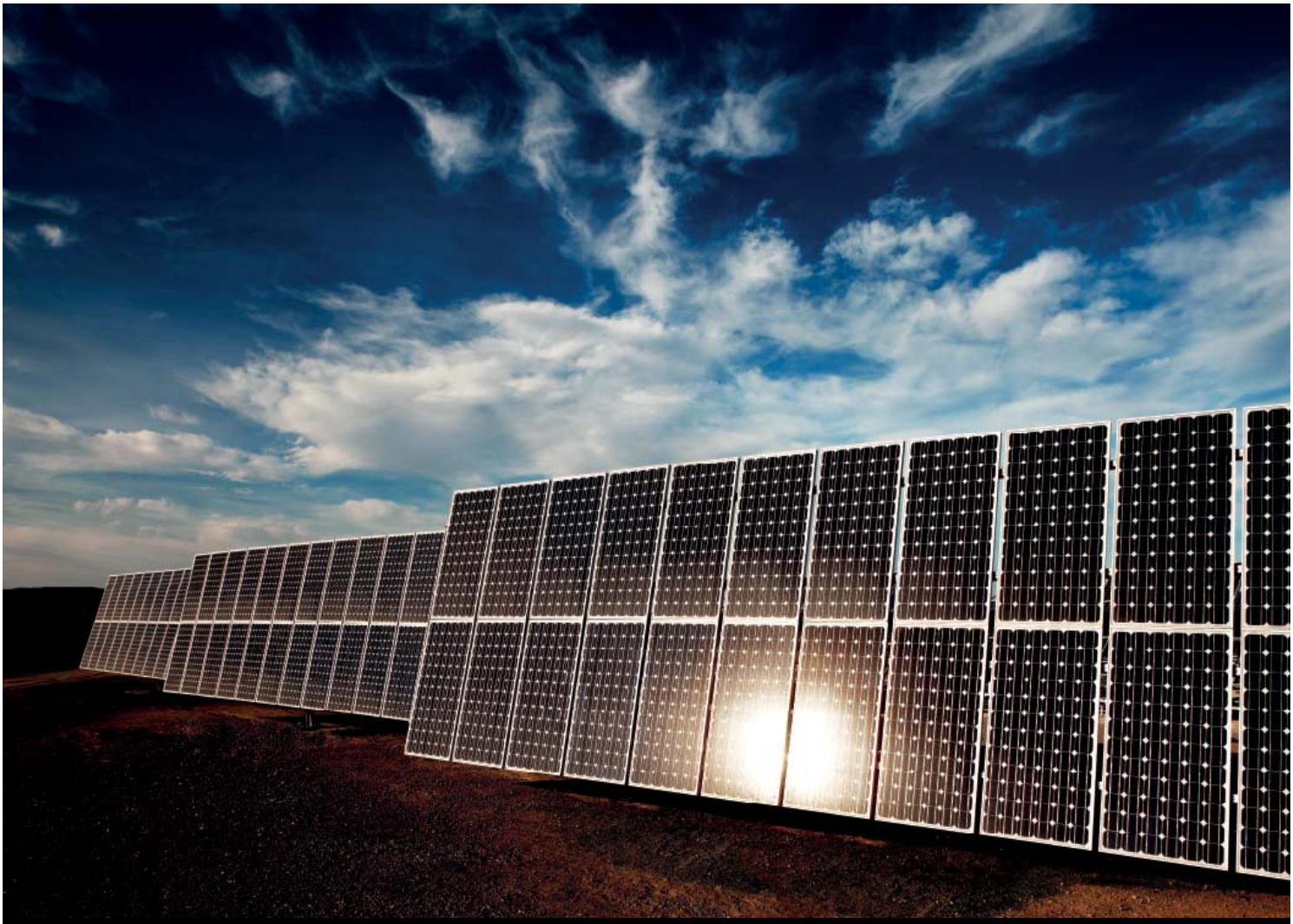


Low voltage AC drives

Solar pump drive
0.37 to 18.5 kW

Power and productivity
for a better world™

Solar pump drive
Exploiting the power of the sun

Low-carbon economy
With utilization of solar power, ABB drives 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 emissions by 260 million tons.

Built-in 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 environments
Absolute protection against dust as well as against strong jets of water from all directions, making it the ideal solution for harsh environment.

Pump-specific protection

Built-in flow measurement and flow detection function. Drive 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 sunshine can now put a smile on their face.

Selection and ordering

Type designation: ACS355 - 0XX - 0XAX - X + N827 + XXX

- Product series
- Constructions
- Ratings and types
- Voltages
- Solar pump software
- Options

Features

- Maximize your pump delivery without wasting a watt
- Automatic start and stop with solar radiation
- Self-diagnostics and self-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 dimensions.

Voltages

The ACS355 is available in two voltage ranges:

2 = 125 to 400 V DC or 200 to 240 V AC
4 = 250 to 800 V DC or 380 to 480 V 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, 50 Hz
B063 = IP66/IP67

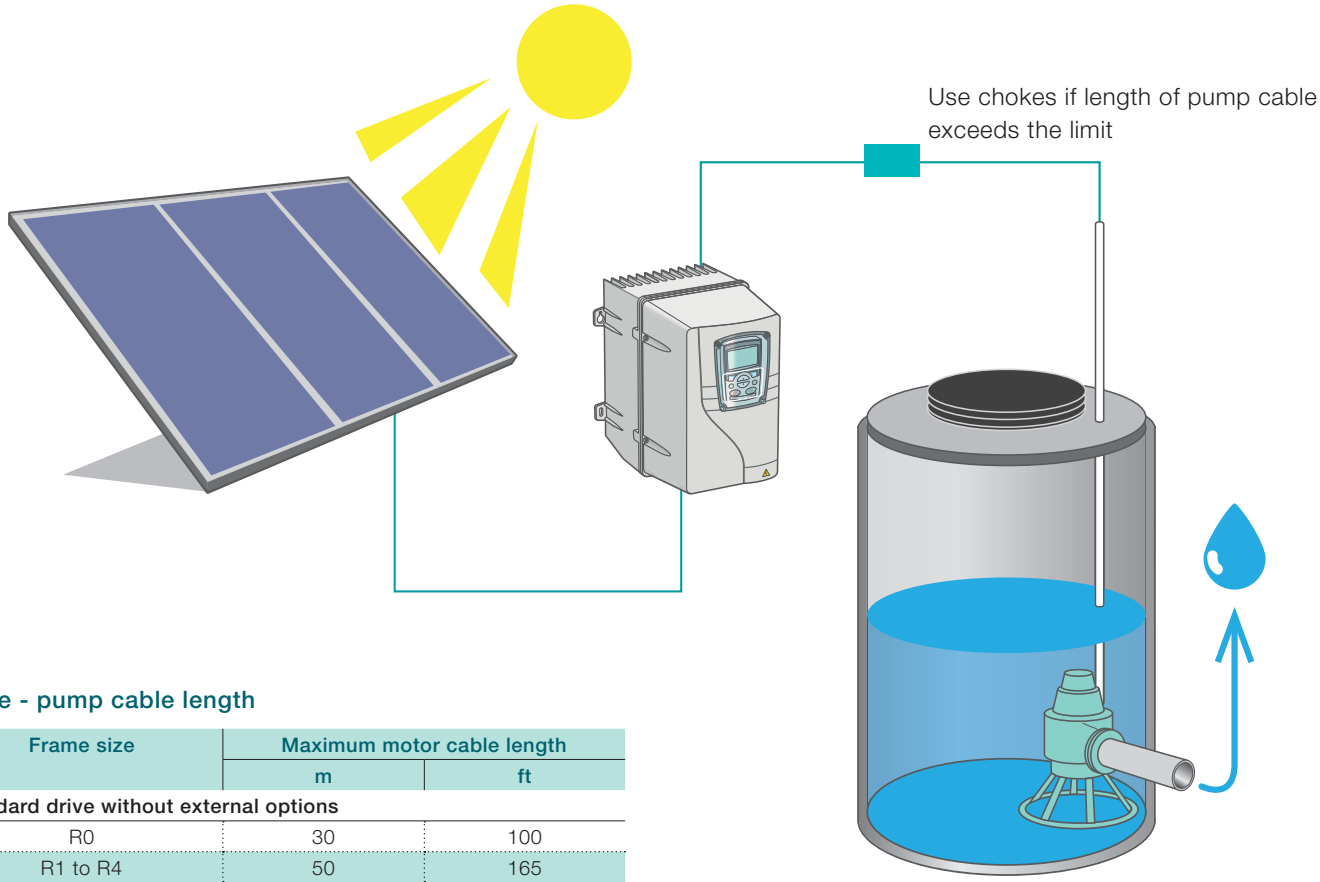
Ratings for IP20			Type designation	Frame size
P_N kW	P_N hp	I_{2N} A		
1-phase AC supply, 125 to 400 V DC or 200 to 240 V				
0.37	0.5	4.7	ACS355-01E-04A7-2	R1
0.75	1.0	6.7	ACS355-01E-06A7-2	R1
1.1	1.5	7.5	ACS355-01E-07A5-2	R2
1.5	2.0	9.8	ACS355-01E-09A8-2	R2
3-phase AC supply, 125 to 400 V DC or 200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

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

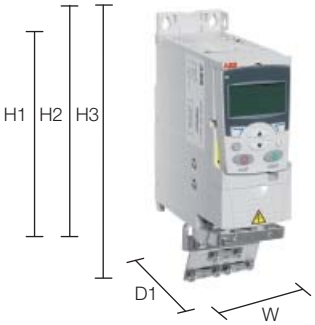


Drive - pump cable length

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

Cabinet-mounted drives (IP20 UL open)

Frame size	IP20 UL open					
	H1	H2	H3	W	D	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
H3 = 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	D	Weight
	mm	mm	mm	kg
R1	305	195	281	7.7
R3	436	246	277	13

Cooling and fuses

Cooling

The 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 type values.

Fuses

Use standard fuses with ABB Solar pump drive.

For input fuse connections in DC side UR or gG, see the table below. With UR fuses, determine the rating by the maximum instantaneous DC current because fuses work quickly. 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. An optional AC-side gG fuse is also mentioned if the drive is operating in grid mode.

Cooling air flow

Type designation	Frame size	Heat dissipation	Air flow
		[W]	m^3/h
1-phase AC supply, 125 to 400 V DC or 200 to 240 V			
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
3-phase AC supply, 125 to 400 V DC or 200 to 240 V			
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
3-phase AC supply, 250 to 800 V DC or 380 to 480 V			
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

Fuse selection table

Type description	Frame size	IEC fuses AC side [A]	DC fuse PV side [A]	
		Fuse type	Fuse type	
		gG	UR	gG
1-phase AC supply, 125 to 400 V DC or 200 to 240 V				
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
3-phase AC supply, 125 to 400 V DC or 200 to 240 V				
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
3-phase AC supply, 250 to 800 V DC or 380 to 480 V				
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

Free space requirements

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

Contact us

For more information please contact your local ABB representative or visit:

www.abb.com/drives
www.abb.com/drivespartners

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