	
LOM Trip Del, A.LOM Trip Del[s]		2 sec	
BI1:Ext		BI1 = Ext	
BI2:F.R		BI2 = N/A	
BI3:Alt		BI3 = N/A	
BI4:Dis		BI4 = N/A	
Default Settings		RE1:!CommTrpPer	
		RE2:!InternFail	
		RE3:!BackTrpImp	
		RE4:!InternFail	
		RE5:TrpEndImp	