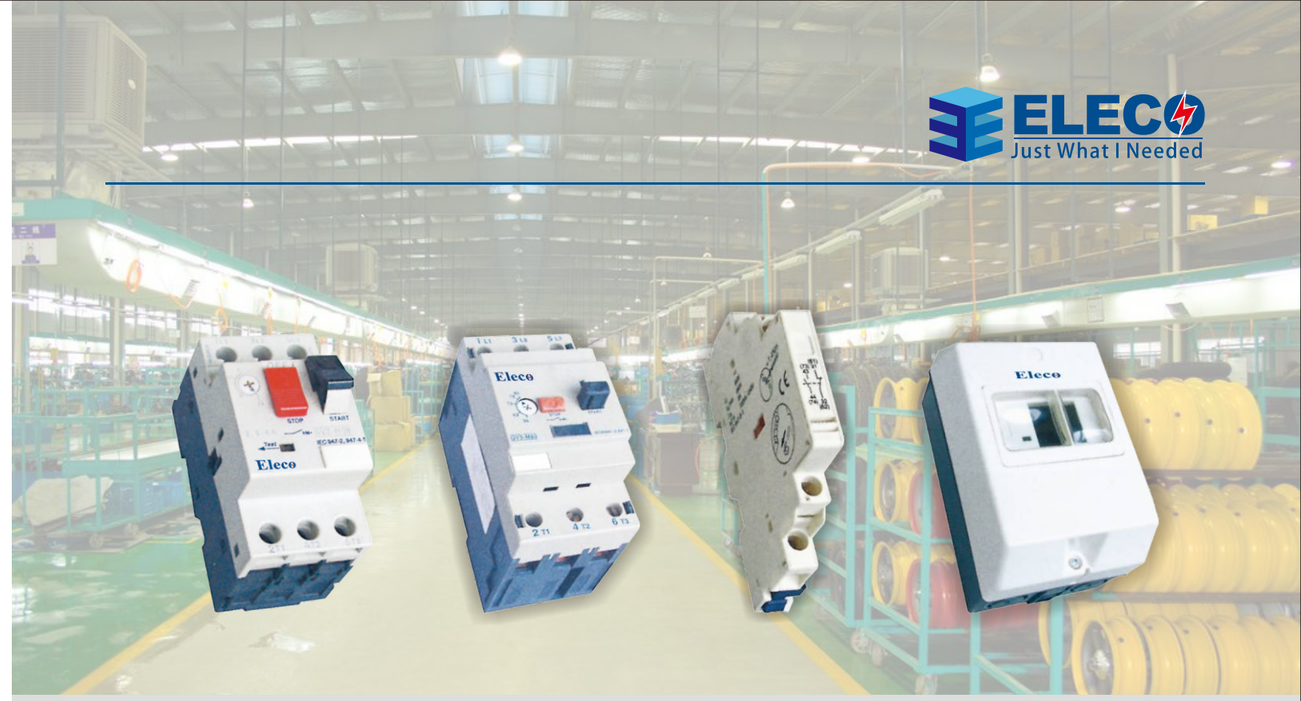

ELV□–M Series

Motor Protection Circuit Breaker

Application

ELV□–M series motor protection circuit breakers is mainly used for the overload and short circuit protection of the motor in AC 50/60Hz, up to 660V, 0.1–80A power circuit, as a full voltage starter to start and cut off the motor, under the AC3 load or for the overload and short circuit protection of the circuit and power equipment in the power distribution network.

Type Designation

ELV□–M□ □

- Rated current for control of AC–3, 380V
- Series type
- Design code(2, 3, 4)
- Motor start
- Company code

Motor Breaker

Specifications

Type	Rated or scale of rated current (A)	Rated standard power of 3-phase motors 50/60Hz in cateELory AC-3					
		220V	380V	415V	440V	500V	660V
		KW	KW	KW	KW	KW	KW
ELV 2-M 01	0.1-0.16	--	--	--	--	--	--
ELV 2-M 02	0.16-0.25	--	--	--	--	--	--
ELV 2-M 03	0.25-0.4	--	--	--	--	--	--
ELV 2-M 04	0.4-0.63	--	--	--	--	--	0.37
ELV 2-M 05	0.63-1	--	--	--	0.37	0.37	0.55
ELV 2-M 06	1-1.6	--	0.37	--	0.55	0.75	1.1
ELV 2-M 07	1.6-2.5	0.37	0.75	0.75	1.1	1.1	1.5
ELV 2-M 08	2.5-4	0.75	1.5	1.5	1.5	2.2	3
ELV 2-M 10	4-6.3	1.1	2.2	2.2	3	3.7	4
ELV 2-M 14	6-10	2.2	4	4	4	5.5	7.5
ELV 2-M 16	9-14	3	5.5	5.5	7.5	7.5	9
ELV 2-M 20	13-18	4	7.5	9	9	9	11
ELV 2-M 21	17-23	5.5	11	11	11	11	15
ELV 2-M 22	20-25	5.5	11	11	11	15	18.5
ELV 2-M 32	24-32	7.5	15	15	15	18.5	26
ELV 3-M 06	1-1.6	--	0.37	--	0.55	0.75	1.1
ELV 3-M 07	1.6-2.5	0.37	0.75	1.1	1.1	1.1	1.5
ELV 3-M 08	2.5-4	0.75	1.5	1.5	1.5	2.2	3
ELV 3-M 10	4-6	1.1	2.2	2.2	3	3.7	4
ELV 3-M 14	6-10	2.2	4	4	4	5.5	7.5
ELV 3-M 20	10-16	4	7.5	7.5	7.5	10	11
ELV 3-M 25	16-25	5.5	11	11	11	15	18.5
ELV 3-M 40	25-40	11	18.5	22	22	25	33
ELV 3-M 63	40-63	15	30	33	33	40	55
ELV 3-M 80	56-80	22	40	45	45	55	63

Type		230/240V		400/415V		440V		500V		690V	
ELV2–M		Icu	Ics %(1)	Icu	Ics %(1)	Icu	Ics %(1)	Icu	Ics %(1)	Icu	Ics %(1)
	A	KA		KA		KA		KA		KA	
01–06	0.1–1.6	–	–	–	–	–	–	–	–	–	–
07	2.5	–	–	–	–	–	–	–	–	3	75
08	4	–	–	–	–	–	–	–	–	3	75
10	6.3	–	–	–	–	50	100	50	100	3	75
14	10	–	–	100	–	15	100	10	100	3	75
16	14	–	–	15	50	8	50	6	75	3	75
20	18	–	–	15	50	8	50	6	75	3	75
21	23	50	100	15	40	6	50	4	75	3	75
22	25	50	100	15	40	6	50	4	75	3	75
32	32	50	100	10	50	6	50	4	75	3	75

ELECO Just What I Needed

Motor Breaker

Specifications

Type		230/240V		400/415V		440V		500V		690V	
ELV2–M		aM	gl	aM	gl	aM	gl	aM	gl	aM	gl
	A	A	A	A	A	A	A	A	A	A	A
01–06	0.1–1.6	–	–	–	–	–	–	–	–	–	–
07	2.5	–	–	–	–	–	–	–	–	16	20
08	4	–	–	–	–	–	–	–	–	25	32
10	6.3	–	–	–	–	50	63	50	63	32	40
14	10	–	–	–	–	50	63	50	63	32	40
16	14	–	–	63	80	50	63	50	63	40	50
20	18	–	–	63	80	50	63	50	63	40	50
21	23	80	100	80	100	63	80	50	63	40	50
22	25	80	100	80	100	63	80	50	63	40	50
32	32	80	100	80	100	63	80	50	63	40	50

Operation performance for motor protection circuit breaker

Serial no.	Rated current Inm(A)	Operating cycle frequency (time/h)	Operating cycle electric life(times)	mechanical life(times)	overall(times)
1	ELV2–M	120	2000	10000	12000
2	ELV3–M	120	2000	10000	12000

Overload balance charcteristics

Step no.	Testing current(A)	Start situation	Limited time	Pre–engage result	Ambient air temperature
1	1.05	cold state	t≥2h	non–trip	□20℃±2℃
2	1.2	hot state(The current rise steadily to a xed value after step 1)	t<2h	trip	□20℃±2℃
3	1.5	It starts after the heat balance of 1.0In current.	trip 10A t<2min	trip	□20℃±2℃
			grade 10 t<4min	trip	□20℃±2℃
4	7.2	cold state	trip 10A 2s<t≤10s	trip	□20℃±2℃
			grade 10 4s≤t≤10s	trip	□20℃±2℃

overload non–balance characteristics

Step no.	Testing current(A) two phases	Testing current(A) third–phase	Start situation	Limited time	Pre–engage result	Ambient air temperature
1	1.0	0.9	cold state	t≥2h	non–trip	□20℃±2℃
2	1.15	0	hot state(The current rise steadily to a xed value after step 1)	t<2h	trip	□20℃±2℃