

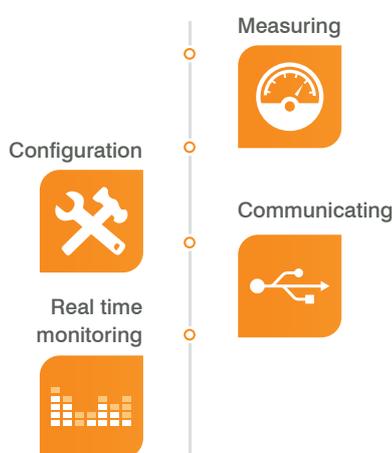


G1-M1 (Protection Relay)

Defining G1 and M1 series protection relays in simple terms

G1 and M1 series protection relays are the automation devices which measure electrical values and detect failures. The renewed power supply circuit is more resistant to tough network conditions. Designed for better durability, especially for the networks with many peak voltages like cranes, elevators and escalators. G1 series is compatible and safe for using with different voltage networks, thanks to its network voltage selector.

Which actions are executed?



A protection relay measures electrical values such as over and under voltage, phase loss, phase sequence, unbalanced etc. in order to **protect** your machines.

It can stop your engine from overheating with external PTC **sensor**. Electrical network which is connected to your machines is examined continuously. if a fault is **detected**, the machine is stopped immediately or with time **delay** by output contacts. After that, any malfunctions can be fixed. This avoids expensive breakdowns, synonymous with production delays and loss of profitability.

Which market are they used frequently?

- Industrial machines
- Construction industry
- Stone pits
- Food and agriculture industry
- Water treatment system
- Moving stairs & elevators

Benefits and Advantages

- First Class quality to fulfill all your monitoring needs
- Quick view of status with leds
- Easy configuration with knobs
- High level of Electromagnetic compatibility (EMC) i.e. maximum immunity to interferences.
- 17.5 mm wide housing and compact design saves panel space.
- Perfect to fit in modular enclosure
- Self-Extinguishing plastic housing
- No auxiliary supply needed
- Preventing overheating thanks to PTC input
- High mechanical endurance
- High accuracy and switching reliability

Control Panel



G1-SA, G1-SAP, G1-A

Control panels must be monitored carefully otherwise the effects of a power outage or voltage drop can be highly harmful for equipments.

Escalators



G1D-SA, G1D-SA-L

Detection of unbalanced voltage on motors.

Cranes



G1

Adjustments of over and under voltage limit in order for cranes to operate correctly.

Temperature Control of Motors



M1-SAP

Preventing overheating with external PTC sensor.

Machine Line



M1D-S, M1D-SA

Providing phase loss, phase sequence and unbalanced protection for 3 phase applications.

	M1-A	M1-SA	M1-SP	M1-SAP	M1D-S	M1D-SA
						
Order Number	270134	270132	270135	270133	270142	270144
Operating Voltage	230V AC ± %25	230V AC ± %25	230V AC ± %25	230V AC ± %25	380 .. 480VAC %25	380 .. 480VAC %25
Supply Voltage	L1-N	L1-N	L1-N	L1-N	L1-L3	L1-L3
Operating frequency	50 .. 60 Hz	50 .. 60 Hz	50 .. 60 Hz			
Fixed Delay Time	2 Sec.	2 Sec.	2 Sec.	2 Sec.	2 Sec.	2 Sec.
Asymmetry Hysteresis	3%	3%	3%	3%	3%	3%
Fixed Asymmetry Threshold	20%	20%	-	20%	-	20%
PTC Protection Threshold			≈ 1100Ω	≈ 1100Ω		
Relay Outputs	1C/O	1C/O	1C/O	1C/O	1C/O	1C/O
Max. Switching Current	10A	10A	10A	10A	10A	10A
Max. Switching Voltage	250V AC	250V AC	250V AC	250V AC	250V AC	250V AC
Max. Switching Power	1250VA	1250VA	1250VA	1250VA	1250VA	1250VA
Operating Temperature	-20°C .. 60°C	-20°C .. 60°C	-20°C .. 60°C	-20°C .. 60°C	-20°C .. 60°C	-20°C .. 60°C
Storing Temperature	-40°C .. 75°C	-40°C .. 75°C	-40°C .. 75°C	-40°C .. 75°C	-40°C .. 75°C	-40°C .. 75°C
Protection Class	IP20	IP20	IP20	IP20	IP20	IP20
Mounting Type	Rail mount	Rail mount	Rail mount	Rail mount	Rail mount	Rail mount

	G1-SA	G1-SAP	G1-A	G1D-SA	G1D-SA-L
					
Order Number	270130	270131	270136	270140	270141
Operating Voltage	230V AC \pm %25	230V AC \pm %25	230V AC \pm %25	380 .. 480VAC %25	190 .. 230V AC %25
Supply Voltage	L1-N	L1-N	L1-N	L1-L3	L1-L3
U _N adjustment Options	N/A			380V, 400V, 440V, 460V, 480V	190V, 200V, 208V, 220V, 230V
Voltage adjustment Range	%5 .. %20 / OFF	%5 .. %20 / OFF			
Voltage Threshold	\pm U _N x (%5 .. %20) /OFF	\pm U _N x (%5 .. %20) /OFF	\pm U _N x (%5 .. %20) /OFF	\pm U _N x (%5 .. %20) /OFF	\pm U _N x (%5 .. %20) /OFF
Voltage Hysteresis	6V AC	6V AC	6V AC	6V AC	6V AC
Delay time	0,1 .. 10 Sec.	0,1 .. 10 Sec.			
Asymmetry Adjustment Range	%5 .. %20 / OFF	%5 .. %20 / OFF			
Asymmetry Threshold	\pm U _N x (%5 .. %20) /OFF	\pm U _N x (%5 .. %20) /OFF	\pm U _N x (%5 .. %20) /OFF	\pm U _N x (%5 .. %20) /OFF	\pm U _N x (%5 .. %20) /OFF
Asymmetry Hysteresis	3%	3%	3%	3%	3%
PTC Protection Threshold		\approx 1100 Ω			
Relay Outputs	1C/O	1C/O	1C/O	1C/O	1C/O
Max. Switching Current	10A	10A	10A	10A	10A
Max. Switching Voltage	250V AC	250V AC	250V AC	250V AC	250V AC
Max. Switching Power	1250VA	1250VA	1250VA	1250VA	1250VA
Operating Temperature	-20°C .. 60°C	-20°C .. 60°C	-20°C .. 60°C	-20°C .. 60°C	-20°C .. 60°C
Storing Temperature	-40°C .. 75°C	-40°C .. 75°C	-40°C .. 75°C	-40°C .. 75°C	-40°C .. 75°C
Protection Class	IP20	IP20	IP20	IP20	IP20
Mounting Type	Rail mount	Rail mount	Rail mount	Rail mount	Rail mount