

# OneGear SMC Flex Controller



Flexible, Powerful, Efficient Medium Voltage Control.

## Advantages:

- Smooth motor starting and reduced starting torque minimizes mechanical stress on system components.
- Reduced inrush currents save energy and prolong system life.
- Interactive pump control mode reduces water hammer – and related shock – on pumping systems.
- Compact PowerBrick™ technology decreases overall component count and simplifies maintenance.
- Intrinsic safety features plus ArcShield™ arc flash-resistant cabinet help protect personnel and equipment.
- Flexible configurations meet requirements for new applications, retrofits and OEM customization.
- Intelligent Motor Control technology provides real-time access to motor information to improve motor protection and system performance.



## The Performance and Protection Your Application Demands

The Allen-Bradley® OneGear™ medium voltage SMC™ Flex controller provides the integrated features and functionality you need to conserve power and minimize manufacturing risks – while reaping the most productivity from your environment.

Rated for applications from 10-15 kV, this flexible smart motor controller offers a full range of starting and stopping methods, including an interactive pump control mode designed to reduce fluid surges in pumping systems. To help protect your valuable rotating assets, choose from fused vacuum contactors or vacuum circuit breakers.

The OneGear SMC Flex controller features compact, compartmentalized construction based on innovative PowerBrick technology to reduce component count – and ease maintenance.

Built to minimize exposure to electrical hazards, this controller includes Guardmaster® safety interlock switches, which prevent personnel from opening the cabinet door when the power source is activated. Our arc flash-resistant cabinet, ArcShield, provides arc-flash protection in accordance with the IEC 62271-200 Annex A standard.

When you choose the OneGear SMC Flex controller, you are assured a flexible solution built to global standards and backed by the expertise, services and support of Rockwell Automation, an industry leader in medium voltage motor control.

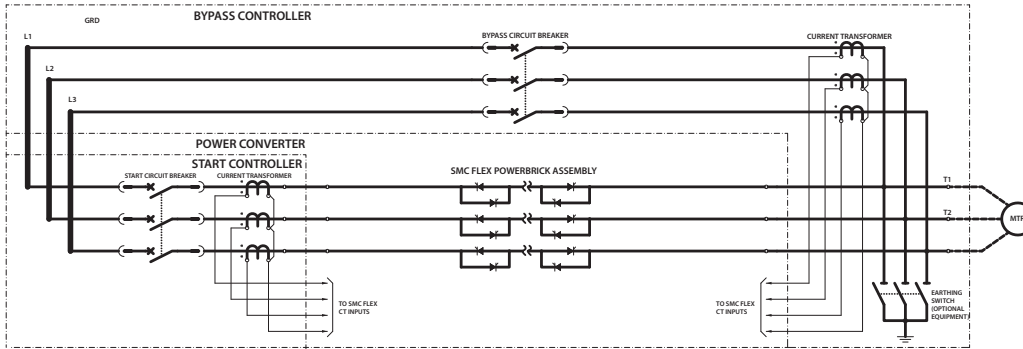
LISTEN.  
THINK.  
SOLVE.®

## Ultimate Flexibility

Featuring one of the smallest footprints in the industry, the OneGear medium voltage SMC Flex controller is designed for maximum flexibility. It is available in three configurations to meet the widest range of requirements:

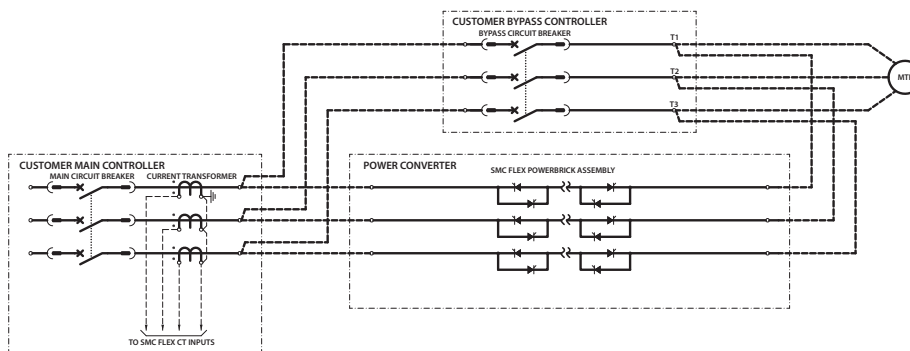
- **10-15 kV SMC Flex Complete Controller**

Designed for new applications, the SMC Flex controller includes the input controller, power electronics, control circuitry and bypass controller. To ease installation, all power and control connections are factory wired and tested.



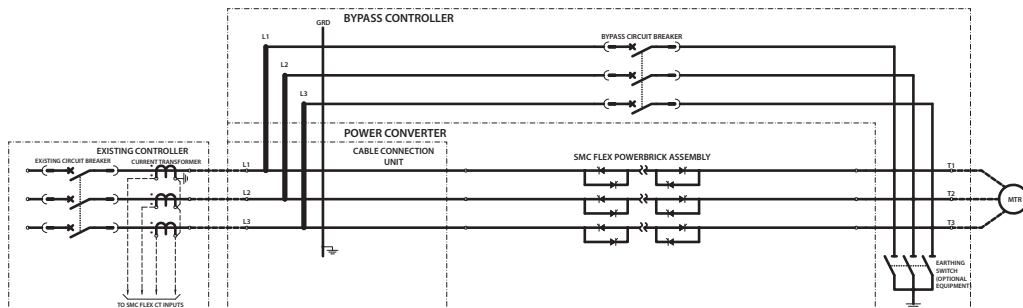
- **10-15 kV SMC Flex OEM Controller**

This configuration allows OEMs to design and build customized SMC Flex controllers by incorporating the power electronics and control circuitry of the controller with the main and bypass control arrangement of your choice.



- **10-15 kV SMC Flex Retrofit Controller**

With this option, you can retrofit an existing fixed speed controller. It can be used in conjunction with existing input controllers and includes the integral bypass controller, power electronics and control circuitry.



## Intelligent Motor Control

### Optimizing Performance, Protecting Investments

From initial system programming to operation and maintenance, the OneGear SMC Flex controller utilizes Intelligent Motor Control technology to streamline operation and maintainability.

#### Maximize your uptime

Simplify commissioning and start-up with intuitive programming software. The built-in keyboard and multi-lingual LCD display make it easy to control and monitor your system.

#### Ease network communications and simplify integration

Easily tap into your architecture and the Logix control environment to access information across your enterprise.

#### Reduce time to troubleshoot and repair

Use real-time diagnostic information to identify faults and speed maintenance.



## ArcShield Protection

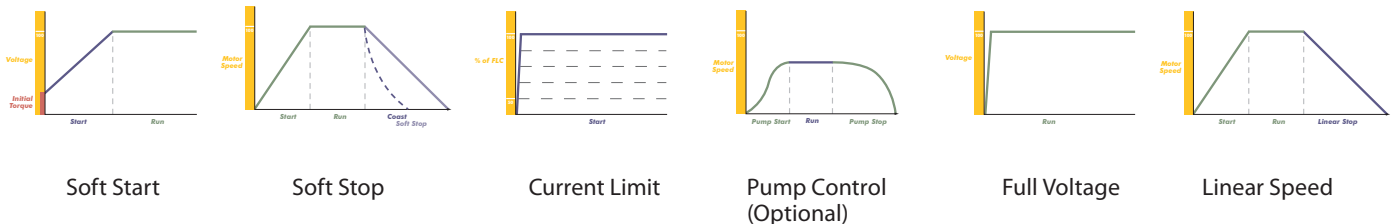
The ArcShield arc flash-resistant cabinet redirects arc flash energy away from personnel through pressure relief vents in the top of the unit via an overhead plenum. The cabinet provides IEC 62271-200 Annex A, IAC AFLR, 31.5 kA, 0.5 sec protection, even when the low voltage door is open for routine maintenance.



Actual photographs of successful ArcShield testing.

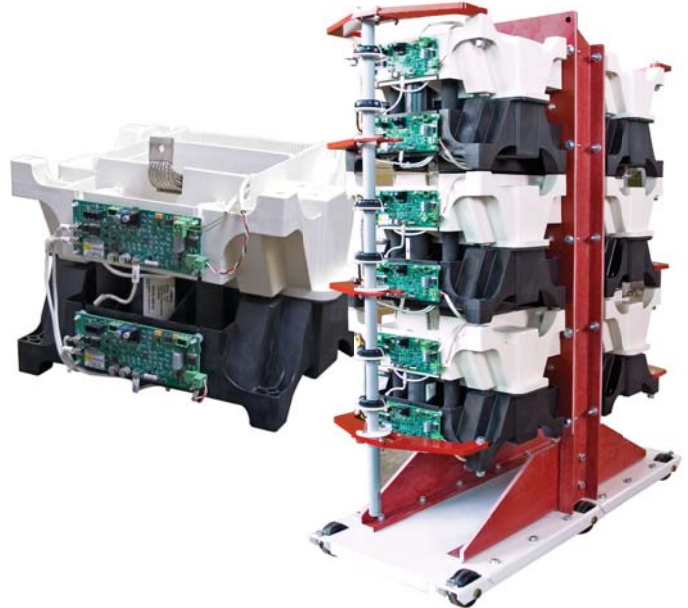
## Versatile Starting and Stopping Control Modules

A full range of stopping and starting modes is offered as standard to drive energy savings and reduce mechanical wear. To reduce fluid surges in centrifugal pumping systems, add the optional Pump Control mode for closed-loop acceleration and deceleration control – without feedback devices.




## PowerBrick Technology


The OneGear SMC Flex controller's impact, easy-to-maintain design is based on PowerBrick technology. The power electronics are housed in "bricks", which can be removed independently for inspection or repair.




## Product Specifications

### Shipping Weights and Dimensions

| Current Rating   | KW (Hp)  |              |               | Dimensions in mm (inches) |           |           | Shipping Weight<br>Kg (lb) |
|--|---|--------------|---------------|---------------------------|-----------|-----------|----------------------------|
|  | 10 kV   | 11 kV        | 13.8 kV       | Width                     | Depth     | Height    |                            |
| <b>10-12 kV SMC Flex Complete Controller (Vacuum Contactor) – Bulletin 7762</b>        |   |              |               |                           |           |           |                            |
| 160 A  | 2200 (3000)   | 2500 (3250)  | –             | 2800 (110)                | 1340 (53) | 2200 (86) | 2728 (6000)                |
| <b>10-15 kV SMC Flex Complete Controller (Vacuum Circuit Breakers) – Bulletin 7763</b> |   |              |               |                           |           |           |                            |
| 160 A  | 2200 (3000)   | 2500 (3250)  | 3150 (4000)   | 2800 (110)                | 1340 (53) | 2200 (86) | 2728 (6000)                |
| 340 A  | 4750 (6500)   | 5300 (7000)  | 6700 (9000)   |                           |           |           |                            |
| 580 A  | 8000 (11000)  | 9000 (12000) | 11000 (15000) |                           |           |           |                            |
| <b>10-15 kV SMC Flex OEM Controller – Bulletin 7761</b>                                |   |              |               |                           |           |           |                            |
| 160 A  | 2200 (3000)   | 2500 (3250)  | 3150 (4000)   | 1500 (59)                 | 1340 (53) | 2200 (86) | 1455 (3200)                |
| 340 A  | 4750 (6500)   | 5300 (7000)  | 6700 (9000)   |                           |           |           |                            |
| 580 A  | 8000 (11000)  | 9000 (12000) | 11000 (15000) |                           |           |           |                            |
| <b>10-15 kV SMC Flex Retrofit Controller (Vacuum Circuit Breaker) – Bulletin 7760</b>  |   |              |               |                           |           |           |                            |
| 160 A  | 2200 (3000)   | 2500 (3250)  | 3150 (4000)   | 2800 (110)                | 1340 (53) | 2200 (86) | 2728 (6000)                |
| 340 A  | 4750 (6500)   | 5300 (7000)  | 6700 (9000)   |                           |           |           |                            |
| 580 A  | 8000 (11000)  | 9000 (12000) | 11000 (15000) |                           |           |           |                            |

 Weights and dimensions are approximate. Certain options (such as top entry or PFCC) will change weight and dimensions. Contact factory for certified dimensions and weights.

 Power Ratings are given for reference only. The capability of the Soft Starter is dependent on the starting current of the motor and operational time. Therefore, application ratings may be greater or less than values in this table.

### Standards compliance:

- IEC 62271-1
- IEC 62271-200
- IEC 60947-4-2
- IEC 62271-200 Annex A
- IEC 62271-100

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