

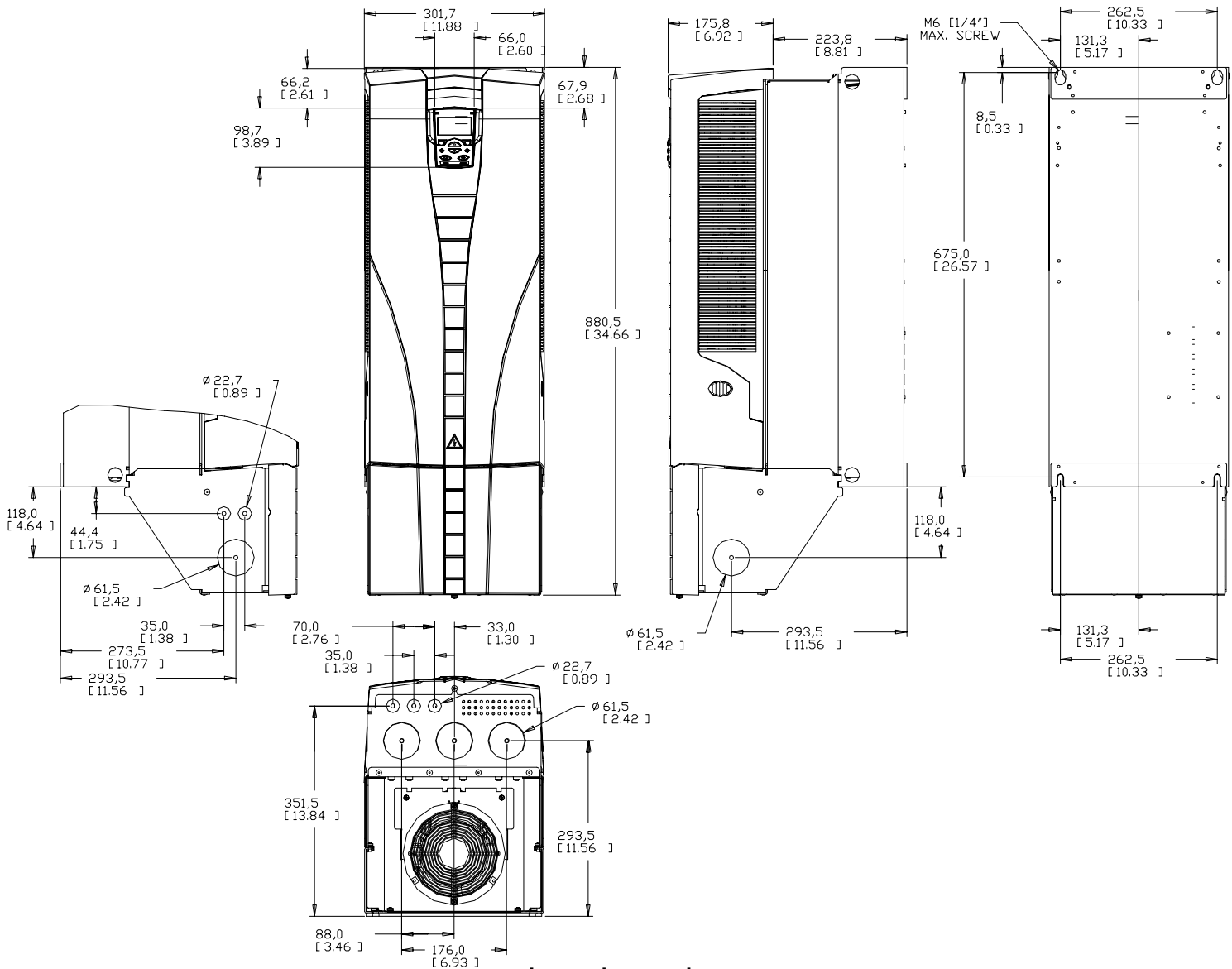


PumpSmart PS75 Drive Dimensions and Ratings Frame R6-NEMA1/IP21

PUMPSMART

PumpSmart PS75 Pump and Motor Control System

The PumpSmart PS75 is a pump and motor control system that provides integral starting, right-sizing, pump protection and process control for all pumping applications. The PumpSmart PS75 is based upon the ABB ACS 550 variable frequency drive. PumpSmart Control Solutions has worked with ABB to incorporate proprietary pump protection & configuration algorithms into the drive to make it more suitable for pumping applications



Drive Dimensions

Frame	Height mm [inches]	Width mm [inches]	Depth mm [inches]	Weight kg [lbm]
R6	880 [34.6]	300 [11.8]	400 [15.8]	69 [152]

*Dimensions not for construction



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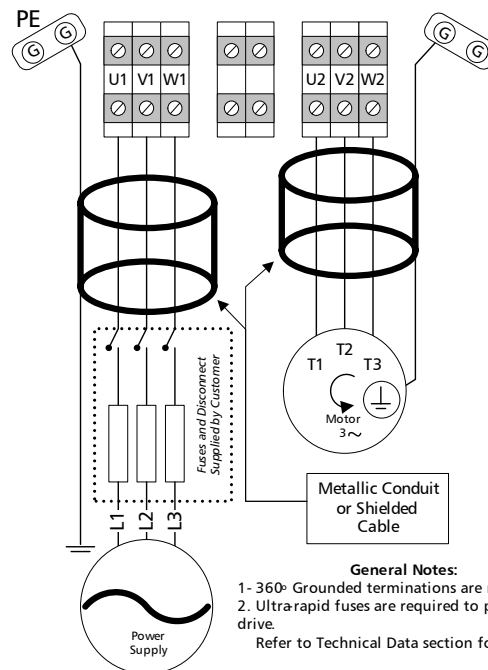
Drive Ratings

ITT P / N	Input Voltage VAC	Power P ^{N1}		Nominal Current I ^{2N2} Amps	Heat Dissipation		Air Flow		Frame	Enclosure Rating	Recommended Main Fuses		
		KW	HP		Watts	BTU/hr	M ³ /hr	CFM			IEC269gG (A)	UL class T (A)	Bussmann Type
A08300A13	230	37	50	143	1268	4431	405	238	R6	NEMA1/IP21	200	200	JJS-200
A08300A14	230	45	60	178	1575	5379					250	250	JJS-250
A08300A15	230	55	75	221	1952	6666					315	300	JJS-300
A08302A16	380* / 460	75*	125	157	2310	7884					200	200	JJS-200
A08302A17	380* / 460	90*	150	180	2810	9590					250	250	JJS-250
A08438A13	575	55	75	77	1504	5136					80	100	JJS-100
A08438A14	575	75	100	99	1821	6219					125	150	JJS-150
A08438A15	575	90	125	125	2442	8339					160	175	JJS-175
A08438A16	575	110	150	144	2813	9607					200	200	JJS-200

Notes

- ¹ P^N - Nominal Power Rating at listed voltage rating
- ² I^{2N} - Continuous base current with 10% overload for 1 min/ 10 minutes
- *- KW rating applies to drives with 380 VAC input voltage





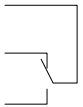
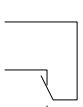
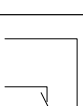
Power Cabling Schematic



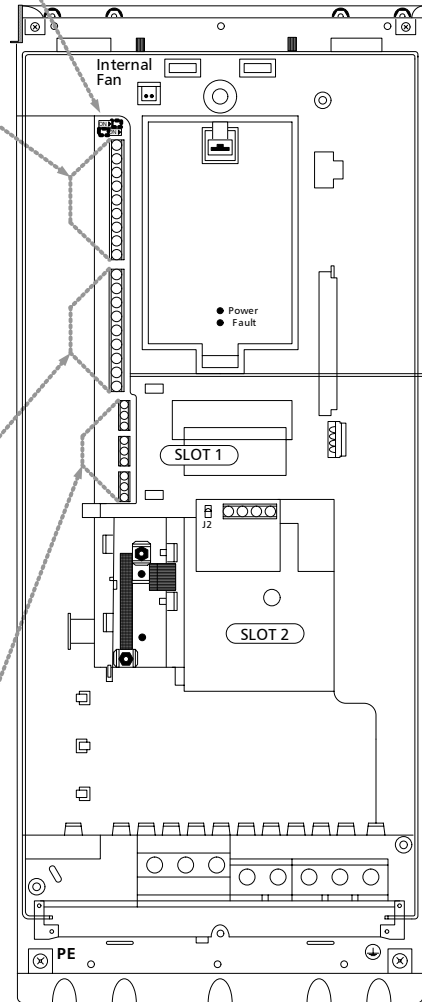
- General Notes:**
- 1- 360° Grounded terminations are required
 2. Ultra-rapid fuses are required to protect drive.
- Refer to Technical Data section for details

Frame Size	U1/V1/W1 – U2/V2/W2 BRK±, UDC± Terminals						Earthing PE Terminal			
	Min. Wire Size		Max. Wire Size		Torque		Max. Wire Size		Torque	
	mm ²	AWG	mm ²	AWG	Nm	Lb-ft	mm ²	AWG	Nm	Lb-ft
R6	95	3/0	185	350 MCM	40	30	185	350 MCM	40	30

PS75 Drive Terminal Block Schematic

	X1	Terminal Block
1	SCR	Signal cable shield connected internally to chassis ground
2	AI1 (+)	OPTION Analog Input 1, Programmable External Setpoint J1:AI1 off 2..10VDC  default J1:AI1 on 4..20mA 
3	AGND (-)	Analog Input 1 Ground
4	+10V	AI Reference Voltage : 10V ± 2%, 10mA max used for AI 1 2-10VDC signals 1K ohm ≤ R ≤10K ohm
5	AI2 (+)	OPTION Analog Input 2, Programmable Primary Process Transmitter J1:AI2 off 2..10VDC  default J1:AI2 on 4..20mA  (Process Control Only)
6	AGND (-)	Analog Input 2 Ground
7	AO1 (+)	OPTION Analog Output 1, programmable 4-20mA Output assigned in parameter 1501. Default is speed Analog Output 2, programmable 4-20mA Output assigned in parameter 1507. Default is current
8	AO2 (+)	
9	AGND (-)	Analog Output Ground
10	+24VDC	Process Transmitter / DI power source 24VDC / 250mA (reference to GND) Used if PumpSmart is powering the process transmitter and / or digital inputs
11	GND	
12	DCOM	
13	DI 1	OPTION 2 - Wire Start / Stop Change parameter 1002 to 2W DI 1 (1). Default is Keypad Start/Stop Used with 3- Wire Start / Stop Speed Control - Constant speed selection Process Control - Selects PID Se# Speed Control - Constant speed selection Process Control - Programmable Digital Input Not Used Fault Reset Input assigned in parameter 1604 Run Enable Input assigned in parameter 1601
14	DI 2	
15	DI 3	
16	DI 4	
17	DI 5	
18	DI 6	
19	RO1C COM	OPTION  Assignable Relay (RO1) The output of this relay is assignable by parameter 1401 Default: Ready (19 and 21 connected)
20	RO1 NC	
21	RO1 NO	
22	RO2C COM	OPTION  Assignable Relay (RO2) The output of this relay is assignable by parameter 1402 Default: Run (22 and 24 connected)
23	RO2 NC	
24	RO2 NO	
25	RO3C COM	OPTION  Assignable Relay (RO3) The output of this relay is assignable by parameter 1403 Default: Fault (25 and 27 connected)
26	RO3 NC	
27	RO3 NO	

J1
Dip switches
for Analog
Inputs



View of I/O Connection board (OMIO)

ACH 550



PumpSmart PS75

Drive Dimensions and Ratings

Frame R6-NEMA1/IP21

PUMPSMART

PumpSmart® PS75

Hardware: ABB ACH550 Drive

CERTIFICATIONS

UL Listed
Canadian UL Listed

CE Marked

INPUT POWER

Voltage..... 208..240 VAC 1P and 3P +10%/-15%
380...480 VAC 3 Phase +10%/-15%
500..600 VAC 3 Phase +10% / -15%

Imbalance..... Max +- 3% of Nominal Phase to Phase
Input Voltage

Frequency..... 48..63 Hz

Fundamental Power..... 0.98
Factor (cos Ø1)

MOTOR CONNECTION

Voltage..... 0 to Usupply

Frequency..... 0-500 Hz

Overload Capacity.... Normal Use 1.1 x Rated Current
for 1 min every 10 min

Switching Frequency.... Default 4kHz, Selectable 1,4,8 and
12 kHz 1-150 hp (.75-110 kW),
Selectable 1,4 and 8 kHz 150-550 hp
(110-355 kW)

Motor Control..... Sensorless Vector Control

Speed Control..... Static Accuracy 20% of motor nominal
slip

Drive Nominal Output ... 6:1 Maximum

Current..... Motor nominal Current

ENVIRONMENTAL LIMITS

Enclosures NEMA Type 1/IP21
NEMA TYPE 12/IP54 (U1/01 Only)

Temperature..... 5...104F (-15..40C) No frost Allowed

Humidity..... <95% Relative Humidity,
Non-condensing

Altitude..... 0..3300 Ft (0..1000M) Standard

Shock..... Not Allowed

Free Fall..... Not Allowed

Vibration..... 5-13.2 Hz 1mm (.04 in)

STANDARD INPUT/OUTPUT

2 Analog Inputs..... (0) 4...20mA, Rin>100 ohm single-ended or
(0) 2..10VDC, Rin>312k ohm single-ended,
resolution 0.1%, accuracy +-1%. Default: AI1
Voltage, AI2 Current Configurable

2 Analog Outputs..... (0) 4...20mA, Load < 500 ohm, Configurable

Auxiliary Voltage..... 24 VDC +- 10%, max. 250 mA

Digital Inputs (6)..... 12V...24VDC with internal or external supply,input
impedance 1.5 kohm Common Configurations:
2-Wire Start/Stop, 3-Wire Start/Stop,Hand-off-Auto
Dual Setpoints, Secondary Protect A, Secondary
Protect B, Run Enable, E-Stop, Fault Reset, Constant
Speed Select PID Set Activation

Relay Outputs (3).. Form-C Switchover Contact Max Switching Voltage
Configurable 250VAC / 30VDC Max Switching Current 6A / 30VDC
1500VA/250VAC 2A rms max continuous current
Min Load:500mW (12V,10mA)

Reference Voltage 10 VDC ± 2%
10mA max current R <10 Kohm

DRIVE PROTECTION

Keypad Loss	Wiring Fault
Earth Fault	Over Current
Over Voltage	Drive Overtemp
Under Voltage	Phase Loss
Motor Temp	Short Circuit
Drive Overload	Communication Failure
Run Enable	

PUMP PROTECTION

Closed Valve	Runout Flow
Loss of Suction/Dry Run	Sensor Failure
Low Flow	Critical Speed (Speed Control)

FIELD BUS

Modbus (built-in std)	ControlNet
DeviceNet	Profibus-DP
EtherNet	

<p>Certified for Construction Purposes only when signed</p> <p>Date.....</p>	<p>Customer Name.....</p> <p>Goulds S/N.....</p> <p>Customer P.O #.....</p> <p>Item No.....</p>
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