

# Transportation Relay Series

| Relay for PCB                                                                     |                       |                          |                                                    |                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                                                                                                                                                                      | Kind                                  |                      |                         |
|-----------------------------------------------------------------------------------|-----------------------|--------------------------|----------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------|-------------------------|
| G8QN                                                                              |                       |                          |                                                    | G8SN                                           | G8QE                                                                              | G8FE                                                                              |                                                                                   | G8SE                                                                              |                                                                                   | G8HL-P                                                                              | G8PE                                                                                |                                                                                                                                                                                                                                      | Type                                  |                      |                         |
| G8QN-1C4                                                                          |                       | G8QN-1C4-05              | G8QN-1C4-RUC                                       | G8SN-1C4-FD                                    | G8QE-1A                                                                           | G8FE-1AP<br>G8FE-1AF                                                              | G8FE-1AP-L<br>G8FE-1AF-L                                                          | G8SE-1A4-E                                                                        | G8SE-1A4-L                                                                        | G8HL-1A4P                                                                           | G8PE-1A4                                                                            | G8PE-1C4                                                                                                                                                                                                                             |                                       |                      |                         |
| Standard                                                                          | Low operating voltage | High heat resistance     | High heat resistance and low operating voltage     | For Lamp                                       | Standard                                                                          | Standard                                                                          | Standard                                                                          | Low operating voltage                                                             | Standard                                                                          | High heat resistance                                                                | Standard                                                                            | Standard                                                                                                                                                                                                                             | Model                                 |                      |                         |
|  |                       |                          |                                                    |                                                |  |  |  |  |  |  |  |                                                                                                                                                   | Appearance                            |                      |                         |
| DC motor control for transportation components                                    |                       |                          | For flasher lamp                                   | DC motor control for transportation components | Head lamp, Tail lamp, Horn                                                        | Head lamp, Tail lamp, EPS                                                         |                                                                                   | Head lamp, Fog lamp, EPS, etc.                                                    |                                                                                   | Head lamp, EPS, etc.                                                                |                                                                                     | Blower fan, Defogger, etc.                                                                                                                                                                                                           | Purpose                               |                      |                         |
| 1c(SPDT)                                                                          |                       |                          |                                                    |                                                | 1a(SPST)                                                                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | 1c(SPDT)                                                                                                                                                                                                                             | Contact configuration                 | Contact              |                         |
| AgSn type (non-cadmium)                                                           |                       | PdRu alloy               |                                                    | AgSn type (non-cadmium)                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | Contact material                                                                                                                                                                                                                     |                                       |                      |                         |
| 14 VDC 25 A Motor load                                                            |                       |                          | 14 VDC 30 A Motor load                             | 12 VDC 120 W Lamp load                         | 12 VDC 15 A Resistance load                                                       |                                                                                   | 12 VDC 20 A Resistance load                                                       |                                                                                   | 12 VDC 40 A Resistance load                                                       | 12 VDC 40 A/25 A Resistance load                                                    | Rated load                                                                          |                                                                                                                                                                                                                                      |                                       |                      |                         |
| <div>Motor lock current 30 A</div> <div>5 A</div>                                 |                       | 108 W Lamp: 85 times/min | <div>Motor lock current 35 A</div> <div>10 A</div> | <div>Inrush current 60 A</div> <div>10 A</div> | <div>Inrush current 80 A</div> <div>15 A</div>                                    |                                                                                   | <div>Inrush current 80A</div> <div>20 A</div>                                     | <div>Inrush current 60 A</div> <div>20 A</div>                                    | <div>Inrush current 100 A</div> <div>20 A</div>                                   | <div>Inrush current 180 A(NO)</div> <div>40 A (NO)</div>                            | <div>Inrush current 60 A(NC)</div> <div>25 A (NC)</div>                             | <div>180 A</div> <div>160 A</div> <div>140 A</div> <div>120 A</div> <div>100 A</div> <div>80 A</div> <div>60 A</div> <div>40 A</div> <div>20 A</div> <div>10 A</div> <div>20 A</div> <div>30 A</div> <div>40 A</div> <div>50 A</div> |                                       |                      |                         |
| 5 VDC 100 mA                                                                      |                       |                          | 5 VDC 1 A                                          | 5 VDC 100 mA                                   | 5 VDC 1 A                                                                         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                                                                                                                                                                      | Min applicable load (Reference value) |                      |                         |
| 100,000 times                                                                     |                       | 2000 hours               | 100,000 times                                      |                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Electrical (Rated load)                                                             |                                                                                                                                                                                                                                      | Endurance (Lifetime)                  |                      |                         |
| 1,000,000 times                                                                   |                       | 10,000,000 times         | 1,000,000 times                                    |                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Mechanical                                                                          |                                                                                                                                                                                                                                      |                                       |                      |                         |
| 12 VDC                                                                            | 9 VDC                 | 12 VDC                   | 9 VDC                                              | DC12V                                          |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                                                                                                                                                                      | Rated coil voltage                    | Coil                 |                         |
| 210 Ω                                                                             | 180 Ω                 | 210 Ω                    | 180 Ω                                              | 210 Ω                                          | 210 Ω                                                                             | 320 Ω                                                                             | 180 Ω                                                                             | 180 Ω                                                                             | 225 Ω                                                                             | 225 Ω                                                                               | 320 Ω                                                                               | 135 Ω                                                                                                                                                                                                                                | 135 Ω                                 |                      | Coil resistant          |
| 686 mW                                                                            | 450 mW                | 686 mW                   | 450 mW                                             | 686 mW                                         | 686 mW                                                                            | 450 mW                                                                            | 800 mW                                                                            | 800 mW                                                                            | 640 mW                                                                            | 640 mW                                                                              | 450 mW                                                                              | 1067m W                                                                                                                                                                                                                              | 1067 mW                               |                      | Rated power consumption |
| 7.3 V or less                                                                     | 6.5 V or less         | 7.3 V or less            | 6.5 V or less                                      | 7.3 V or less                                  | 6.5 V or less                                                                     | 8.0 V or less                                                                     | 7.3 V or less                                                                     | 6.0 V or less                                                                     | 7.3 V or less                                                                     | 7.3 V or less                                                                       | 8.0 V or less                                                                       | 7.0 V or less                                                                                                                                                                                                                        | 6.8 V or less                         |                      | Operating voltage       |
| 1.2 V or more                                                                     | 0.6 V or more         | 1.2 V or more            | 0.6 V or more                                      | 1.2 V or more                                  | 0.9 V or more                                                                     | 1.0 V or more                                                                     |                                                                                   |                                                                                   | 1.2 V or more                                                                     |                                                                                     | 0.7 V or more                                                                       | 1.0 V or more                                                                                                                                                                                                                        | Release voltage                       | Withstand voltage    |                         |
| 500 VAC: 1 minute                                                                 |                       |                          |                                                    |                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                                                                                                                                                                      | Between a coil and contact            |                      |                         |
| 500 VAC: 1 minute                                                                 |                       |                          |                                                    |                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                                                                                                                                                                      | Between contacts                      |                      |                         |
| -40~+85°C<br>High heat resistance: -40~+105°C                                     |                       |                          |                                                    | -40~+85°C                                      | -40~+105°C                                                                        |                                                                                   |                                                                                   |                                                                                   | -40~+85°C<br>High heat resistance: -40~+110°C                                     |                                                                                     | -40~+100°C                                                                          | -40~+105°C                                                                                                                                                                                                                           | Ambient temperature                   | Protection structure |                         |
|                                                                                   |                       |                          |                                                    |                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                                                                                                                                                                      | Unsealed type (In a case)             |                      |                         |
|                                                                                   |                       |                          |                                                    |                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                                                                                                                                                                      | Flux protection type                  |                      |                         |
| ○                                                                                 |                       |                          |                                                    | ○                                              | ○                                                                                 | ○                                                                                 |                                                                                   | ○                                                                                 |                                                                                   | ○                                                                                   | ○                                                                                   | ○                                                                                                                                                                                                                                    | Fully sealed type                     |                      |                         |
|                                                                                   |                       |                          |                                                    |                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ○                                                                                 |                                                                                     |                                                                                     |                                                                                                                                                                                                                                      | Surface mount terminal                |                      |                         |
| ○                                                                                 |                       |                          |                                                    | ○                                              | ○                                                                                 | ○                                                                                 |                                                                                   | ○                                                                                 |                                                                                   | ○                                                                                   | ○                                                                                   | ○                                                                                                                                                                                                                                    | PCB terminal                          | Terminal             |                         |
|                                                                                   |                       |                          |                                                    |                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                                                                                                                                                                      | Plug-in terminal                      |                      |                         |
| 6.0 g                                                                             |                       |                          |                                                    | 12.5 g                                         | 6.0 g                                                                             | 8.7 g                                                                             |                                                                                   | 16.0 g                                                                            |                                                                                   | 13.0 g                                                                              | 20.0 g                                                                              |                                                                                                                                                                                                                                      | Weight (about)                        |                      |                         |