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M-GS20 / 40PC Static Relay Zero-crossing or phase angle (8 PROGRAMMABLE FUNCTIONS) AUTOMATIC ACQUISITION OF CONTROL SIGNALS AND LINE FREQUENCY. SINGLE PHASE 20 / 40A 230-440V AC 50-60Hz

Via DIP-switches on the front panel, you can set up eight different actuation methods. Four with SSR control in the range 11-24VDC 5mA, and four with analog control 0-10V DC. They are equipped with load, fuse, semiconductor fault diagnostics for all functions except in the use with MASTER-SLAVE method. It must be powered with 24VDC 20mA, and is able to automatically adapt to the 50/60Hz line and LOGIC or ANALOG control signal.

FUNCTION 1: Dip 1 (off), Dip 2 (off). Zero-crossing. With SSR signal, the relay switches over with direct control, the AL line is considered fuse load fault alarm. FUNCTION 1A : with analog signal 0-10V, converts the switching into proportional times of 500ms. The AL output can be used to control one or two relays simultaneously with MASTER SLAVE method. Suitable for SINGLE AND THREE-PHASE RESISTIVE LOADS, with single phase, two phase and three phase method.

FUNCTION 2 : Dip 1 (on), Dip 2 (off). Zero-crossing. With SSR signal, the relay switches with a direct command performing "phase angle soft" from zero to 100% with a time of 400ms, for an average trigger time equal to 5 sec. After this period the switching becomes 'zero-crossing'. If the control signal remains absent for more than 2 sec., that automatically resets the soft. Minimum recommended SSR cycle time 1 sec. The AL output is considered fuse load fault alarm. **FUNCTION 2A**: With analog signal 0-10V converts the switching into proportional times of 500ms. The AL output is considered fuse load fault. Suitable for SINGLE-PHASE RESISTIVE LOADS with considerable variations in initial draw such as medium and short wave infrared lamps.

FUNCTION 3 : Dip 1 (off), Dip 2 (on). This function requires a fixed SSR cycle time of 1 sec. +/- 3% The relay actuates with "phase angle" converting the SSR control signal in a reference in %, performing the soft start from 0 to 100% with a time of 1Ses. Auto soft in the event of transient lack of line voltage. The AL output is considered fuse load fault.

FUNCTION 3A: with analog signal 0-10V behaves as a normal phase angle control with characteristics of soft, auto-soft and alarm identical as function 3. Suitable for SINGLE-PHASE RESISTIVE AND INDUCTIVE LOADS, with considerable variations in initial draw, in particular in surface thermal treatments in motion with infrared shortwave lamps.

FUNCTION 4 : Dip 1 (on), Dip 2 (on). This function requires a fixed SSR cycle time of 1 sec. +/- 3% The relay performs a "phase angle" preheating by converting the SSR control signal in a percentage reference, for a period of 5 sec, then passes from phase angle to zero crossing control, with a SRR cycle time of 500ms. If the control signal remains absent for more than 2 sec., that automatically resets the preheating. In preheating, it behaves as a normal phase angle control, performing the soft start of 1Sec. In the case of transient lack of line voltage, preheating is reset. The AL output is considered fuse load fault.

FUNCTION 4A : with the analog signal 0-10V it behaves with the same characteristics as function 4. SUITABLE FOR SINGLE-PHASE RESISTIVE LOADS with considerable variations in initial draw, such as medium and short wave infrared lamps.

COMMON SPECIFICATIONS:

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DIP Prog.

- Switched current at 45°C environment
- M-GS20PC (17.5A I2T450A) 230/400V AC
- M-GS40PC (30A 12T880A) 230/400V AC. POWER SUPPLY 24V DC, 20mA + (ALARM OUT). LOGIC CONTROL SIGNAL 11-24V DC 2mA.
- ANALOG CONTROL SIGNAL 1-10V DC 1mA
- (Limiting trimmer 0-100% of the control signal, for 0-10v test only)
- ALARM OUT (EXCEPT FOR PROG 1A) 22V DC MAX.20mA Reports: Breaking semiconductor, load, fuse and absence of line voltage. WITH INTERNAL DIODE FOR PARALLEL CONNECTION.

- OUT (PROG. 1A) 22V DC MAX.20mA. FOR MASTER-SLAVE USE.

- SSR control (11-24V DC 5mA)

FUNCTION 1: Dip 1 (off), Dip 2 (off). - ZERO CROSSING ACTUATION.

- Minimum cycle time (SSR) 0.2 Sec.

FUNCTION 2: Dip 1 (on), Dip 2 (off).

- PHASE ANGLE + ZERO CROSSING actuation. RECOMMENDED CYCLE TIME (SSR) 1 Sec.
- MINIMUM PULSE CONSIDERED 20ms.
- PHASE ANGLE SOFT TIME FROM 0 TO 100% 400mS.
- SOFT DURATION 5 Sec. OF SSRACTIVE TIME.
- After the ZERO CROSSING soft actuation
- TIME FOR SOFT RESET DUE TO LACK OF SSR 2 Sec.

FUNCTION 3: Dip 1 (off), Dip 2 (on).

- PHASE ANGLE actuation.
- CYCLE TIME (SSR) FOR SAMPLING 1 Sec. +/- 3%
- MINIMUM PULSE CONSIDERED 20ms.
 ACTUATION % UPDATE TIME 1 Sec.
 SOFT START FROM 0 TO 100% 1 Sec.

- FUNCTION 4: Dip 1 (on), Dip 2 (on). PHASE ANGLE + FAST ZERO CROSSING actuation. CYCLE TIME (SSR) FOR SAMPLING 1 Sec. +/- 3% ACTUATION % UPDATE TIME 1 Sec. SOFT START FROM 0 TO 100% 1 Sec.

- Phase angle preheating time 5 Sec.
- After preheating, conversion to Zero Crossing with 500ms. SSR cycle
- MINIMUM PULSE CONSIDERED 20ms.

Control 0-10V DC 1mA.

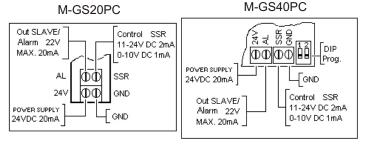
- FUNCTION 1A: Dip 1 (off), Dip 2 (off). ZERO CROSSING ACTUATION.
- Cycle time conversion (SSR) 500mS
- Out AL 22V DC MAX. 20mS. For MASTER-SLAVE function.
- FUNCTION 2A: Dip 1 (on), Dip 2 (off). ZERO CROSSING ACTUATION.
- Cycle time conversion (SSR) 500mS
- Out AL 22V DC MAX. 20mS. Load/fuse fault alarm.

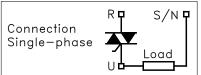
FUNCTION 3A: Dip 1 (off), Dip 2 (on)

- PHASE ANGLE actuation. SOFT START FROM 0 TO 100% 1 Sec.

FUNCTION 4A: Dip 1 (on), Dip 2 (on).

- PHASE ANGLE preheating.
- Preheating TIME 5 Sec.
 SOFT START FROM 0 TO 100% 1 Sec.
- After preheating, conversion to Zero Crossing with cycle (SSR) 500mS







= DIP Prog.

M-GS20PC

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M-GS40PC

DIN RAIL

H.100-L.60-P.115

HOOKING FOR

H.138-L.24-P.108

M-GS40PC 40A IZT 880A

HOOKING FOR DIN RAIL