

漢鐘精機股份有限公司
HANBELL PRECISE MACHINERY CO.,LTD.**12/20/2007****Subject: Change of motor protector from INT69 or INT69Y to INT69HBY****Application**

The motor protector INT69HBY has been specially developed to monitor motor winding temperature, phase sequence and phase failure on compressors. Compared to INT69Y, it has more functions, such as locked rotor lockout reset, twin LED information and connection to remote reset button. Temporarily, we'll ship parts of reset button loose. We look forward to customers' comment on INT69HBY's application.

Description

1. When supply voltage is applied, the output relay pulls in after an initialization period of approx. 3 seconds, provided all thermistors lie below their rated response temperature.
2. 1 to 9 PTC thermistors with varied rated response temperatures can be connected in series to the input terminals.
3. If any thermistor resistance increases above trip level the relay drops out. This failure results in a lockout. (5 minutes delay for 1st PTC failure, 60 minutes delay for 2nd failure, lockout for 3rd failure.)
4. If a rapid temperature increase is detected (locked rotor condition), the output relay drops out. This failure results in a lockout.
5. The phase monitoring function is active 1 second after motor start during a 10 second window. Incorrect phase sequence results in lockout trip. Phase loss results in lockout trip.
6. Lockout and time delay can be cancelled by mains reset of approx. 5 seconds.
7. To avoid nuisance tripping due to reverse running after shutdown (pressure equalization), the phase monitoring function is only re-enabled approx. 20 seconds after motor stop.
8. A twin LED (red / green) provides operational information.
9. The relay is fed out as a N/O dry contact, which is closed under good conditions.
10. Sensor and supply circuits are galvanic isolated.
11. The motor protector is not suitable for use with frequency converters.

漢鐘精機股份有限公司
HANBELL PRECISE MACHINERY CO.,LTD.

12/20/2007

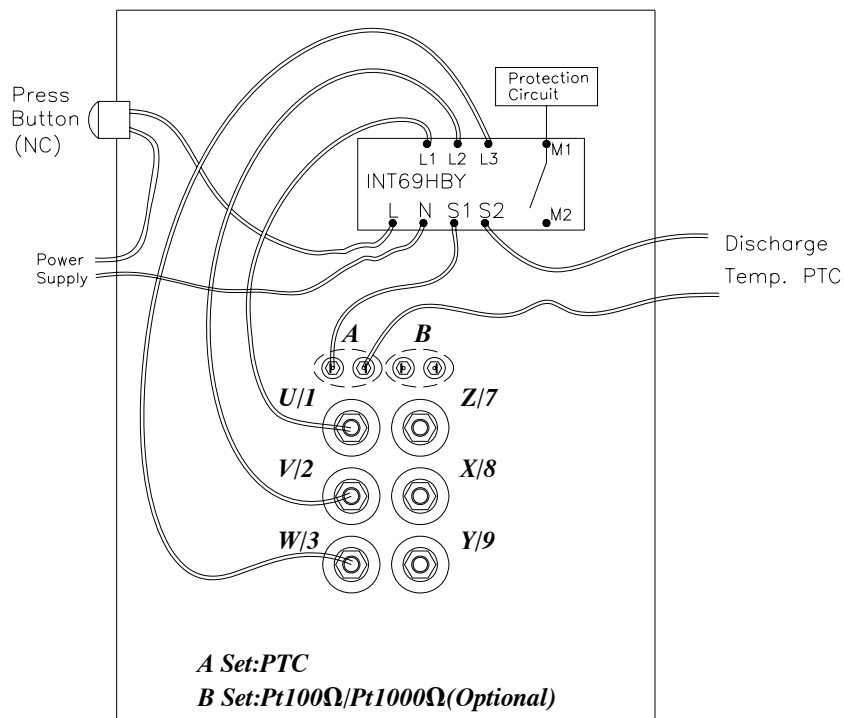
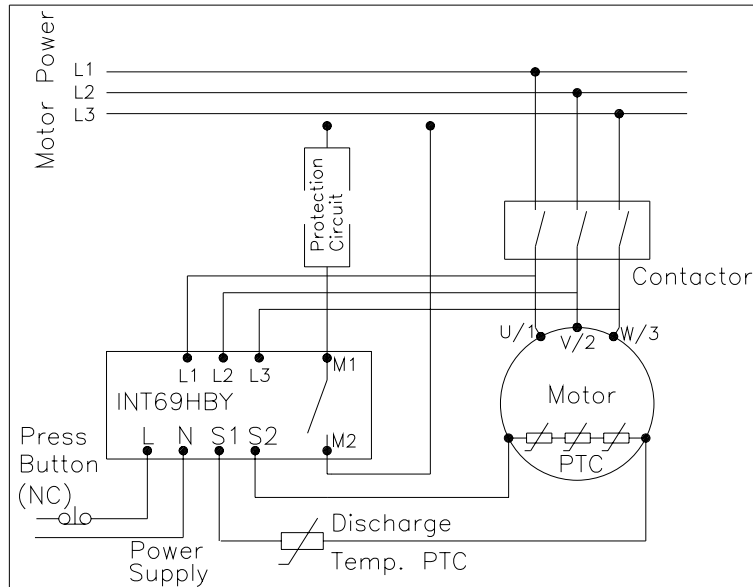
Technical Data

| | |
|--|---|
| Supply voltage -dual voltage | AC 50/60Hz 115/120V -15...+10% 3VA AC 50/60Hz 230/240V -15...+10% 3VA |
| Ambient temperature range | -30...+70°C |
| Temperature monitoring - Number of sensors - R 25, total - R trip static - R reset - max. lead length | PTC, to DIN 44081/082 1...9 in Series < 1.8kΩ 4.5kΩ ± 20% 2.75kΩ ± 20% < 30m |
| Time delay after cool down - static trip -dynamic trip(locked rotor) | lockout lockout |
| Phase monitor | 3 AC 50/60Hz 200...575V ±10% active window : t ₀ + 1s...t ₀ + 11s |
| Phase sequence Phase loss | lockout lockout |
| Relay -AgNi 90/10 | max. AC 240V, max. 2.5A, C300 min. >24V AC/DC, >20mA |
| Mechanical service life | approx. 1 mio. switching cycles |
| Protection class acc. to EN 60529 | IP00 |
| Connection | 6.3mm connectors (Faston) |
| Housing material | PA66 GF25 |
| Mounting | Screw mounted or latching |
| Dimensions | 76.5x81.5x34.5mm |
| Weight | approx. 200g |

漢鐘精機股份有限公司
HANBELL PRECISE MACHINERY CO.,LTD.

12/20/2007

Suggested Connection Diagram

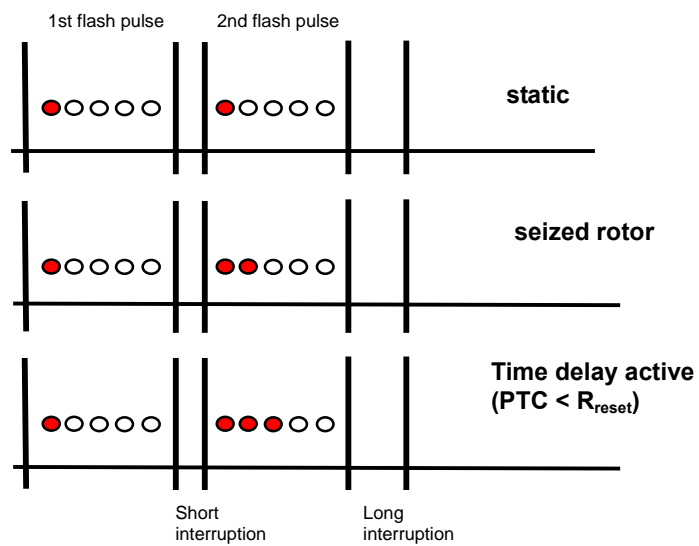


漢鐘精機股份有限公司
HANBELL PRECISE MACHINERY CO.,LTD.

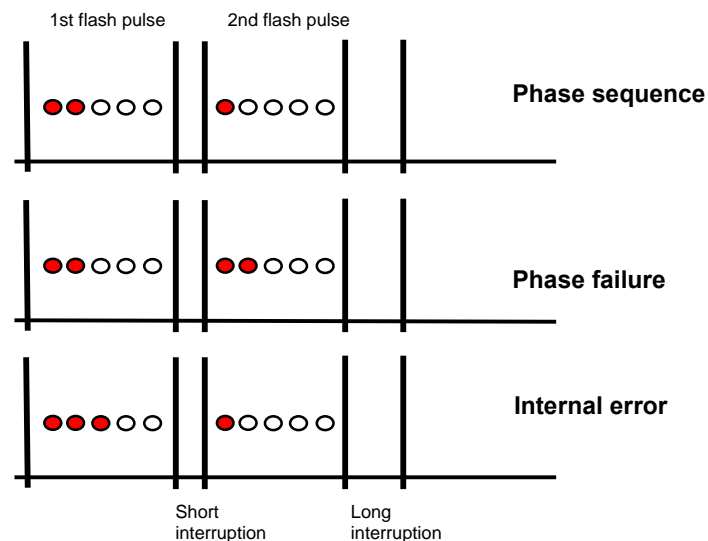
12/20/2007

Blink code INT69 HBY

PTC






Phase monitoring / General



漢鐘精機股份有限公司
HANBELL PRECISE MACHINERY CO.,LTD.

12/20/2007

Comparison among INT69, INT69Y and INT69HBY

| | INT69 | INT69Y | INT69HBY |
|--|--|---|--|
| |  |  |  Lamp is here |
| Supply voltage | Single voltage AC 40...60Hz 200...240V Or AC 40...60Hz 100...120V ±10% 3VA | Dual voltage AC 50/60Hz 115/120V AC 50/60Hz 230/240V -15...+10% 3VA | Dual voltage AC 50/60Hz 115/120V AC 50/60Hz 230/240V -15...+10% 3VA |
| Ambient temp range. | -30...+60°C | -30...+70°C | -30...+70°C |
| Time relay after cool down | 3K below response temp | 5min ± 1min | -static trip 1 st : 5min 2 nd : 60min 3 rd : lockout -dynamic trip (locked rotor) lockout |
| Phase monitor | - | 3 AC 50/60Hz 200...600V active window : t ₀ + 1s...t ₀ + 6s | 3 AC 50/60Hz 200...575V ±10% active window : t ₀ + 1s...t ₀ + 11s |
| After response of phase monitor -Phase sequence -Phase loss -Reset / cancel lockout | - | lockout within 5s lockout within 5s mains reset for 5s | lockout lockout mains reset for 5s |
| Reset button | - | - | Installed at lateral side of terminal box by Hanbell or installed at preferred position by customer |

漢鐘精機股份有限公司
HANBELL PRECISE MACHINERY CO.,LTD.

12/20/2007

Temporary measures for installation of INT69HBY reset button

Spare opening $\phi 30$ in terminal box is not available for all models so Hanbell will ship loose reset button, sticker and wire terminals in accessory kit.

- RC10~11, RC2-100, RC2-140 & RC2-180



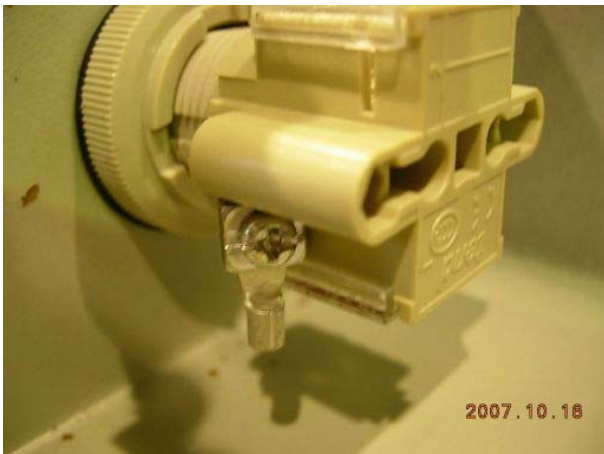
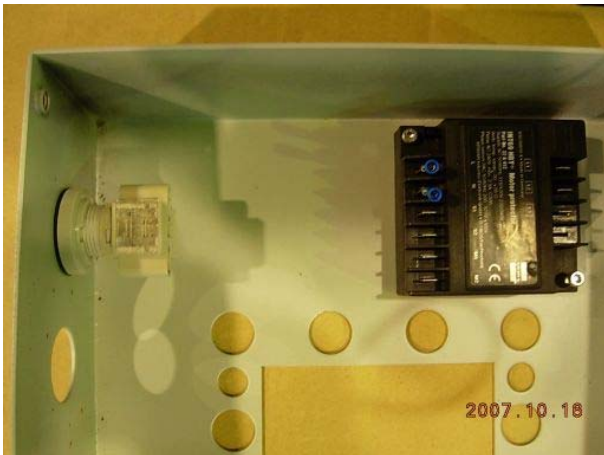
- RC12~21(RC18 exclusive), RC2-170~930(RC2-180, RC2-550 & RC2-620 exclusive)



When customers install reset button through existent opening, please follow below photos.

漢鐘精機股份有限公司
HANBELL PRECISE MACHINERY CO.,LTD.

12/20/2007



➤ RC18, RC2-550 & RC2-620

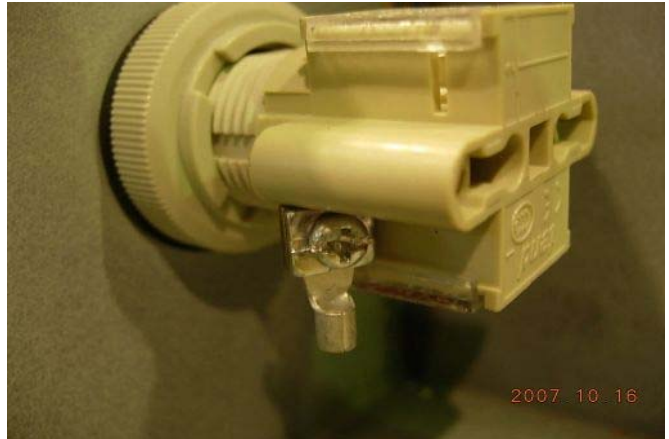
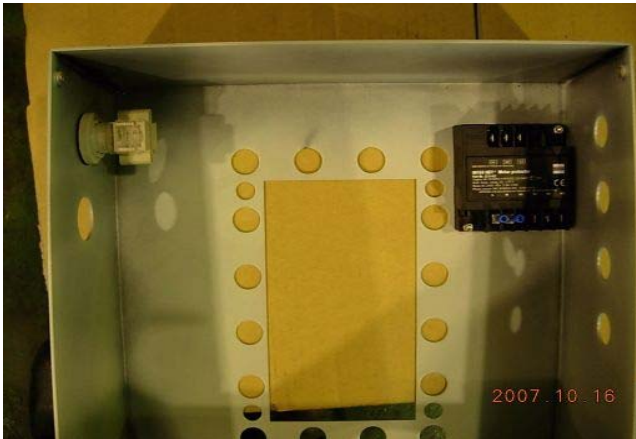


When customers install reset button through existent opening, please follow below photos.

5 KONSAN ROAD, KUAN-YIN INDUSTRIAL PARK, KUAN-YIN SHIANG, TAO-YUAN HSIEN, TAIWAN, R.O.C.
TEL: +886-3-4836215 FAX: +886-3-4836223

漢鐘精機股份有限公司
HANBELL PRECISE MACHINERY CO.,LTD.

12/20/2007



➤ RC22~24, RC2-1090~1520

