



BROCHURE

## HPC™ switches

New generation high pressure contact switches with ArcWatch® technology!



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The high pressure contact (HPC) switch has been demonstrated to be a superior switching device when compared to bolted pressure switches due to the exceptional contact design.



The new generation HPC switch is based on the time-proven platform of the Power Break® II circuit breaker, similar to how the original HPC was based on the proven Power Break circuit breaker platform. Now, it's ArcWatch-enabled to provide a better arc flash hazard mitigation solution — 8 calories or less.

The new generation HPC builds on the abilities of the original HPC by using the features of the Power Break II (PBII) circuit breaker. These features include UL field-installable accessories:

- Motor operator mechanism
- Remote close
- Undervoltage release
- Shunt trip with lockout
- Bell alarm — alarm only
- Bell alarm with lockout
- Auxiliary switch module
- Mechanical counter
- Key interlock mounting provision
- Pushbutton cover
- Door interlock
- Blown fuse protector



In addition, the new generation HPC utilizes the EntelliGuard® control unit, which incorporates many of the features of the EntelliGuard trip unit for GE circuit breakers:

- Built-in metering, waveform capture and Modbus communications
- Ground fault protection or alarm, optional GF disable
- GE's patented WFR adjustable selective instantaneous protection
- RELT alternate adjustable fast instantaneous setting, remote operable and with positive status feedback
- Zone-selective operation for GF that works with all circuit breaker trip platforms and includes four different GF curve shapes
- Instantaneous zone-selective operation that works with upstream EntelliGuard trip units and EntelliGuard control units

The new generation HPC switch is available in frame ratings of 800, 1200, 1600, 2000, 2500, 3000 and 4000 A, both top and bottom feed, with IC ratings to 200 kA with the appropriate UL class L fuses.

## Reliability and arc flash mitigation

Features available for the new generation HPC include integral ground fault, operating the switch through a flux shifter instead of a shunt trip, which increases the reliability of the switch. Integral ground fault through the control unit provides 13 distinct delay bands, pickup-up points in 0.01 increments and four curve shapes, including a fuse-shaped curve for the maximum flexibility for ground fault coordination with other devices.

Exclusive to the new HPC for a fused switching device is the ability to have fully adjustable IOC (instantaneous overcurrent protection). When the switch is ordered with IOC, the user can adjust the instantaneous pickup in a way to maintain the selective coordination of the proposed fused system, while also reducing the incident energy and the arc flash hazard. See GE DET-760 for instructions on the exclusive GE WFR selectivity capability.

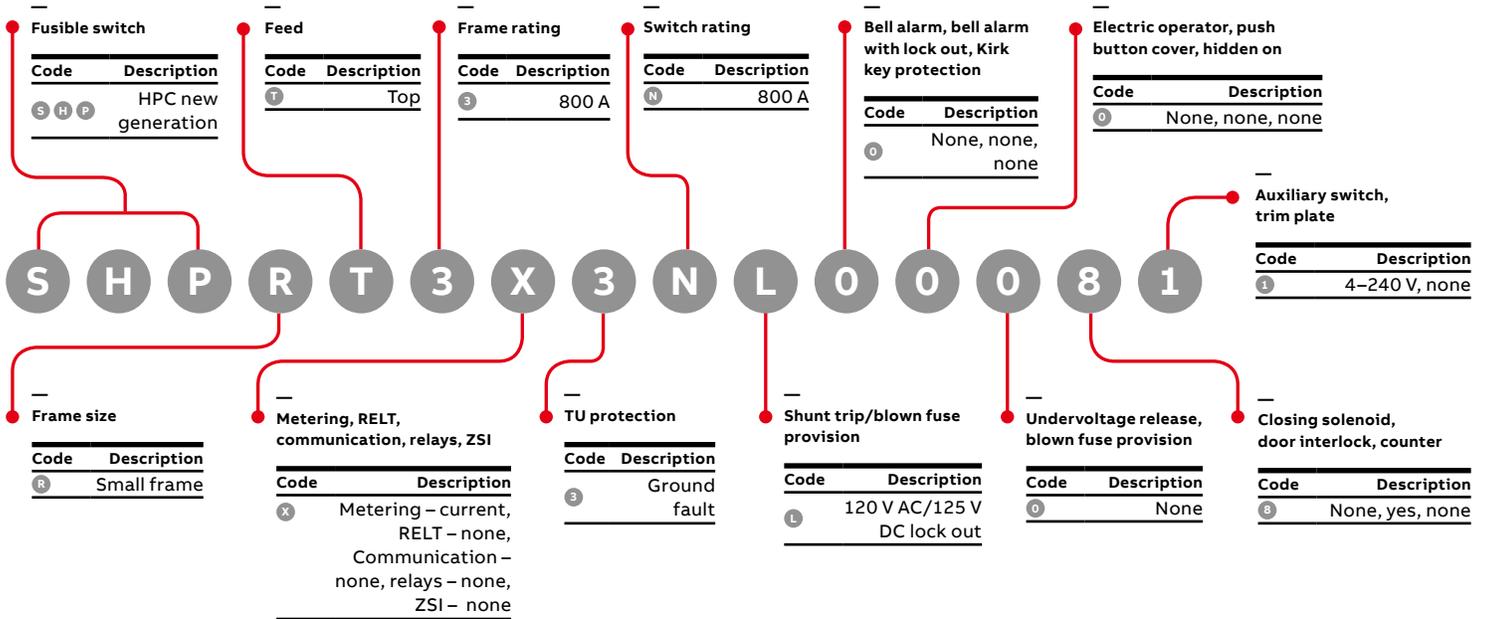
The switch can also be incorporated with RELT (reduced-energy let-through) to allow the user to initiate an instantaneous pickup that is lower than what is provided by the fuses in the switch, or even the selective WFR instantaneous protection. These features can lower the incident energy available at the protected circuit and provide lower arc flash incident energy at energized equipment. See DEE-715 – HPC switches, new generation, instantaneous protection application guide for more details.

### **New and retrofit installations**

The new generation HPC switch is available for new installations and for retrofit, to replace the older GE HPC. By retrofitting with the new generation HPC switch, remote operation of the switch through the motor operators, shunt trips with lockouts, RELT and the adjustable IOC for continuous reduced incident energy can be added in the same footprint as that of the older existing switch.

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## Catalog number format



## How to order

1. Determine your new HPC 15-digit part number by using the configurator (contact your authorized ABB distributor) and referring to the BuyLog\* for complete list of options.
2. Check Empower for price and availability (for access to Empower, contact your authorized ABB distributor).

Note: Because of multiple possible combinations, only catalog numbers that have previously been ordered are in Empower. If the part number you are interested in is not in Empower yet, email the request to [GE.1STOP\\_REPLY@GE.com](mailto:GE.1STOP_REPLY@GE.com) to add it to the system.

3. Once the product number is loaded, the order can be placed via Empower.

## References

- Online BuyLog: [electrification.us.abb.com/buylog](http://electrification.us.abb.com/buylog)
- Online product information: [electrification.us.abb.com](http://electrification.us.abb.com)
- DEC-139 – HPC Switches Catalog Numbers Cross-Reference Table
- DEE-715 – HPC Switches, New Generation ArcWatch Enabled, Instantaneous Protection Guide
- DEH-41689 – HPC Switches, New Generation, User’s Manual
- DEH-41700 – HPC Switches, New Generation, Retrofit Kits (Switchboards)
- DES-121 – Time Current Curve - Fusible Switches, HPC New Generation, Ground Fault Protection
- DES-122 – Time Current Curve - Fusible Switches, HPC New Generation, Instantaneous

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