

## Medium Voltage Controller Components – IntelliVAC™ Family



IntelliVAC



IntelliVAC Plus

### Description of Features

The Allen-Bradley Bulletin 1503VC family of IntelliVAC controllers offers a superior, efficient and flexible means of controlling vacuum contactors. The IntelliVAC family offers a scalable solution for multiple medium voltage control applications. The IntelliVAC family has three main products:

- IntelliVAC provides basic control capabilities for 400 and 800 Amp contactors (electrically held and mechanical latch) using a single device. It offers enhanced reliability through better diagnostics and coordination between the power fuses and the vacuum contactor drop-out time. Productivity is improved using the power loss ride through (TDUV) and contactor anti-kiss and anti-plugging features.
- IntelliVAC Plus builds on IntelliVAC with incremental benefits such as DeviceNet communication (including IntelliCENTER software compatibility), digital I/O (8 inputs, 2 outputs), DeviceLogix™ control and enhanced diagnostics.
- IntelliVAC MC is used in multi-contactor applications, allowing one IntelliVAC Plus to control up to four IntelliVAC MC control modules in a Master-Slave configuration. Control and timing logic is handled in DeviceLogix, minimizing control hardware and wiring.

IntelliVAC controllers are designed to perform with Bulletin 1502 vacuum contactors. These industry-proven contactors are available in 400A and 800A ratings up to 7,200 volts.

### IntelliVAC Control Module

- The IntelliVAC control module has a universal input voltage range (110 - 240 VAC, 50/60 Hz or 110 - 250 VDC)
- Consistent vacuum contactor pick-up time, ensures optimal synchronization
- Selectable and repeatable vacuum contactor drop-out times (50, 75, 100, 130, 150, 175, 200 or 240 msec) for tighter coordination with power fuses
- Altitude compensation (-1,000 to 5,000 meters) eliminates mechanical hardware changes at high altitude (400 Amp vacuum contactors)
- Power loss ride-through logic (TDUV) with selectable drop out time (0.2, 0.5, 1.0 or 2.0 sec) requires only an external capacitor
- Anti-kiss and anti-plugging protection
- Status indication (LEDs and relay outputs) allows integration in control system and aids troubleshooting
- Temporary motor jog function (separate input) to allow process set-up
- Delayed motor re-start prevents rapid cycling of vacuum contactor, protecting the connected motor

### IntelliVAC Plus Control Module

The IntelliVAC Plus control module has the same feature as the IntelliVAC, with the additional capabilities below:

- DeviceNet communication
- DeviceLogix control
- Digital inputs (8), rated for 110 to 250 VAC or VDC, and outputs (2), rated up to 250 VAC or FDC, with all LEDs indicating status
- Support for multi-contactor (MC) control schemes, with up to four slave IntelliVAC MC units connected on RS485, and DeviceLogix pre-configured for standard MV controller logic (can also define Custom MC control configurations)
- Enhanced operational information and diagnostics with features like real-time clock, extended contactor close time monitoring and tracking of contactor usage
- IntelliCENTER software compatibility
- Configurable using either RS Network or handheld configuration terminal (Bulletin 193-DNCT) for DeviceNet

### IntelliVAC MC Control Module

The IntelliVAC MC control module has the same feature as the IntelliVAC, with the additional capabilities below:

- Communication board (RS485) to allow the "MC" module to be controlled by one IntelliVAC Plus for multi-contactor control schemes

## Specifications

IntelliVAC Catalog Number		Vacuum Contactor Type
1503VC-BMC5	IntelliVAC	Electrically Held or Mechanical Latch
1503VC-BMC5-EM1	IntelliVAC Plus	
1503VC-BMC5-MC1	IntelliVAC MC	Electrically Held
Ratings and Approvals ③		
Input Voltage		AC – 110 to 240 V, 47 to 63 Hz ① DC – 110 to 250 V
Input Current ②	AC ①	Inrush (max.) – 25 A (1/2 cycle)
		Idle (max.) – 125 mA
		Close (max.) – 11.3 A
		Hold (max.) – 300 mA
		Latch Trip (max.) – 7.0 A
	DC	Inrush (max.) – 25 A
		Idle (max.) – 35 mA
		Close (max.) – 4.8 A
		Hold (max.) – 100 mA
		Latch Trip (max.) – 3.7 A
Command Inputs		AC – 110 to 240 V, 9 mA max. ① DC – 50 to 250 V, 9 mA max.
IntelliVAC Plus Inputs ④		AC – 110 to 240 V, 9 mA max. ① DC – 50 to 250 V, 9 mA max.
Status Output Contacts		AC – 250 V, 5 A, R load ① DC – 30 V, 5 A, R load
IntelliVAC Plus Output Contacts ④		AC – 250 V, 5 A, R load ① DC – 30 V, 5 A, R load
Standards and Approval		cULus, CSA, IEC, CE

① All AC values are rms, except where noted.

② The maximum currents shown are for either the 400 or 800 A Bulletin 1502 vacuum contactors. Close current duration is 200 milliseconds.

③ Common ratings for all versions of IntelliVAC, except where noted.

④ Available with IntelliVAC Plus (1503VC-EMC1) only.