

Product Family Overview

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Size 1 and 2 Starter

Product Description

Setting the Standard in Motor Control

Cutler-Hammer® Advantage motor starters from Eaton's electrical business have extended operating life in a physical space requirement one half the size of conventional motor starters.

Offering motor overcurrent protection accurate to 2% at maximum FLC, Advantage also maintains constant coil power regardless of varying control circuit conditions, eliminating coil burnout, contact chatter and welding due to low voltage of fluttering control signals.

Advantage is designed with a full complement of features that make it the most versatile motor starter in the industry. Multifunction overload protection options provide application flexibility while reducing inventory. Communication capability extends benefits, allowing Advantage to be interactively linked to higher order control systems for monitoring, troubleshooting and control.

Technological advances incorporated in the Advantage design, such as pre-start diagnostics, increased accuracy and the ability to communicate with other systems, are benefits not realized in traditional motor starters.

Benefits

Advantage Breakthroughs

To achieve the level of benefits envisioned for Advantage controls at a competitive price, it was discovered early in the development process that simply improving existing design concepts would fall short of the mark. A new approach involving a higher level of technology was required. The result was the incorporation of three technical breakthroughs — new current

sensing monitoring, an energy-balanced contact closure system that increased life by decreasing electrical and mechanical wear and an intelligent coil controller optimizing the contact closing process based on varying control circuit conditions. Coordinating these breakthroughs to provide enhanced motor control performance is concentrated in the SURE chip.

Advantage uses the right combination of brains and brawn in effecting a motor start. The power circuit of the contactor employs heavy-duty silver alloy contacts scientifically designed for long life. The addition of a uniquely developed application-specific microprocessor chip regulates power supplied to the operating coil. The regulated closing profile is tailored to existing control circuit conditions. This results in an energy balanced system which reduces armature/magnet crash and contact bounce, extending mechanical and electrical life.

Improved Protection and Motor Utilization

The motor circuit monitoring and overload protection functions of Advantage starters are provided by three current sensors closely monitored by the microprocessor. This sensor/microprocessor combination yields a protection scheme closely paralleling that of the

motor heating damage boundary expressed in terms of current and time. Accurate to 2% of full scale, Advantage allows full utilization of motor capability without motor damage or nuisance tripping.

No Heaters, Small Size

Advantage starters eliminate the need for costly heater elements and their associated installation expense. Standard overload protection functions include phase loss and unbalance protection, selectable trip class, automatic/manual reset and ground current protection.

Built-In Communications Capabilities Provide Two-Way Control

Advantage also offers low cost communication capability. ON/OFF commands, status and motor data can be linked to automated control systems without the addition of costly sensors, I/O modules and transducers, in a language compatible with many computer-based software systems in use today.

Protected by 22 patents and proven in many years of operating experience in harsh industrial applications, Advantage motor starters and contactors offer the user unprecedented value at a price competitive with traditional devices.

Instructional Leaflets

17401	Sizes 1, 2 Non-reversing Contactors and Starters
17403	Sizes 3, 4 Non-reversing Contactors and Starters
17405	Sizes 5, 6 Non-reversing Contactors and Starters
17482	Sizes 1, 2 Reversing Contactors and Starters
17484B	Sizes 3, 4 Reversing Contactors and Starters
17486	Sizes 5, 6 Reversing Contactors and Starters
17456	Sizes 1, 2 Contactor Overload Combo
17457	Sizes 3, 4 Contactor Overload Combo
17604	Sizes 5, 6 Contactor Overload Combo
17595	Sizes 1, 2 Reversing Contactors and Starters with status-only ACM
17596	Sizes 3, 4 Reversing Contactors and Starters with status-only ACM
17597	Sizes 5, 6 Reversing Contactors and Starters with status-only ACM
17598	Sizes 1, 2 Two-Speed Two-Winding Starters with status-only ACM
17599	Sizes 3, 4 Two-Speed Two-Winding Starters with status-only ACM
17600	Sizes 5, 6 Two-Speed Two-Winding Starters with status-only ACM
17601	Sizes 1, 2 Two-Speed One-Winding Starters with status-only ACM
17602	Sizes 3, 4 Two-Speed One-Winding Starters with status-only ACM
17603	Sizes 5, 6 Two-Speed One-Winding Starters with status-only ACM

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Contactors — Non-reversing and Reversing

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Size 3 and 4 Starter

Product Description

Catalogue Number W201 — Non-reversing Contactors

Catalogue Number W211 — Horizontal Reversing Contactors (shown above) — long axis horizontal

Catalogue Number W251 — Vertical Reversing Contactors (not illustrated) — long axis vertical

Features

- Small physical size
- Brownout protection
- Communications capability
- Long electrical life
- Higher contact force

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Product Selection

When Ordering Specify

- Non-reversing Catalogue Number as specified in table below.
- Reversing Catalogue Number as specified in table below.

Table A-209. Advantage Contactors — 3-Pole Non-reversing and Reversing — NEMA Sizes 1 – 6

NEMA Size	Motor Voltage	Max. hp	Continuous Amperes (Enclosed)	Coil Voltage/Hz	Non-reversing		Reversing (Horizontal)		Reversing (Vertical)	
					Catalogue Number	Price	Catalogue Number	Price	Catalogue Number	Price
1	200	7-1/2	27	120/60 110/50	W201K1CF W201K1CN		W211K1CF W211K1CN		W251K1CF W251K1CN	
	230	7-1/2								
	460	10								
	575	10								
2	200	10	45	120/60 110/50	W201K2CF W201K2CN		W211K2CF W211K2CN		W251K2CF W251K2CN	
	230	15								
	460	25								
	575	25								
3	200	25	90	120/60 110/50	W201K3CF W201K3CN		W211K3CF W211K3CN		W251K3CF W251K3CN	
	230	30								
	460	50								
	575	50								
4	200	40	135	120/60 110/50	W201K4CF W201K4CN		W211K4CF W211K4CN		W251K4CF W251K4CN	
	230	50								
	460	100								
	575	100								
5	200	75	270	120/60 110/50	W201K5CF W201K5CN		W211K5CF W211K5CN		W251K5CF W251K5CN	
	230	100								
	460	200								
	575	200								
6	200	150	540	120/60 110/50	W201K6CF W201K6CN		W211K6CF W211K6CN		W251K6CF W251K6CN	
	230	200								
	460	400								
	575	400								

Discount Symbol **MC7**