



PROTECTION & CONTROL

- **Phase Failure Relays**
- **Voltage Monitoring Relays**
- **Time Relays**
- **Astronomic Time Relays**
- **Multifunctional Time Relays**
- **Current Monitoring Relays**
- **Daylight Switches**
- **Liquid Level Controller**
- **Overcurrent Monitoring Relays**
- **Power Supplies**

















MKC-06P Phase Failure Relay

- Phase Failure Protection
- Phase Sequence Failure Protection
- PTC Protection (with PTC3)
- %5-%15 Adjustable Asymmetry
- Between 0.1-20 sec. off delay and on delay time adjustment
- 1 C/O Contact
- DIN II Enclosure
- Rail Mounting

MKC- MKS Series Phase Failure Relays

MKC - MKS series phase failure relays are designed to prevent over-heating and burning of 3 phase motors due to phase failure or unbalanced voltage (asymmetry) in industrial plants. FR-02 Phase Sequence Relay controls the order of 3 phase feeding motors. PT-01 Thermistor Relay is developed to protect motors with PTC. Phase failure relays are used in process industry, conveyor & transport systems, moving stairs & elevators and industrial machine lines.

Product Code	Neutral Failure	Phase Failure	Phase Seq. Failure	PTC Protection	Fixed Asymmetry	Adjustable Asymmetry	Without Neutral	Switch On Delay	Switch Off Delay	1 C/O Contact	1 N/O Contact	DIN1 Rail Mounting	DIN2 Rail Mounting	Pcs / Box
 MK-01 Phase Failure Relay	●	●			●					●				20
 MKC-01 Phase Failure Relay	●	●			●					●			●	16
 MKS-01 Phase Failure Relay	●	●			●						●	●		28
 MKC-03 Phase Failure Relay	●	●	●		●					●			●	16
 MKC-03P Phase Failure Relay (with PTC3)	●	●	●	●	●					●			●	16
 MKS-03 Phase Failure Relay	●	●	●		●						●	●		28
 MKC-04 Phase Failure Relay		●	●		●		●			●			●	16
 MKC-05 Phase Failure Relay	●	●	●			○		●	●	●			●	16
 MKC-05P Phase Failure Relay (with PTC3)	●	●	●	●		○		●	●	●			●	16
 MKC-06 Phase Failure Relay		●	●			○	●	●	●	●				16
 MKC-06P Phase Failure Relay		●	●	●		○	●	●	●	●			●	16
 MKC-20 Phase Failure Relay		●	●			○		●	●	●		●		28

○ Can be switched off



GKRC-02F Voltage Monitoring Relay

- Protection against over/under voltage for 3-phase system
- Phase Failure Protection
- Phase Sequence Failure Protection
- Between 0.1-20 sec. off delay and on delay time adjustment
- 1 C/O Contact
- DIN II Enclosure
- Rail Mounting

DGRC-GKRC-MCC Series Voltage Monitoring Relays

Voltage monitoring relays are designed to protect 1-phase or 3-phase systems from voltage changes. Our wide range of voltage monitoring relays provides to detect phase loss, incorrect phase sequence and to control under/over voltage with adjustable voltage limits.

Voltage monitoring relays are used in protection of compressors, electrical motors, and capacitors in compensation systems, air conditioning/ industrial cooling systems, telecom base stations and railway applications.

Product Code		Neutral Failure	3-Phase	Single Phase	Under Voltage	Over Voltage	Phase Failure	Phase Seq. Failure	Switch on Delay	Switch off Delay	Without Neutral	Auxiliary Supply	DIN1 Rail mounting	DIN2 Rail mounting	Pcs / Box
DGRC-01		●	●		■				●	●				●	16
GKRC-01		●	●		■				●	●				●	16
GKRC-02		●	●		■	■			●	●				●	16
GKRC-02F		●	●		■	■	●	●	●	●				●	16
GKRC-02FA			●		■	■	●	●	●	●	●	●		●	16
GKRC-03			●		■	■			●	●	●			●	16
GKRC-03F			●		■	■	●	●	●	●	●			●	16
GKRC-M2		●		●	■	■			●	●				●	16
MCC-1D	5-15 min ON-Delay	●		●	●		●		●				●		28
MCC-3D	5-15 min ON-Delay	●	●		●		●		●				●		28
GKRC-20F			●		○	○	●	●		●			●		10

○ Adjustable.
 ■ Adjustable and can be switched off.



DTR-20TS Astronomic Time Relay

- Automatic sunrise and sunset calculation
- Automatic DST (Daylight Saving Time) switching
- 24/7 programming based on city name and geographical coordination
- Thanks to long-life battery, no need to adjust location and time at power failure
- Backlight display
- Vacation Mode
- 32 programs and precise timing
- Modbus RS-485 Communication
- 1 C/O Contact
- DIN II Enclosure
- Rail Mounting

DTR Series / MCB-50/50t Astronomic Time Relays

DTR series astronomic time relays are smart time relays which are capable of automatically calculation of sunrise and sunset times and have internal real time clocks. MCB-50/50t electronic time relays which have internal real time clocks are designed to control devices according to the time periods programmed by the user. They are used in lighting controls (streets, parks, gardens, and buildings), school bells, industrial heating/cooling systems and agricultural irrigation.

Product Code		Data Transfer	Programmable Prayer Time	24h Time Programming	Geographical Coordinate Programming (Astronomic)	15 Programs	32 Programs	1 Relay Output (16A)	2 Relay Output (16A)	Pcs / Box
DTR-10	Astronomic Time Relay			●	●	●			●	16
DTR-10t	Astronomic Time Relay			●	●	●		●		16
DTR-20	Astronomic Time Relay, External Memory	PROG		●	●		●		●	16
DTR-20S	Astronomic Time Relay (Double-Contacted)	RS-485		●	●		●		●	16
DTR-20TS	Astronomic Time Relay (With Communication)	RS-485		●	●		●	●		16
DTR-20M	Astronomic Time Relay, IR Programming	IR		●	●		●		●	16
DTR-25	Astronomic Time Relay		●	●	●		●		●	16
MCB-50	Electronic Timer, 32 Programs			●			●		●	16
MCB-50t	Electronic Timer, 32 Programs			●			●	●		16
Programmer										
DTR-PROG	Programmer (for DTR20)									
DTR-IR-PROG	IR Programmer (for DTR20M)									



MCB-200 Multifunctional Time Relay

- User-friendly menu
- Internal battery eliminating the need of power supply
- Precise time setting between 0.2-9999sec / 0.1-9999min
- 15 different functions
- IP40 Protection Class for Enclosure
- 1 C/O Contact
- DIN II Enclosure
- Rail Mounting

MCB-100/200 / ERTC-100 Series Multifunctional Time Relays

Multifunctional time relays offer flexible solutions that are tailored to objective with trigger-controlled rich sub-functions in addition to their main functions.

Multifunctional time relays are used in automation machines and food & agriculture industry.

Product Code	Time	Triggering Input	ON Delay	OFF Delay	Pulse	Asymmetrical Flasher	Symmetrical Flasher	Start/Stop	Counter	Left / Right	Star/Delta	2 Step ON Delay	2 Step OFF Delay	85-315 VAC/DC	Memory	10-30VAC/DC	Self Supply	DIN II Enclosure	Pcs / Box
MCB-100 Multifunctional Time Relay	0,1s-9999min.	●								●	●	●	●	●	*			●	16
MCB-101 Multifunctional Time Relay	0,1s-9999min.	●								●	●	●	●		*	●		●	16
MCB-120 Multifunctional Time Relay	0,1s-9999min.	●	●	●	●	●								●	*			●	16
MCB-121 Multifunctional Time Relay	0,1s-9999min.	●	●	●	●	●									*	●		●	16
MCB-125 Multifunctional Time Relay	0,1s-9999min.	●	●	●	●	●		●	●					●	*			●	16
MCB-126 Multifunctional Time Relay	0,1s-9999min.	●	●	●	●	●		●	●						*	●		●	16
MCB-130 Multifunctional Time Relay	0,1s-9999min.	●	●	●	●	●		●	●	●	●	●	●	●	*			●	16
MCB-131 Multifunctional Time Relay	0,1s-9999min.	●	●	●	●	●		●	●	●	●	●	●		*	●		●	16
MCB-200 Multifunctional Time Relay	0.2s-9999min-0,1m-9999min	●	○	○	○	○	○										●	●	16
ERTC-100 Counter / Pulse Time Relay	0,1s-9999min.	●			●									●	*			●	16
ERTC-101 Counter / Pulse Time Relay	0,1s-9999min.	●			●										*	●		●	16

△ Refer to the function table to see sub-functions included in main functions.

○ Functions with Triggering

* The memory feature does not apply to all functions that the device has. Refer to the user manual for details of the functions available.







AKC-03D Current Monitoring Relay

- Protection against under current
- Between 1.5A-60A current adjustment interval with CT-25 current transformer
- IP20 Protection Class
- 1 C/O Contact
- DIN II Enclosure
- Rail Mounting

AKC Series Current Monitoring Relays

AKC series current monitoring relays are designed to protect motors and systems against under or over current with a current adjustment and two delay adjustments. Current monitoring relays measure system current, and shut down systems when measured current values are below or above defined levels.

They are used in conveyor & transport systems, heating, ventilation and air conditioning.

Product Code			Under Current Protection	Over Current Protection	.../5A	CT-25	Pcs / Box
	AKC-01D	Low Current Protection (0,5-5A)	●		●		16
	AKC-01A	Over Current Protection (0,5-5A)		●	●		16
	AKC-03D	Low Current Protection (between 1,5 and 60A with CT-25)	●	●		●	12
	AKC-03A	Over Current Protection (between 1,5 and 60A with CT-25)				●	12



SSRC-04 Liquid Level Controller


- Control the level of the conductive liquids
- Single tank control
- Adjustable 5-50 kΩ Sensitivity
- 1 C/O Contact
- DIN II Enclosure
- Rail Mounting

SSRC-04 Liquid Level Controller

SSRC-04 liquid level controller is used to control the level of the conductive liquids and to prevent working the motors without water in wells and liquid tanks.

Liquid level controllers are used in wastewater treatments, pump stations and tank level controlling.

Product Code

			5-50 kW Adjustable	Small Electrode	Large Electrode	Pcs / Box
	SSRC-04	Liquid Level Controller	●			16
	LLS-01	Liquid Level Electrode		●		100
	LLS-02	Liquid Level Electrode			●	100

⚠ Liquid level electrodes cannot be used with inflammable and corrosive liquids and food products. The liquids that will be controlled for their levels must have electrical conductivity.





CKR-93T Overcurrent Monitoring Relay

- 85-265 VAC / 24 VDC Operating Voltage Range
- 3-Phase and Earth Fault Protection
- 2-Phase and Earth Fault Protection (CKR-92T)
- 144x144 (mm) dimensions
- Adjustable Inverse and Fixed Times
- 1 NO contact for phase and 1 C/O contact for neutral

CKR Series Overcurrent Monitoring Relays

CKR series overcurrent protection relays are used to protect transformers, motors, generators and energy transmission lines in the energy distribution system against short circuits and grounding faults.

Product Code

Product Code	Description	Operating Voltage	Pcs / Box
 CKR-93T	3 Phase + Earth (Adjustable Inverse and Fixed Times for Phase & Earth)	85-265 VAC / DC	4
 CKR-92T	2 Phase + Earth (Adjustable Inverse and Fixed Times for Phase & Earth)	85-265 VAC / DC	4

Pcs / Box

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