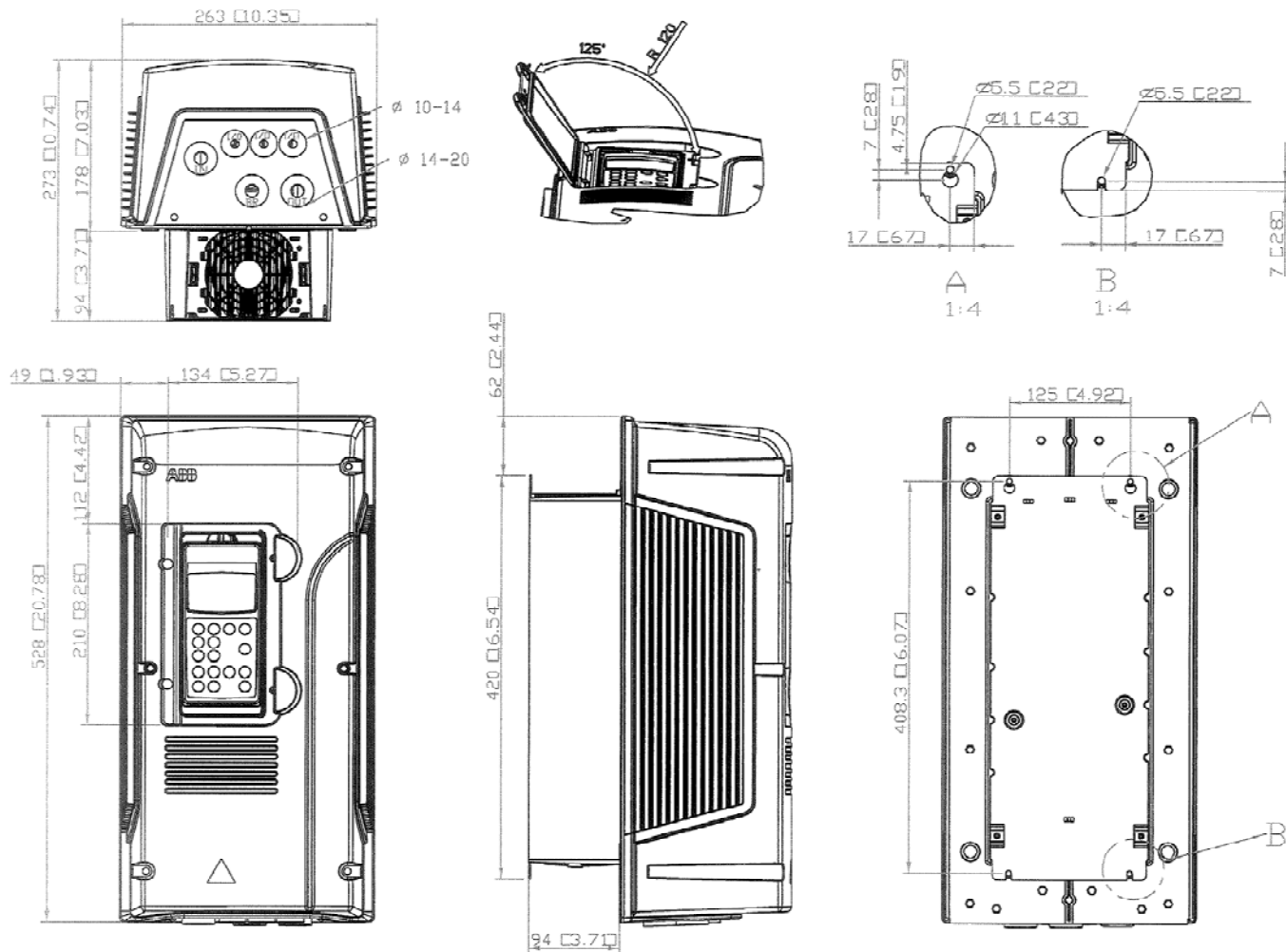


PumpSmart PS200 Pump and Motor Control System

The PumpSmart PS200 is a pump and motor control system that provides integral starting, right-sizing, pump protection and process control for all pumping applications. The PumpSmart PS200 is based upon the ABB ACS800 variable frequency drive platform. PumpSmart Control Solutions has worked with ABB to incorporate proprietary pump protection, process control and 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]
R3	528 [20.78]	263 [10.35]	273 [10.74]	18 [41]

*Dimensions not for construction



PumpSmart PS200 Drive Dimensions and Ratings Frame R3-IP55

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Drive Ratings

ITT Type Code	Input Voltage VAC	Power P ^{N1} KW	Nominal Current I _{2N2} Amps	Heat Dissipation Watts	Air Flow M ³ /Hr	Noise Level dBA	Frame	Enclosure Rating	Recommended Main Fuses		
									gG or aR	V	IEC Size
ACS-ITT-01-0006-2	230	4	18	160	69	62	R3	IP55	20	500	000
ACS-ITT-01-0009-2	230	5.5	24	200					25		
ACS-ITT-01-0011-2	230	7.5	31	250					40		
ACS-ITT-01-0011-3	400	7.5	18	250					20		
ACS-ITT-01-0016-3	400	11	24	340					25		
ACS-ITT-01-0020-3	400	15	31	440					40		
ACS-ITT-01-0016-5	500	11	18	340					20		
ACS-ITT-01-0020-5	500	15	23	440					25		
ACS-ITT-01-0025-5	500	18.5	31	530					40		

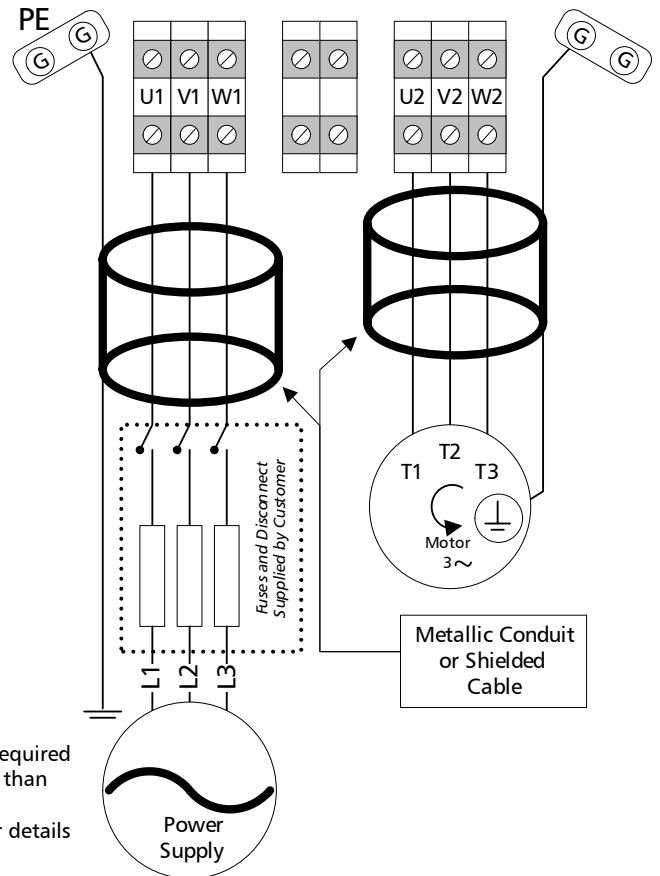
¹ P_N - Nominal Power Rating at listed voltage rating for variable torque loads

² I_{2N} - Continuous base current with 10% overload for 1 min / 5 minutes at 40° C

Power Cabling Schematic

Frame Size	U1/V1/W1 - U2/V2/W2 R+, R- Terminals			Earthing PE Terminal	
	Max. Wire Size	Cable Dia.	Torque	Max. Wire Size	Torque
	mm ²	mm	Nm	mm ²	Nm
R3	16 *	14-20	1.2-1.5	10	1.5

*16 mm² rigid solid cable 10 mm² flexible stranded cable



General Notes:

- 1- 360° Grounded terminations are required
 2. Fuse operating times must be less than 0.5 seconds to protect drive.
- Refer to Technical Data section for details



**PumpSmart PS200
Drive Dimensions and Ratings
Frame R3-IP55**

PUMPSMART

PumpSmart® PS200

Drive Hardware: ABB ACS800 -6 Pulse PWM

CERTIFICATIONS

USA/Canada
600 VAC and Below
UL, C-UL, CSA

Europe
CE Marked
Bureau Veritas Cert 14370/AO BV
EMC 89/336/EEC as amended by 93/68
DNV Cert. E-7039

INPUT POWER

Voltage..... 208..690 VAC 3 Phase ±10%
Overload..... 110% for 1 min/5 min,
140-150% for 10 sec at startup
Frequency..... 48..63Hz

Fundamental Power..... $\text{COS}\Phi_1 = 0.98$ (fundamental)
Factor ($\text{COS}\Phi_1$)..... $\text{COS}\Phi_1 = 0.93..95$ (total)
Efficiency..... 98% (at nominal power)

MOTOR CONNECTION

Voltage..... $0..V_{1in}/V_{3in}$
Frequency..... 0..300 Hz
0..120 Hz with dV/dT Filters
Motor Control..... ABB Direct Torque Control Software
Static Accuracy: 10% of Motor Slip
Speed Control..... Dynamic Accuracy: 0.3-0.4% second
with 100% Torque Step

ENVIRONMENTAL LIMITS

Enclosures..... NEMA 1/IP21
NEMA 12/IP54
Temperature..... 5..104° F (-15 to 40°C) Standard
104..122° F (40-50 C) with
de-rating (1%/1 C)
Humidity..... 5..95% Relative Humidity
Altitude..... 0..3300 Ft (0..1000M) Standard
3300..13,123Ft (1000..4000M) with
de-rating (1%/100M)
Vibration..... Max. 1 mm (0.04 in.) 5-13.2 HZ
Max. 7 m/s^2 (23 ft/s^2) 13.2 – 100
HZ, Sinusoidal
Shock, Free Fall Not Allowed

STANDARD INPUT/OUTPUT

2 Current Analog Inputs..... 4...20mA
100Ω Input Resistance
11 bit resolution

Communication
1 Voltage Analog Input..... 2-10 VDC
200Ω Input Resistance
11 bit resolution
Galvanically isolated as a group

2 Current Analog
Output.....

4...20mA
700Ω Max load impedance
10 bit resolution
Galvanically isolated as a group

Digital Inputs (7).....

2 Wire Start/Stop
Hand-off Auto (HOA)
3-Wire Start/Stop
Setpoint 1-2
Speed Override
Specific Gravity
Secondary Protect A/B
Digital Reset
E Stop/Permissive
Motor Thermistor
24 VDC Input Voltage
1 mS filtering time

Relay Outputs (3)
Configurable.....

Form-C Switchover Contact
24 VDC or 250 VAC
2A max continuous current

Reference Voltage.....
Output

10 VDC ± 0.5%
10mA max current

Auxiliary Voltage Output...

24 VDC ±10%
250 mA max current output

DRIVE PROTECTION

Keypad Failure
Earth Fault
Over Voltage
Over Temperature (VFD)
Phase Loss

Over Current
Under Voltage
Over Temperature (Motor)
Over Torque
Motor Stall

PUMP PROTECTION

Loss of Suction/Dry Run
Low Flow
Run-out Flow
Shut-off/Dead Head
Critical Speed Lockout

General Condition
Sleep Function
Sensor Failure
Safe Speed Operation

FEATURES:

Smartflow
Smartcontrol (PID Torque)
Cavitation Control
Automatic Fault Reset

Multipump (Synchronous Control)
Multipump (Backup)
System Curve Compensation
Pump Cleaning Sequence

FIELDBUS

Modbus, Profibus DP
Ethernet, DeviceNet
ControlNet

<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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