
ACS580-0P...+F255+G310 packaged drive with circuit breaker and two-contactor bypass

Overview

The ACS580-0P...+F255+G310 Packaged Drive is an ACS580 variable frequency drive with an input circuit breaker and fast acting fuses and a two-contactor bypass. A service switch, used to isolate the drive from input power, is optional. The ACS580-0P Packaged Drive provides a door-mounted input disconnect operator (padlockable in the OFF position), door-mounted 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/bottom exit (Type 1, 12), bottom entry/exit (Type 3R)
- Input circuit breaker and fast-acting fuses
- 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

Optional features include:

- Support of a wide range of fieldbuses and input/output adapters
- Power options - Service switch, line reactor, output filter (up to 15 hp)
- User controls - Bypass control package, emergency stop, speed pot, fault pilot light
- Special options - auto bypass, extra 200 VA control power, wire markings, voltage monitor
- Type 3R options - stainless steel enclosure, surge suppressor

Applications:

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

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Type code sheet

A	C	S	5	8	0	-	0	P	-					-						+	F	2	5	5	+	G	3	1	0	+								
Product series				Construction				Size				Voltage				Circuit breaker + manual bypass						Options																

-	0	P
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Construction

0P = Drive with Disconnect Switch and Drive Fuses

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Size

(Output current rating, see table below for details)

NOTE: Cabinet drives five (5) digit amp rating and type code

Voltage	Frame size								
	R1	R2	R3	R4	R5	R6	R7	R8	R9
208V	04A6	024A	046A	075A	088A	143A	169A	273A	
	06A6	031A	059A		114A		211A		
	07A5								
	10A6								
	017A								
480V	02A1	014A	027A	052A	096A	124A	156A	240A	302A
	03A0	023A	034A	065A			180A		361A
	03A5		044A	077A					414A
	04A8								
	07A6								
600V	012A								
		02A7	022A		041A		099A	144A	192A
		03A9	027A		052A		125A		242A
		06A1	032A		062A				
		09A0			077A				
	011A								
	017A								

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Voltage rating

2 = 208...240 VAC
 4 = 380...500 VAC
 6 = 525...600 VAC

+	F	2	5	5	+	G	3	1	0
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Standard features

Door interlock circuit breaker with two-contactor bypass and selector switch

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Option codes

Letter code followed by 3 digit number (see option code pages for details)

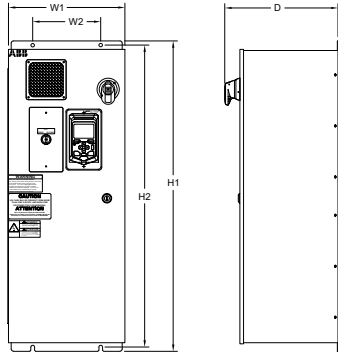
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Data sheet

Input ratings	Input voltage range	208 - 240 V; 460 V; 575 V Wye (575V Delta available by special order)
	Input voltage tolerance	10%/-15%
	Phase	Three-phase
	Frequency	48 to 63 Hz
Output ratings	Short circuit rating (UL 508c)	230 & 460 V = 65,000 A; 575 V = 10,000 A symmetrical when input cables are fused
	Horsepower	1 - 100 HP @ 230 VAC
		1 - 350 HP @ 480 VAC (Type 3R = 200 HP max)
		2 - 150 HP @ 575 VAC
	Overload capacity	Heavy duty = 150% for 60 seconds every 10 minutes
		Light duty = 110% for 60 seconds every 10 minutes
Frequency	0-500 Hz	
Voltage	0 to maximum input voltage (RMS)	
Motor types	Asynchronous AC induction, permanent magnet synchronous, and synchronous reluctance motor types	
Protective features	Overcurrent	Excessive output current
	Overcurrent - Bypass	Class 10 bi-metallic overload
	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	Type 1 and 12: 0 to 40 °C. Type 3R: -15 to 40 °C. 40 to 50 °C by special order. No frost allowed.
	Cooling	Forced air
	Enclosure	UL (NEMA) Type 1, Type 12, Type 3R
	Altitude	Sea level to 3300 ft. (1000 m) De-rate 1% per 330 ft. (100 m) up to 13,128 ft. (4000 m)
	Humidity	0 to 95% RH non-condensing
Keypad display	Display	LCD graphical
	Keys	8 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	Mounted on outside of enclosure; with protective cover on UL Type 3R
	Trip	Last three faults stored in fault history
Control specifications	Switching frequency	1, 4, 8, 12 kHz (up to 150hp): 1 or 4 kHz (over 150hp)
	Accel/decel	0-1800 seconds
	Speed control accuracy	20% of motor 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 > 200kΩ single-ended 0 (4) to 20mA, Rin = 100 Ω single-ended
	Resolution	± 1%
Analog outputs	Two current outputs	0 to 10 V, load > 100 k Ω 0 to 20 mA, load < 500 Ω
	Resolution	± 3%
Digital inputs	Six digital inputs	15 V...24 VDC with internal or external supply ** some inputs may be used for internal control **
	Input impedance	Pull-up or pull-down (PNP or NPN) (DI1 to DI5); NPN (DI6) 2.4 kΩ
Digital outputs	Three relay outputs	Programmable, Form C ** some outputs may be used for internal control **
	Maximum switching voltage	250 VAC/30 V DC
	Maximum continuous current	2 A rms./30 VDC or 250 VAC
Safety	Safe torque off (STO)	Not available due to existence of the bypass circuit

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Dimensions and weights

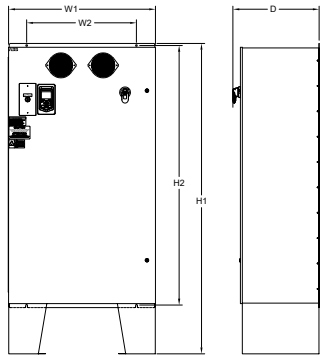


UL Type 1 CX1-21 thru CX1-23

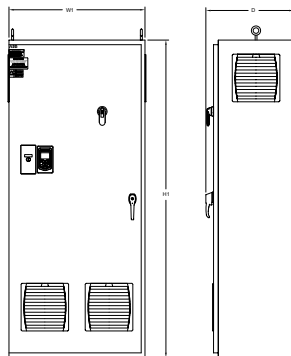
ACS580-0P, packaged drive with Circuit Breaker Disconnect and Two-Contactor Bypass, UL (NEMA) Type 1

Dimension Reference	Height (H1)		Height (H2)		Width (W1)		Width (W2)		Depth (D)		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
CX1-21	36.00	914	35.50	902	13.70	348	8.00	203	13.32	338	90	41
CX1-22	53.44	1357	52.44	1332	16.30	414	10.00	254	14.35	364	175	80
CX1-23	61.87	1571	60.88	1546	19.31	490	10.00	254	18.98	482	375	170
CX1-24	73.44	1865	61.38	1559	34.75	883	26.00	660	20.40	518	550	250
CX1-25	84.00	2134	NA	NA	36	914	NA	NA	23.3	592	950	432

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



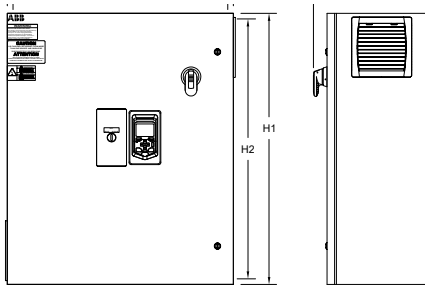
UL Type 1 Cx1-24



UL Type 1 Cx1-25

ACS580-0P..+F255+G310 packaged drive with circuit breaker and two-contactor bypass

Dimensions and weights

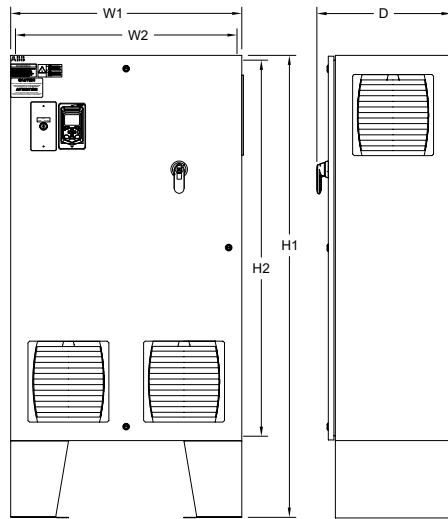


UL Type 12 Cx12-21 thru Cx12-24

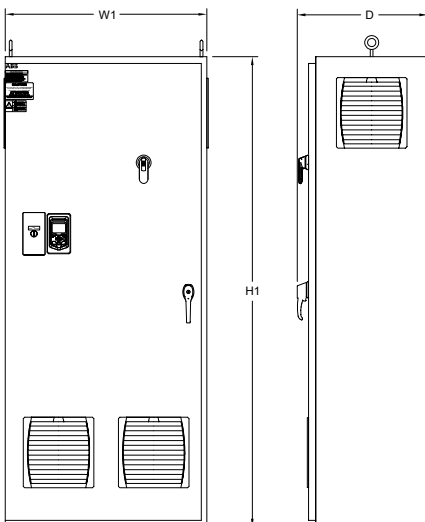
ACS580-0P, packaged drive with Circuit Breaker Disconnect and Two-Contactor Bypass, UL (NEMA) Type 12

Dimension Reference	Height (H1)		Height (H2)		Width (W1)		Width (W2)		Depth (D)		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
CX12-21	24.00	610	22.50	572	18.00	457	16.50	419	15.00	381	85	39
CX12-22	30.00	762	28.50	724	24.00	610	22.50	572	15.00	381	155	70
CX12-23	36.00	914	34.50	876	30.00	762	28.50	724	15.00	381	207	94
CX12-24	48.00	1219	46.50	1181	36.00	914	34.50	876	21.00	533	410	186
CX12-25	72.00	1829	58.60	1488	36.00	914	34.50	876	20.90	531	608	276
CX12-26	84.00	2134	NA	NA	48	1219	NA	NA	23.3	592	950	432

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



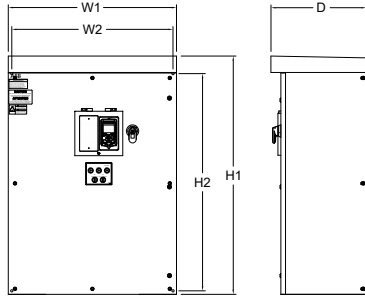
UL Type 12 Cx12-25



UL Type 12 Cx12-26

ACS580-0P..+F255+G310 packaged drive with circuit breaker and two-contactor bypass

Dimensions and weights

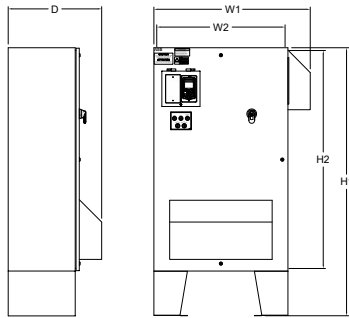


UL Type 3R CX3R-21 thru CX3R-24

ACS580-0P, packaged drive with Circuit Breaker Disconnect and Two-Contactor Bypass, UL (NEMA) Type 3R

Dimension Reference	Height (H1)		Height (H2)		Width (W1)		Width (W2)		Depth (D)		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
CX3R-21	27.34	694	22.50	572	18.21	463	16.50	419	14.38	365	90	41
CX3R-22	33.00	838	28.50	724	24.00	610	22.50	572	14.37	365	145	66
CX3R-23	39.40	1001	34.50	876	30.00	762	28.50	724	15.87	403	230	105
CX3R-24	51.00	1295	46.50	1181	36.00	914	34.50	876	20.37	517	445	202
CX3R-25	72.00	1829	58.60	1488	42.00	1067	34.50	876	25.10	638	675	307

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



UL Type 3R CX3R-25