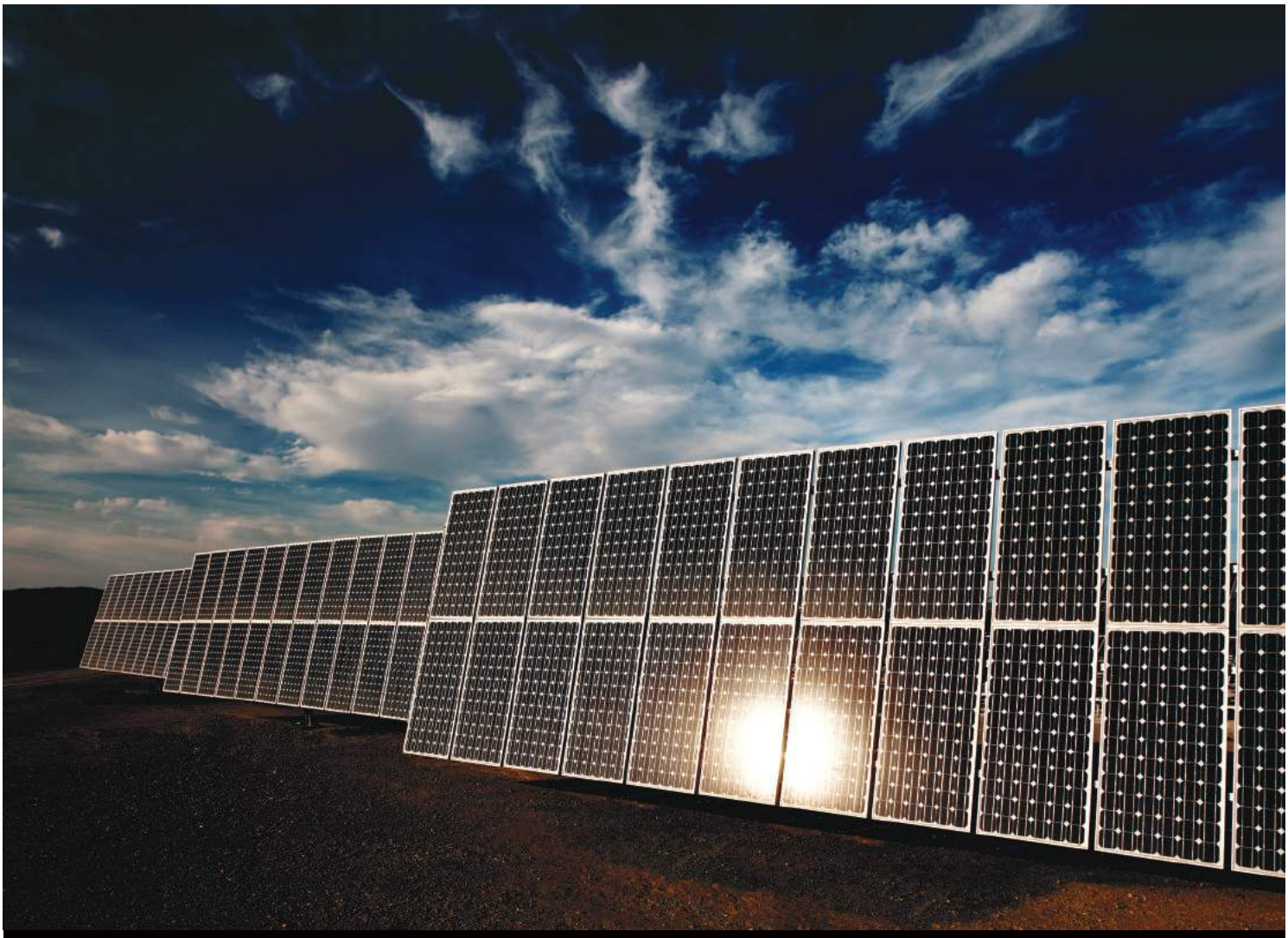


Low Voltage AC drives

Solar Pump Inverter 0.37 to 18.5kW

Power and productivity
for a better world™

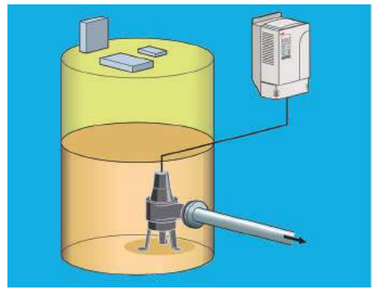
ABB

Solar Pump Inverter
Enabling the power of the sun

Low carbon economy
With utilization of solar power, ABB inverters helps in reducing your carbon footprint. The installed base of ABB's variable speed drives saved about 310 TWh in 2011 and reduced CO_2 emission by 260 million tons.

In-built MPPT
Maximum power point tracking ensures that you get the most power output possible from your solar panel and maximizes the performance of your pump throughout the day.

IP66 for harsh environment
Absolute protection against dust as well as against strong jet of water from all directions making it ideal solution for Indian environment.



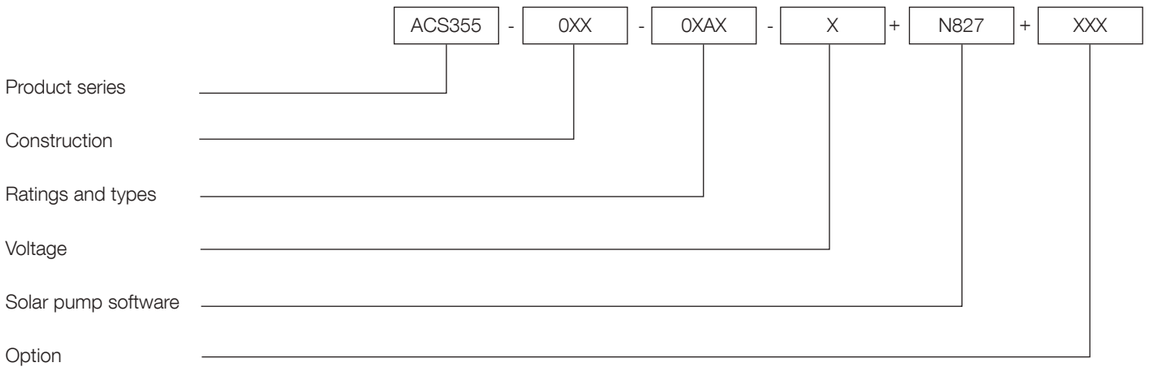
Pump specific protection
Inbuilt flow measurement and flow detection function. Inverter turns off in case of dry run.

Remote monitoring
With the addition of optional modules you can monitor solar pump parameters from anywhere.

Best off grid solution
Where electricity is very erratic and unpredictable farmers need not depend on grid electricity for their agricultural requirements. 300 days of sun shine can now put a smile on their face.

Selection and ordering

Type designation



Features

- Maximize your pump delivery without wasting a watt
- Automatic start and stop with solar irradiation
- Self diagnostic and protection
- Dry run protection
- Dual supply mode - solar and grid compatible
- Compatible with all pumps

Ratings, types and voltages

ACS355 - 0XX - 0XAX - X + N827 + XXX

Type code

This is the unique reference number (shown above and below) to identify your drive by power rating and frame size and can be used to determine the drive dimension.

Voltages

ACS355 is available in two voltage ranges:
2 = 125V to 400V DC or 200V to 240V AC
4 = 250V to 800V DC or 380V to 480V AC

Insert either “2” or “4”, depending upon your chosen voltage, into the type code shown.

Construction

“01E” within the type code (shown above) varies depending upon on the drive phase and EMC filtering. Choose one from below options

01 = 1 phase
03 = 3 phase
E = EMC filter connected, 50Hz

B063 = IP66/IP67

Ratings for IP20				
P_N (HP)	P_N (KW)	I_{2N} (A)	Type description	Frame size
125V to 400V DC or 200V to 240V 1-phase AC				
0.5	0.37	4.7	ACS355-01E-04A7-2	R1
1.0	0.75	6.7	ACS355-01E-06A7-2	R1
1.5	1.1	7.5	ACS355-01E-07A5-2	R2
2.0	1.5	9.8	ACS355-01E-09A8-2	R2
125V to 400V DC or 200V to 240V 3-phase AC				
0.5	0.37	3.5	ACS355-03E-03A5-2	R0
0.75	0.55	4.7	ACS355-03E-04A7-2	R1
1.0	0.75	6.7	ACS355-03E-06A7-2	R1
1.5	1.0	7.5	ACS355-03E-07A5-2	R1
2.0	1.5	9.8	ACS355-03E-09A8-2	R2
3.0	2.2	13.3	ACS355-03E-13A3-2	R2
4.0	3.0	17.6	ACS355-03E-17A6-2	R2
5.0	4.0	24.4	ACS355-03E-24A4-2	R3
7.5	5.5	31.0	ACS355-03E-31A0-2	R4
10.0	7.5	46.2	ACS355-03X-46A2-2	R4
250V to 800V DC or 380V to 480V 3-phase AC				
0.5	0.37	1.9	ACS355-03E-01A9-4	R0
0.75	0.55	2.4	ACS355-03E-02A4-4	R1
1.0	0.75	3.3	ACS355-03E-03A3-4	R1
1.5	1.1	4.1	ACS355-03E-04A1-4	R1
2.0	1.5	5.6	ACS355-03E-05A6-4	R1
3.0	2.2	7.3	ACS355-03E-07A3-4	R1
4.0	3.0	8.8	ACS355-03E-08A8-4	R1
5.0	4.0	12.5	ACS355-03E-12A5-4	R3
7.5	5.5	15.6	ACS355-03E-15A6-4	R3
10.0	7.5	23.1	ACS355-03E-23A1-4	R3
15.0	11.0	31.0	ACS355-03E-31A0-4	R4
20.0	15.0	38.0	ACS355-03E-38A0-4	R4
25.0	18.5	44.0	ACS355-03E-44A0-4	R4

Ratings for IP66/IP67				
P_N (HP)	P_N (KW)	I_{2N} (A)	Type description	Frame size
125V to 400V DC or 200V to 240V 3-phase AC				
0.5	0.37	3.5	ACS355-03E-03A5-2+B063	R1
0.75	0.55	4.7	ACS355-03E-04A7-2+B063	R1
1.0	0.75	6.7	ACS355-03E-06A7-2+B063	R1
1.5	1.1	7.5	ACS355-03E-07A5-2+B063	R1
2.0	1.5	9.8	ACS355-03E-09A8-2+B063	R3
3.0	2.2	13.3	ACS355-03E-13A3-2+B063	R3
4.0	3.0	17.6	ACS355-03E-17A6-2+B063	R3
250V to 800V DC or 380V to 480V 3-phase AC				
0.5	0.37	1.9	ACS355-03E-01A9-4+B063	R1
0.75	0.55	2.4	ACS355-03E-02A4-4+B063	R1
1.0	0.75	3.3	ACS355-03E-03A3-4+B063	R1
1.5	1.1	4.1	ACS355-03E-04A1-4+B063	R1
2.0	1.5	5.6	ACS355-03E-05A6-4+B063	R1
3.0	2.2	7.3	ACS355-03E-07A3-4+B063	R1
4.0	3.0	8.8	ACS355-03E-08A8-4+B063	R1
5.0	4.0	12.5	ACS355-03E-12A5-4+B063	R3
7.5	5.5	15.6	ACS355-03E-15A6-4+B063	R3

Product compliance

- UL, cUL, CE, C-Tick and GOST R approvals
- Low Voltage Directive 73/23/EEC with supplements
- EMC Directive 89/336/EEC with supplements
- Quality assurance system ISO 9001
- Environmental system ISO 14001
- RoHS compliant
- DIN40050-9 (IP69K)

Connection representation

Inverter - pump cable length

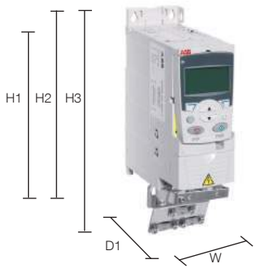
Frame size	Maximum motor cable length	
	m	ft
Standard inverter without external options		
R0	30	100
R1...R4	50	165
Standard inverter with external output chokes		
R0	60	195
R1...R4	100	330

Dimensions

Cabinet mounted inverter (IP20 UL open)

Frame size	IP20 UL open					
	H1	H2	H3	W	D1	Weight
	mm	mm	mm	mm	mm	kg
R0	169	202	239	70	161	1.2
R1	169	202	239	70	161	1.2
R2	169	202	239	105	165	1.5
R3	169	202	236	169	169	2.5
R4	181	202	244	260	169	4.4

H1 = Height without fastenings and clamping plate
H2 = Height with fastenings but without clamping plate
H2 = Height with fastenings and clamping plate
W = Width
D1 = Standard depth



Wall mounted drives (IP66/IP67/UL type 4X)

Frame size	IP66/67 UL type 4X			
	H	W	D1	Weight
	mm	mm	mm	kg
R1	305	195	281	7.7
R3	436	246	277	13

Cooling and fuses

Cooling

ACS355 is fitted with cooling fans as standard. The cooling air must be free from corrosive substances. Heat dissipation from IP66/IP67/UL type 4x drive equals to the IP20 UL open values.

Fuses

Use standard fuses with ABB Solar pump inverter.

For input fuse connection in DC side UR or gG, see table below. With UR fuses, determine the rating by the maximum instantaneous DC current because fuses work fast. In practice, select fuses for a current about two times higher than the DC current calculated from the nominal power. With gG fuses, take a rating one size smaller. Optional AC side gG fuse is also mentioned if inverter is operating on grid mode.

Cooling air flow

Type description	Frame size	Heat dissipation	Air flow
		[W]	m³/h
125V to 400V DC or 200V to 240V 1-phase AC			
ACS355-01E-04A7-2	R1	72	24
ACS355-01E-06A7-2	R1	97	24
ACS355-01E-07A5-2	R2	101	21
ACS355-01E-09A8-2	R2	124	21
125V to 400V DC or 200V to 240V 3-phase AC			
ACS355-03E-03A5-2	R0	54	–[1]
ACS355-03E-04A7-2	R1	64	24
ACS355-03E-06A7-2	R1	86	24
ACS355-03E-07A5-2	R1	88	21
ACS355-03E-09A8-2	R2	111	21
ACS355-03E-13A3-2	R2	140	52
ACS355-03E-17A6-2	R2	180	52
ACS355-03E-24A4-2	R3	285	71
ACS355-03E-31A0-2	R4	328	96
ACS355-03E-46A2-2	R4	488	96
250V to 800V DC or 380V to 480V 3-phase AC			
ACS355-03E-01A9-4	R0	40	–[1]
ACS355-03E-02A4-4	R1	50	13
ACS355-03E-03A3-4	R1	60	13
ACS355-03E-04A1-4	R1	69	13
ACS355-03E-05A6-4	R1	90	19
ACS355-03E-07A3-4	R1	107	24
ACS355-03E-08A8-4	R1	127	24
ACS355-03E-12A5-4	R3	161	52
ACS355-03E-15A6-4	R3	204	52
ACS355-03E-23A1-4	R3	301	71
ACS355-03E-31A0-4	R4	408	96
ACS355-03E-38A0-4	R4	498	96
ACS355-03E-44A0-4	R4	588	96

[1] Frame size R0 with free convection cooling

Free space requirement

Enclosure type	Space above mm	Space below mm	Space on left/right mm
All frame size	75	75	0
IP66/67 enclosure	75	75	20

Cooling air flow

Type description	Frame size	IEC fuses AC side [A]	DC fuse PV side [A]	
		Fuse type	Fuse type	
		gG	UR	gG
125V to 400V DC or 200V to 240V 1-phase AC				
ACS355-01E-04A7-2	R1	16	10	10
ACS355-01E-06A7-2	R1	16	10	10
ACS355-01E-07A5-2	R2	20	16	10
ACS355-01E-09A8-2	R2	25	16	16
125V to 400V DC or 200V to 240V 3-phase AC				
ACS355-03E-03A5-2	R0	10	10	10
ACS355-03E-04A7-2	R1	10	10	10
ACS355-03E-06A7-2	R1	16	10	10
ACS355-03E-07A5-2	R1	16	16	10
ACS355-03E-09A8-2	R2	16	16	16
ACS355-03E-13A3-2	R2	25	25	25
ACS355-03E-17A6-2	R2	25	35	25
ACS355-03E-24A4-2	R3	63	35	35
ACS355-03E-31A0-2	R4	80	50	50
ACS355-03E-46A2-2	R4	100	80	63
250V to 800V DC or 380V to 480V 3-phase AC				
ACS355-03E-01A9-4	R0	10	10	10
ACS355-03E-02A4-4	R1	10	10	10
ACS355-03E-03A3-4	R1	10	10	10
ACS355-03E-04A1-4	R1	16	10	10
ACS355-03E-05A6-4	R1	16	10	10
ACS355-03E-07A3-4	R1	16	16	10
ACS355-03E-08A8-4	R1	20	25	16
ACS355-03E-12A5-4	R3	25	25	16
ACS355-03E-15A6-4	R3	35	35	25
ACS355-03E-23A1-4	R3	50	50	35
ACS355-03E-31A0-4	R4	80	63	50
ACS355-03E-38A0-4	R4	100	80	50
ACS355-03E-44A0-4	R4	100	80	63

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Note: Specifications subject to change without notice.