

HF9516

1 CUBIC INCH 3 FORM C HERMETICALLY SEALED RELAY  
WITH COIL TRANSIENT SUPPRESSION



**Features**

- Force balanced type
- With coil transient suppression
- 25A contacts switching capability
- Failure rate can be level L
- High ambient applicability
- All metal welded construction
- Hermetically welded and marked by laser

AMBIENT ADAPTABILITY

| Ambient grade             |              | I                         | II                        | III                       |
|---------------------------|--------------|---------------------------|---------------------------|---------------------------|
| Ambient temperature       |              | -55 °C to 85 °C           | -55 °C to 85 °C           | -65 °C to 125 °C          |
| Humidity                  |              | 98%, 40 °C                |                           |                           |
| Low air pressure          |              | 58.53 kPa                 | 4.39 kPa                  | 4.39 kPa                  |
| Sine vibration            | Frequency    | 10 Hz to 1000 Hz          | 10 Hz to 2000 Hz          | 10 Hz to 3000 Hz          |
|                           | Acceleration | 147 m/s <sup>2</sup>      | 196 m/s <sup>2</sup>      | 294 m/s <sup>2</sup>      |
| Shock resistance          |              | 490 m/s <sup>2</sup>      | 980 m/s <sup>2</sup>      | 1960 m/s <sup>2</sup>     |
| Random vibration          |              | 10 (m/s <sup>2</sup> )/Hz | 20 (m/s <sup>2</sup> )/Hz | 40 (m/s <sup>2</sup> )/Hz |
| Steady-state acceleration |              | 147 m/s <sup>2</sup>      | 294 m/s <sup>2</sup>      | 490 m/s <sup>2</sup>      |

CONTACT DATA

| Ambient grade                      |                 | I       | II | III    |
|------------------------------------|-----------------|---------|----|--------|
| Arrangement                        |                 | 3 C     |    |        |
| Contact resistance or voltage drop | Initial max.    | 0.2V    |    | 0.15V  |
|                                    | After life max. | 0.25V   |    | 0.175V |
| Failure level                      |                 | Level L |    |        |

Contact and life ratings

| Type      | Contact load |                                   | Electrical life min.    |
|-----------|--------------|-----------------------------------|-------------------------|
|           | 28Vd.c.      | 115/200Va.c. 400Hz<br>Three phase |                         |
| Resistive | 25A          | 25A                               | 5 x 10 <sup>4</sup> ops |
| Inductive | 12A          |                                   | 1 x 10 <sup>4</sup> ops |
| Inductive |              | 15A                               | 2 x 10 <sup>4</sup> ops |
| Motor     | 10A          |                                   | 5 x 10 <sup>4</sup> ops |
| Lamp load | 5A           |                                   | 5 x 10 <sup>4</sup> ops |

SPECIFICATION

|                                                          |                                                     |                            |                                            |                                            |
|----------------------------------------------------------|-----------------------------------------------------|----------------------------|--------------------------------------------|--------------------------------------------|
| Ambient grade                                            |                                                     | I                          | II                                         | III                                        |
| Insulation resistance min.                               | Initial                                             | 100 MΩ (@ 500 Vd.c.)       | 100 MΩ (@ 500 Vd.c.)                       | 100 MΩ (@ 500 Vd.c.)                       |
|                                                          | After life or after testing                         | 50 MΩ (@ 500 Vd.c.)        | 50 MΩ (@ 500 Vd.c.)                        | 50 MΩ (@ 500 Vd.c.)                        |
| Dielectric strength min.<br>(Normal condition)           | Between coil & cover                                | 1000 Vr.m.s.               | 1000 Vr.m.s.                               | 1000 Vr.m.s.                               |
|                                                          | Between other insulation parts (initial)            | 1250 Vr.m.s.               | 1250 Vr.m.s.                               | 1250 Vr.m.s.                               |
|                                                          | Between other insulation parts (after life testing) | 1000 Vr.m.s.               | 1000 Vr.m.s.                               | 1000 Vr.m.s.                               |
| Dielectric strength min.<br>(Low air pressure condition) |                                                     | 250 Vr.m.s.                | 250 Vr.m.s.                                | 250 Vr.m.s.                                |
| Leakage rate max.                                        |                                                     | 1 Pa•cm <sup>3</sup> /s    | 1 x 10 <sup>-1</sup> Pa•cm <sup>3</sup> /s | 1 x 10 <sup>-3</sup> Pa•cm <sup>3</sup> /s |
| Operate time max.                                        |                                                     | 15 ms                      |                                            |                                            |
| Release time max.                                        |                                                     | 15 ms                      |                                            |                                            |
| Mounting style                                           |                                                     | See the mounting dimension |                                            |                                            |
| Terminals                                                |                                                     | See the terminal styles    |                                            |                                            |
| Work position                                            |                                                     | Random                     |                                            |                                            |
| Weight max.                                              |                                                     | 85 g                       |                                            |                                            |

COIL DATA

|                   |            |
|-------------------|------------|
| Normal coil power | Approx. 3W |
|-------------------|------------|

Coil Version Vd.c.

| Order Number | Coil voltage    |            | at 25 °C                 |                      |                   |                       | -65°C to 125°C       |                   |                       | Pick-up voltage max. |                          |
|--------------|-----------------|------------|--------------------------|----------------------|-------------------|-----------------------|----------------------|-------------------|-----------------------|----------------------|--------------------------|
|              | Nominal voltage | Value max. | Coil resistance (Ω) min. | Pick-up voltage max. | Hold voltage max. | Drop-out voltage min. | Pick-up voltage max. | Hold voltage max. | Drop-out voltage min. | High temp. test      | Continuous electric test |
| 028          | 28              | 29         | 260                      | 15.5                 | 5.5               | 2.3                   | 20.0                 | 7.0               | 1.5                   | 21.0                 | 25.0                     |

Notes: We can offer many kinds of coil voltage under the requirement of users.

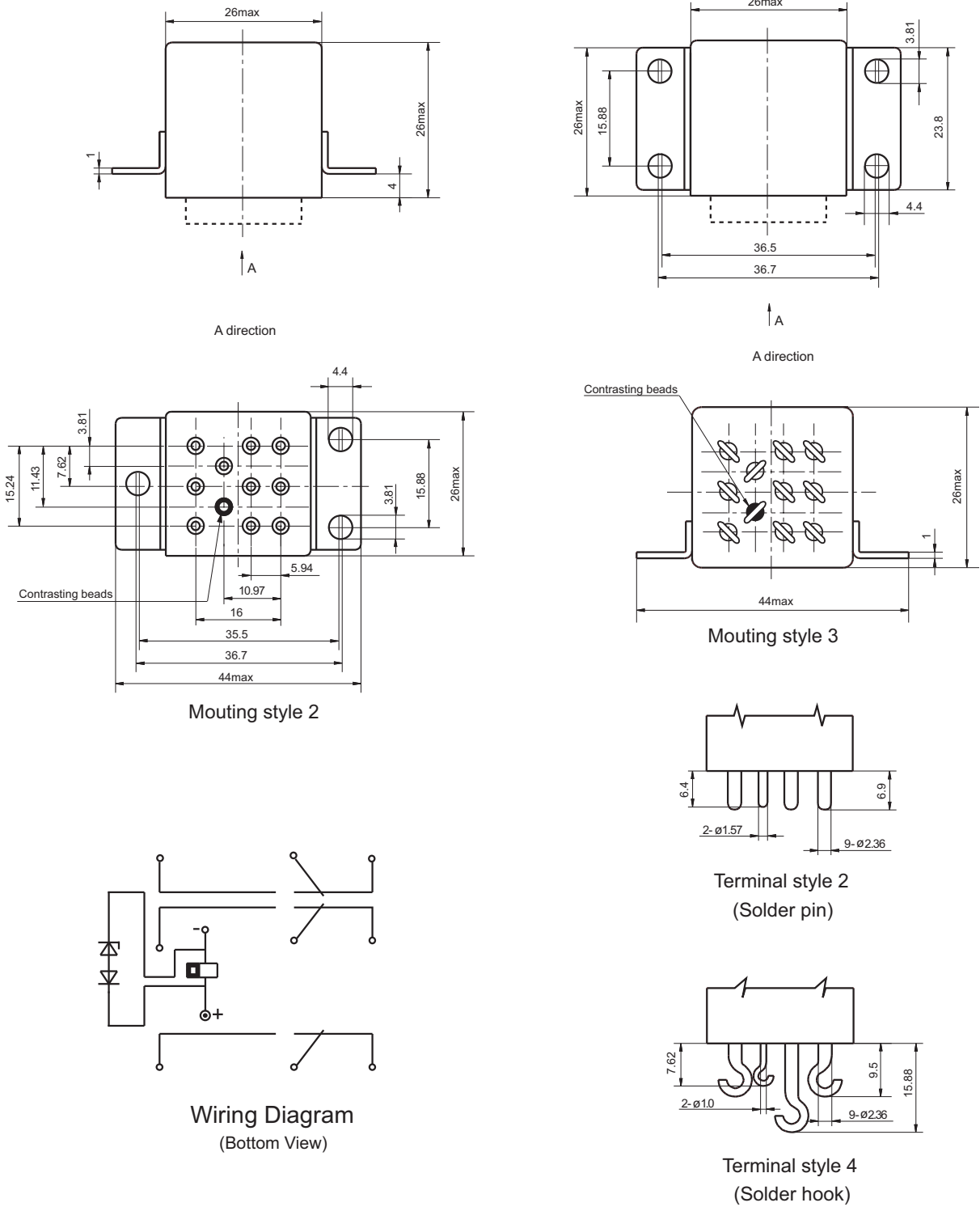
ORDERING INFORMATION

|                 |                                                                                |      |   |    |   |      |
|-----------------|--------------------------------------------------------------------------------|------|---|----|---|------|
| Type            | HF9516                                                                         | -028 | L | -2 | 2 | - II |
| Order Number    | 028                                                                            |      |   |    |   |      |
| Failure Rate    | L (level III products available)                                               |      |   |    |   |      |
| Mounting Style  | 2, 3 (See the mounting dimension)                                              |      |   |    |   |      |
| Terminals Style | 2, 4 (See " Terminal styles " below)                                           |      |   |    |   |      |
| Ambient Grade   | I : level I    II : level II    Nil: level III (With failure rate requirement) |      |   |    |   |      |

OUTLINE DIMENSIONS AND WIRING DIAGRAM

Unit:mm

Outline Dimension



Disclaimer

This datasheet is for the customers' reference. All the specifications are subject to change without notice.

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