

Achieving Type 2 “No Damage” Motor Start Protection

General Electric Motor Starters & Mersen Fuses

Type 2 “No Damage” Protection - What Is It and Which Fuses Are Best?

Type 2 protection, also referred to as “no damage” protection, simply means that if a short circuit occurs, the short circuit protective device will operate fast enough to prevent fault current damage to healthy equipment in the system. Tests show that current-limiting fuses are the best choice for the protection of the motor controllers if damage-free performance is required. To ensure that correct fuse choices are made, short circuit tests must be made on every possible combination of motor control and fuse. This sheet summarizes a major manufacturer’s motor starter and the Mersen time-delay fuses which give Type 2 “no damage” protection. All combinations are UL witnessed and certified.

200 Volt, Three-Phase Motors

HP	Contactor	OLR	Class J	SCCR (kA)
1/2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1J	AJT4	100
1/2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1K	AJT8†	100
3/4	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1K	AJT8	100
1	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1L	AJT10	100
1 1/2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1M	AJT12	100
2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1N	AJT20†	100
3	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1P	AJT20	100
5	CL02, CL03, CL04, CL25, CL45	RT*1S	AJT35	100
5	CL06, CL07, CL08, CL09, CL10	RT*2B	AJT35	100
5	CL03, CL04, CL45	RT*1T	AJT45†	100
7 1/2	CL04, CL05	RT*1U	AJT45	100
7 1/2	CL06, CL07, CL08, CL09, CL10	RT*2D	AJT60†	100
7 1/2	CL04, CL45	RT*1V	AJT60†	100
10	CL45	RT*1W	AJT70	100
10	CL06, CL07, CL08, CL09, CL10	RT*2E	AJT70	100
15	CL07, CL08, CL09, CL10	RT*2G	AJT100	100
20	CL08, CL09, CL10	RT*2H	AJT125	100
20	CK08, CK09, CK95	RT*3B	AJT125	100
25	CK08, CK09	RT*3C	AJT150	100

230 Volt, Three-Phase Motors

HP	Contactor	OLR	Class J	SCCR (kA)
1/2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1J	AJT4	100
3/4	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1K	AJT8†	100
1	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1L	AJT10	100
1 1/2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1L	AJT10	100
2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1M	AJT12	100
3	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1N	AJT20	100
5	CL02, CL03, CL04, CL25, CL45	RT*1S	AJT35†	100
5	CL06, CL07, CL08, CL09, CL10	RT*2B	AJT35†	100
7 1/2	CL03, CL04, CL45	RT*1T	AJT45	100
7 1/2	CL06, CL07, CL08, CL09, CL10	RT*2C	AJT45	100
7 1/2	CL03, CL04, CL45	RT*1U	AJT45	100
10	CL04	RT*1V	AJT60	100
10	CL45	RT*1V	AJT60	100
10	CL06, CL07, CL08, CL09, CL10	RT*2D	AJT60	100
15	CL06, CL07, CL08, CL09, CL10	RT*2F	AJT90	100
20	CL07, CL08, CL09, CL10	RT*2G	AJT100	100
20	CL07, CL08, CL09, CL10	RT*2H	AJT125†	100
25	CK08, CK09, CK95	RT*3B	AJT125	100
25	CL08, CL09, CL10	RT*2J	AJT125	100
30	CK08, CK09, CK95	RT*3B	AJT125	100
25	CK08, CK09	RT*3C	AJT150	100

* Replace * with “A” or “M”

†† May be too small to allow some motors to start.

† Sized larger than code max for single motor.

www.geindustrial.com

USA T 978 462 6662 F 978 462 0181 info.nby@mersen.com
 CANADA T 416 252 9371 F 416 252 6572 sales.tor@mersen.com

ep-us.mersen.com

FERRAZ SHAWMUT IS NOW MERSEN

MERSEN

Achieving Type 2 “No Damage” Motor Start Protection

General Electric Motor Starters & Mersen Fuses

460 Volt, Three-Phase Motors

HP	Contactor	OLR	Class J	SCCR (kA)
1/2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1F	AJT1-1/2††	100
1/2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1G	AJT2	100
3/4	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1H	AJT4†	100
1	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1J	AJT4	100
1 1/2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1K	AJT8†	100
2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1K	AJT8†	100
3	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1L	AJT10	100
5	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1N	AJT20†	100
7 1/2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1P	AJT20	100
10	CL02, CL03, CL04, CL25, CL45	RT*1R	AJT25	100
10	CL06, CL07, CL08, CL09, CL10	RT*2A	AJT30	100
15	CL03, CL04, CL45	RT*1T	AJT45	100
15	CL06, CL07, CL08, CL09, CL10	RT*2C	AJT45	100
20	CL04, CL45	RT*1V	AJT60	100
20	CL06, CL07, CL08, CL09, CL10	RT*2D	AJT60	100
25	CL45	RT*1W	AJT70	100
25	CL06, CL07, CL08, CL09, CL10	RT*2E	AJT70	100
30	CL06, CL07, CL08, CL09, CL10	RT*2E	AJT70	100
30	CL06, CL07, CL08, CL09, CL10	RT*2F	AJT90	100
40	CL07, CL08, CL09, CL10	RT*2G	AJT100	100
50	CL08, CL09, CL10	RT*2H	AJT125	100
50	CL08, CL09, CL10	RT*3B	AJT125	100
50	CL08, CL09, CL10	RT*2J	AJT125	100
60	CL09, CL10	RT*3B	AJT125	100
60	CL09, CL10	RT*2K	AJT150	100

575 Volt, Three-Phase Motors

HP	Contactor	OLR	Class J	SCCR (kA)
1/2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1F	AJT1-1/2	100
3/4	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1G	AJT2	100
3/4	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1H	AJT4†	100
1	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1H	AJT4†	100
1 1/2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1J	AJT4	100
2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1J	AJT4	100
2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1K	AJT8†	100
3	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1K	AJT8	100
5	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1L	AJT10	100
5	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1M	AJT12	100
7 1/2	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1N	AJT20	100
10	CL00, CL01, CL02, CL03, CL04, CL25, CL45	RT*1P	AJT20	100
15	CL02, CL03, CL04, CL25, CL45	RT*1S	AJT35	100
15	CL06, CL07, CL08, CL09, CL10	RT*2B	AJT35	100
20	CL03, CL04, CL45	RT*1T	AJT45	100
20	CL06, CL07, CL08, CL09, CL10	RT*2C	AJT45	100
20	CL03, CL04, CL45	RT*1U	AJT45	100
25	CL04, CL45	RT*1V	AJT60	100
25	CL06, CL07, CL08, CL09, CL10	RT*2D	AJT60	100
30	CL04, CL45	RT*1V	AJT60	100
30	CL06, CL07, CL08, CL09, CL10	RT*2D	AJT60	100
30	CL45	RT*1W	AJT70	100
30	CL06, CL07, CL08, CL09, CL10	RT*2E	AJT70	100
40	CL06, CL07, CL08, CL09, CL10	RT*2E	AJT70	100
40	CL06, CL07, CL08, CL09, CL10	RT*2F	AJT90	100
50	CL07, CL08, CL09, CL10	RT*2G	AJT100	100
60	CL07, CL08, CL09, CL10	RT*2H	AJT125	100
60	CK08, CK09, CK95	RT*3B	AJT125	100
75	CK08, CK09, CK95	RT*3B	AJT125	100
75	CK08, CK09	RT*3C	AJT150	100

* Replace * with “A” or “M”

†† May be too small to allow some motors to start.

† Sized larger than code max for single motor.

www.geindustrial.com

Disclaimer: Regarding information available in this document, Mersen does not warrant or assume any legal liability or responsibility for the accuracy or usefulness of any information disclosed. The content in this guide is for informational purposes only. All information has been gathered from the individual websites of the product manufacturers listed in this document.

USA T 978 462 6662 F 978 462 0181 info.nby@mersen.com

CANADA T 416 252 9371 F 416 252 6572 sales.tor@mersen.com

ep-us.mersen.com

FERRAZ SHAWMUT IS NOW MERSEN

MERSEN