
ACS580-0P, packaged drive with disconnect means

Overview

The ACS580-0P Packaged Drive is an ACS580 Variable Frequency Drive enclosed with either an input disconnect switch and fast acting fuses (ACS580-0P) or an input circuit breaker and fast acting fuses (ACS580-0P+F255). The ACS580-0P Packaged Drive provides a door-mounted input disconnect operator (padlockable in the OFF position), electronic motor overload protection, a door-mounted control panel with graphical display for local control, provisions for external control connections, and serial communications capability.

With a compact design and built-in essential features, the ACS580-0P packaged drive allows for simple and quick installation, commissioning and use. The assistant control panel, which provides 16 different language options, can be upgraded to an optional Bluetooth control panel to enable wireless commissioning and monitoring.

ACS580 drives are designed for customers who value reliability, high quality, and robustness in their applications. The ACS580-0P Packaged Drive is offered in UL (NEMA) Type 1, Type 12, and Type 3R making it suitable for a variety of environments and conditions. Additionally, all ACS580 drives and their protective features are thoroughly tested for performance at maximum temperature with nominal loads.

Standard main features include:

- Compact design for easy installation, commissioning and maintenance
- Enclosure class UL (NEMA) Type 1, Type 12/IP55 or Type 3R
- Top entry/exit (Type 1, 12), bottom entry/exit (Type 3R)
- Input disconnect switch and fast acting fuses
- Integrated safety including Safe Torque Off (STO)
- Supports various motor types
- Intuitive control panel with USB connection
- Coated circuit boards
- Standard control program- common software used throughout the ACS580 drive series such as Adaptive Programming
- Control unit supporting a wide range of fieldbuses and input/output options

Optional features include:

- Input circuit breaker (+F255)

Applications:

- Constant torque, variable torque or constant horsepower applications
- New installation, replacement and original equipment manufacture (OEM) use

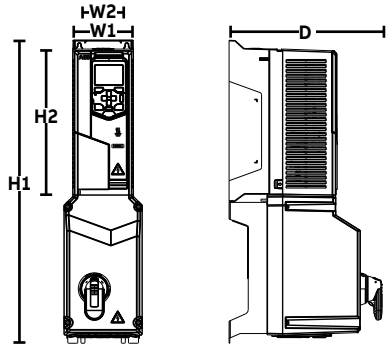
ACS580-0P, packaged drive with disconnect means

Data sheet

Input ratings	Input voltage range	208 - 240 V; 380 - 500 V; 525 - 575 V Wye (575V Delta available as a custom quote)
	Input voltage tolerance	+10%/-15%
	Phase	Three phase
	Frequency	48 to 63 Hz
	Short circuit rating (UL 508c)	100,000 rms symmetrical amperes up to 600 V when input cables protected by class T
Output ratings	Horsepower	1 - 100 HP @ 230 VAC 1 - 200 HP @ 480 VAC 2 - 150 HP @ 575/600 VAC
	Overload capacity	Heavy duty = 50% for 60 seconds every 5 minutes Light duty = 10% for 60 seconds every 5 minutes
	Frequency	0-500 Hz
	Voltage	0 to maximum input voltage (RMS)
	Motor types	Asynchronous AC induction motors, permanent magnet synchronous motors and synchronous reluctance motors
Protective features	Overcurrent	Excessive output current
	DC overvoltage	High DC bus
	Overtemp	Drive heatsink above operating temperature, max ambient temperature exceeded
	Short circuit	Short on motor output terminals
	Undervoltage	Low voltage on drive input
	Loss of reference	Analog input programmed for 4-20 ma but signal less than 4 ma
	Motor overtemp	Excessive estimated motor temperature
	Loss of keypad	Drive will trip if under keypad control and keypad communication is lost
	Motor stall	Motor cannot achieve commanded speed due to excessive load
	Ground fault	Ground fault detected in motor or motor cabling
Motor phase fault	Loss at one of the motor phases	
Environmental	Temperature	0 to 40°C (32 to 104°F). 0 to 50°C (32 to 122°F) w/ derate. No frost allowed.
	Cooling	Forced air
	Enclosure	UL (NEMA) Type 1 / IP21, UL (NEMA) Type 12 / IP55, UL (NEMA) Type 3R
	Altitude	Sea level to 3300 ft. (1000 m) Derate 1% per 330 ft. (100 m) up to 13,128 ft. (4000 m)
	Humidity	0 to 95% RH non-condensing
	Vibration	Max. 1 mm (0.04 in.) (5 to 13.2 Hz), max. 7 m/s ² (23 ft/s ²) (13.2 to 100 Hz) sinusoidal
Keypad display	Display	LCD graphical
	Keys	10 key keypad with tactile response
	Functions	Output status monitoring, digital speed control, parameter setting and display, diagnostic and fault log display, motor run, local/remote toggle, graphical monitoring
	Remote mount	Keypad may be mounted up to 9 ft. using appropriate cable (see Options for kit)
	Trip	Last three faults stored in fault history
Control specifications	Switching frequency	1, 4, 8, 12kHz (up to 150HP): 1 or 4kHz (over 150HP)
	Accel/decel	0-1800 seconds
	Speed control accuracy	20% of motor nominal slip
	Skip frequencies	Three configurable bands 0-max speed
	PC setup software	Drive composer, drive composer pro
	Maximum output frequency	500 Hz
	Selectable operating modes	2-Wire, 3-Wire, Motor Potentiometer, Hand/Auto, PID
Analog inputs	Two single ended	0 (2) to 10 V, Rin > 312kΩ single-ended 0 (4) to 20mA, Rin = 100 Ω single-ended
	Resolution	± 1%
Analog output	Two current outputs	0 to 20 mA, load < 500 Ω
	Resolution	± 3%
Digital inputs	Six digital inputs	15 V...24 VDC with internal or external supply
	Input impedance	Pull-up or pull-down (PNP or NPN) (DI1 to DI5); NPN (DI6) 2.4 kΩ
Digital outputs	Three relay outputs	Form C
	Maximum switching voltage	250 VAC/30 VDC
	Maximum continuous current	2 A/30 VDC or 250 VAC
Safety	Safe Torque Off (STO)	STO standard input; 17...30 VDC, 55 mA

ACS580-0P, packaged drive with disconnect means

Dimensions and weights

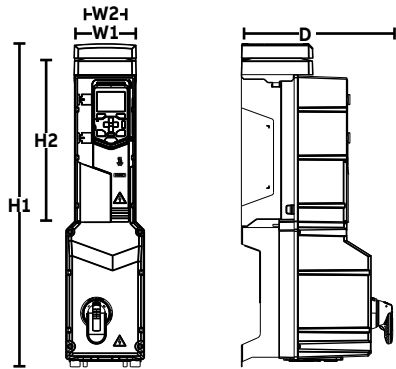


UL Type 1 R1-R4

ACS580-0P, packaged drive with disconnect means, UL (NEMA) Type 1

Frame size	Height (H1)		Height (H2)		Width (W1)		Width (W2)		Depth (D)		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
R1	24.60	625	12.48	317	6.42	163	3.86	98	12.42	316	18.1	8.2
R2	28.53	725	16.42	417	6.42	163	3.86	98	12.63	321	22.0	10.0
R3	34.86	885	18.75	476	8.39	213	6.3	160	13.22	336	39.0	17.7
R4	40.61	1032	24.49	622	8.39	213	6.3	160	14.26	362	60.0	27.2
R5-R8	47.72	1212	46.26	1175	28.24	717	23.62	600	19.04	484	359.0	163.0

H1 - Height
 H2 - Mounting Height
 W1 - Width
 W2 - Mounting Width

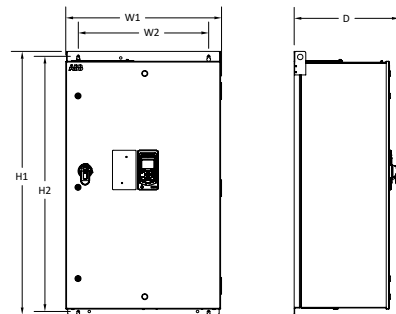


UL Type 12 R1-R4

ACS580-0P, packaged drive with disconnect means, UL (NEMA) Type 12

Frame size	Height (H1)		Height (H2)		Width (W1)		Width (W2)		Depth (D)		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
R1	26.50	673	12.48	317	6.50	164	3.86	98	12.40	316	18.1	8.2
R2	30.22	768	16.42	417	6.50	164	3.86	98	12.64	321	22.0	10.0
R3	36.51	927	18.75	476	8.39	213	6.30	160	13.22	336	39.0	17.7
R4	42.54	1081	24.49	622	8.39	213	6.30	160	14.26	362	60.0	27.2
R5-R8	54.18	1376	46.26	1175	28.24	717	23.62	600	19.04	484	359.0	163.0

H1 - Height
 H2 - Mounting Height
 W1 - Width
 W2 - Mounting Width

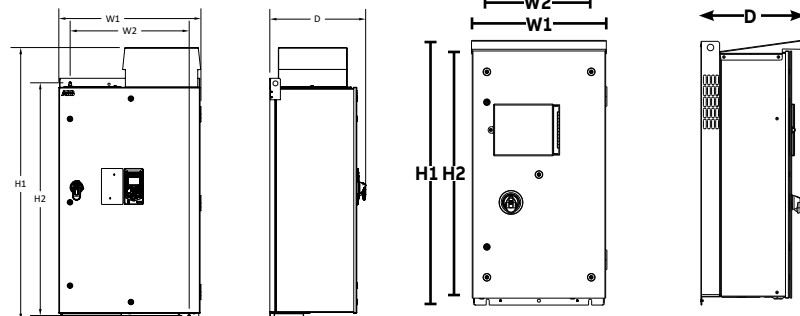


UL Type 1 R5-R8

ACS580-0P, packaged drive with disconnect means, UL (NEMA) Type 3R

Frame size	Height (H1)		Height (H2)		Width (W1)		Width (W2)		Depth		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
R1-R2	33.35	847	31.89	810	17.68	449	12.60	320	14.00	356	77	35.0
R3-R4	40.69	1034	39.29	998	20.70	526	15.75	400	15.41	392	176	79.8

H1 - Height
 H2 - Mounting Height
 W1 - Width
 W2 - Mounting Width



UL Type 12 R5-R8

UL Type 3R