LOW VOLTAGE AC DRIVES

ABB drive with bypass and circuit breaker

ACS580-0P, 1 to 350 HP

High-quality robust ACS580 drive with a contactor bypass for the extra insurance of across-the-line operation in an emergency.

Extra protection
The drive system includes a through-the-door circuit breaker disconnect and drive input fusing to provide the highest level of protection.

Two-contactor bypass
The manual bypass includes separate contactors that direct motor power from the drive or from the bypass circuit. An optional service switch isolates the drive from input power.

Suitable for various environments and uses
ACS580-0P bypass is available in a variety of packages including UL Type 1, Type 12 and Type 3R. An assortment of options are available to customize the package to your specifications.

Wide variety of applications
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.

High reliability
ACS580 drives are designed for customers who value reliability, high quality and robustness in their applications. All ACS580 drives and their protective features are thoroughly tested for performance at maximum temperatures with normal loads.

Technical data

Voltage and power range	1 - 100 HP at 208 to 240 V, +10%/-15%
	1 - 350 HP at 480 V, +10%/-15%
	2 - 150 HP at 575 V Wye, +10%/-15%
Frequency	60 Hz ±5%
Short circuit current rating	65 kA rms (10 kA for 575V) symmetrical when input cables are protected by class T fuses
Degree of protection	UL Type 1 (standard), UL Type 12 (option), UL Type 3R (option)
Overload	Heavy duty = 50% for 60 seconds every 10 minutes Light duty = 10% overload for 60 seconds every 10 minutes
Ambient conditions	0 to 40 C 0 to 95% RH non-condensing
Compliance	UL Listed (UL 508a)
Drive protective features	
Overcurrent	Excessive output current
DC overvoltage	High DC bus
Overtemp	Drive heatsink above operating temperature, max ambient temperature exceeded
Short circuit current rating	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
Bypass protective features	
Overcurrent	Class 10 bimetallic overlaod
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 mounted on outside of cabinet door
Trip	Last three faults stored in fault history
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 outputs	
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

***Not all digital inputs and outputs are available for customer use**

Simple. Connected. All-compatible.

Standard main features include:

- Compact design for an easy installation, commissioning and maintenance
- Enclosure class UL (NEMA) Type 1, Type 12 or 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 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 and fault pilot light
- Special options - auto bypass, extra 200 VA control power, wire markings and 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

There is more to this drive

A wide power range of wall-mounted cabinets up to 200 horsepower at 460V.

Adaptive programming for customizing the drive for the application, without any previous programming knowledge.

Motor control capabilities include asynchronous motors, permanent magnet motors and synchronous reluctance motors.

Video playlist: ACS580 how-to videos

Online manuals for the ACS580 drives

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

abb.com/ACS580
abb.com/drives

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