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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage and power range</td>
<td>1 - 100 HP at 208 to 240 V, +10%/-15%</td>
</tr>
<tr>
<td></td>
<td>1 - 350 HP at 480 V, +10%/-15%</td>
</tr>
<tr>
<td></td>
<td>2 - 150 HP at 575 V Wye, +10%/-15%</td>
</tr>
<tr>
<td>Frequency</td>
<td>60 Hz ±5%</td>
</tr>
<tr>
<td>Short circuit current rating</td>
<td>65 kA rms (10 kA for 575V) symmetrical when input cables are protected by class T fuses</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>UL Type 1 (standard), UL Type 12 (option), UL Type 3R (option)</td>
</tr>
<tr>
<td>Overload</td>
<td>Heavy duty = 50% for 60 seconds every 10 minutes</td>
</tr>
<tr>
<td></td>
<td>Light duty = 10% overload for 60 seconds every 10 minutes</td>
</tr>
<tr>
<td>Ambient conditions</td>
<td>0 to 40°C</td>
</tr>
<tr>
<td></td>
<td>0 to 95% RH non-condensing</td>
</tr>
<tr>
<td>Compliance</td>
<td>UL Listed (UL 508A)</td>
</tr>
</tbody>
</table>

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 overload
- Keypad display: LCD graphical
- Display: 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
- Keypad communication is lost
- 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*: Form C
- Maximum switching Voltage: 250 VAC/30 VDC
- Maximum continuous current: 2 A/30 VDC or 250 VAC

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.