

**Think Controls**

# FOTEK

**Enhanced Heat sink  
Solid state module**

**加強散熱型固態模組  
QSR、QCR大電流型40—100A**

- **High Dielectric strength over 4KV**
- **High Isolation strength over 100MΩ/500VDC**
- **High surge current sustenance**
- **High surge voltage sustenance**
- **Conformity with EN60947-4-3 and EN60950**
- 高電介強度超過4KV
- 高絕緣強度超過100MΩ/500VDC
- 耐瞬間電流超過額定電流10倍以上
- 附雙重突波吸收回路有效防止突波破壞
- 符合EN60947-4-3 and En60950標準



**CE Rohs**

**FOTEK**  
www.fotek.com.tw



**陽明電機股份有限公司  
FOTEK CONTROLS CO., LTD.**

## 保險絲型加強散熱固態模組

### Specification [Rated current corresponding to Resistive load]

#### ❖ DC to AC type

| Type            | 型式    | DC to AC Fuse type |            |                |          | AC to AC Fuse type |            |                |          |
|-----------------|-------|--------------------|------------|----------------|----------|--------------------|------------|----------------|----------|
| Model           | 型號    | QSR-F3D            | QSR-F4D    | QSR-F5D+       | QSR-F6D+ | QSR-F3A            | QSR-F4A    | QSR-F5A+       | QSR-F6A+ |
| Load max.       | 最大負載  | 40A                | 60A        | 80A            | 100A     | 40A                | 60A        | 80A            | 100A     |
| Rated current   | 額定電流  | 32A                | 48A        | 64A            | 80A      | 32A                | 48A        | 64A            | 80A      |
| Protection fuse | 保險絲   | 63A                | 80A        | 100A           | 125A     | 63A                | 80A        | 100A           | 125A     |
| Surge current   | 耐突波電流 | 410A               | 675A       | 850A           | 1100A    | 410A               | 675A       | 850A           | 1100A    |
| Outline         | 外形尺寸  | 71*72*102          | 100*72*125 | 100*98*125     |          | 71*72*102          | 100*72*125 | 100*98*125     |          |
| Cooling fan     | 冷卻風扇  | Non                |            | 80*80 (220AVC) |          | Non                |            | 80*80 (220AVC) |          |
| Block voltage   | 最低耐壓  | 600VAC             | 1200VAC    |                |          | 600VAC             | 1200VAC    |                |          |
| Input voltage   |       | 4 ~ 32VDC          |            |                |          | 80 ~ 250VAC        |            |                |          |
| Output voltage  | 輸出電壓  |                    |            |                |          | 24 ~ 550VAC        |            |                |          |

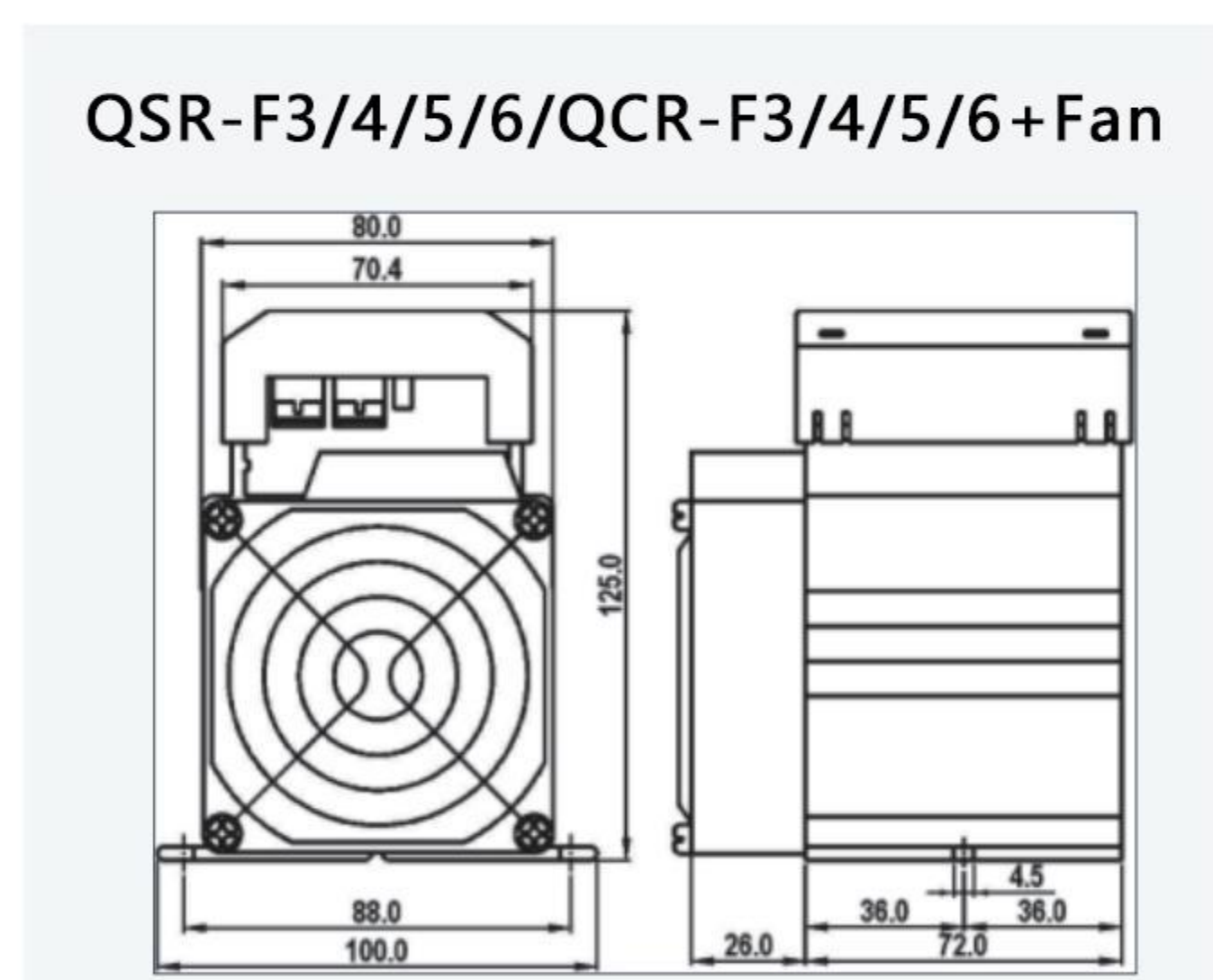
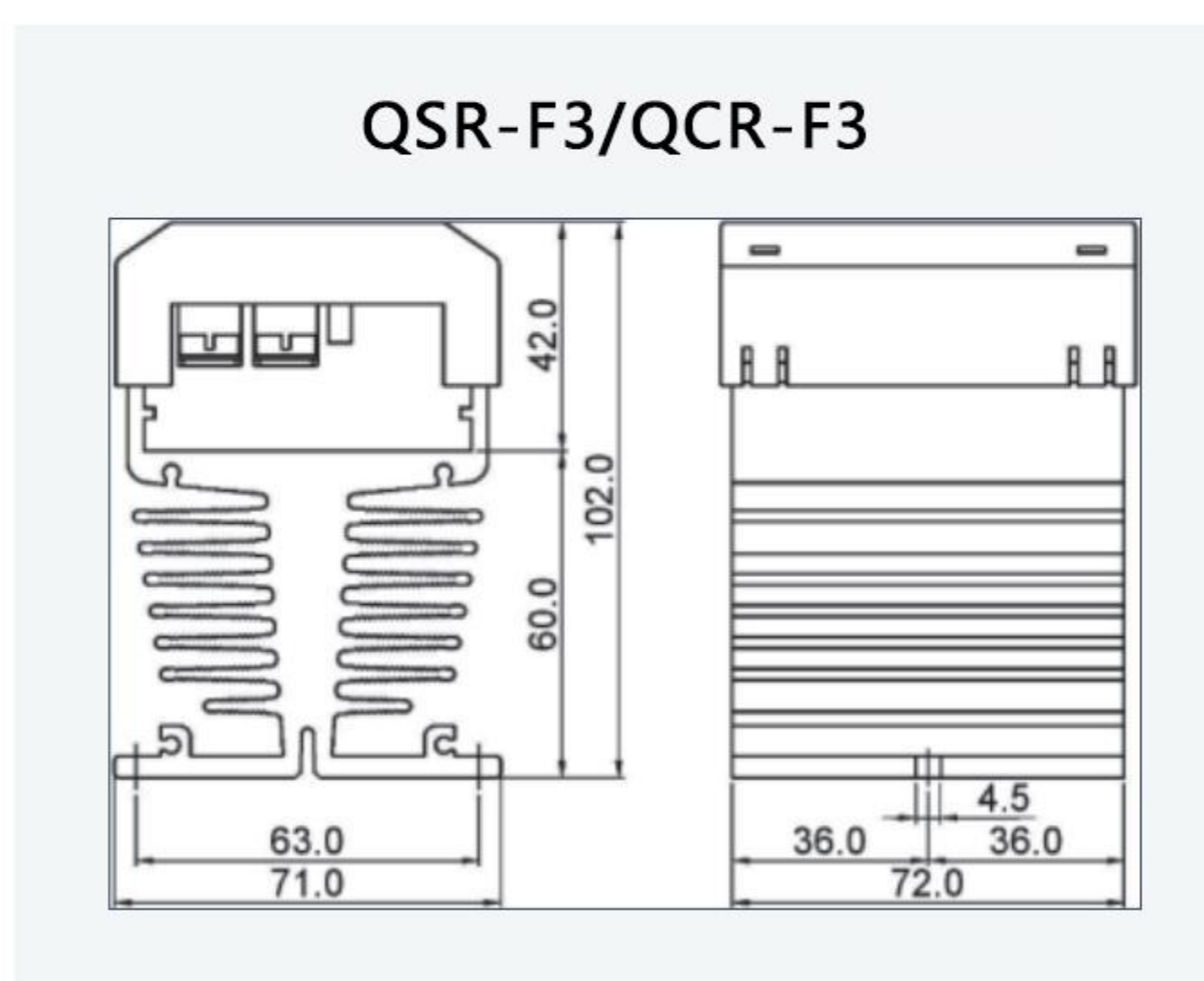
#### ❖ Linear control type

| Type            | 型式    | Linear control Fuse type |         |                |          |               |            |                |              |
|-----------------|-------|--------------------------|---------|----------------|----------|---------------|------------|----------------|--------------|
| Load voltage    | 負載電壓  | Standard voltage         |         |                |          | High voltage  |            |                |              |
| Model           | 型號    | QCR-F3L                  | QCR-F4L | QCR-F5L+       | QCR-F6L+ | QCR-F3D(H)    | QCR-F4D(H) | QCR-F5D(H)+    | QCR-F6D(H1)+ |
| Load max.       | 最大負載  | 40A                      | 60A     | 80A            | 100A     | 40A           | 60A        | 80A            | 100A         |
| Rated current   | 額定電流  | 32A                      | 48A     | 64A            | 80A      | 32A           | 48A        | 64A            | 80A          |
| Protection fuse | 保險絲   | 63A                      | 80A     | 100A           | 125A     | 63A           | 80A        | 80A            | 100A         |
| Surge current   | 耐突波電流 | 410A                     | 675A    | 850A           | 1100A    | 410A          | 675A       | 850A           | 1100A        |
| Outline         | 外形尺寸  | 71*72*102                |         | 100*98*125     |          | 71*72*102     |            | 100*98*125     |              |
| Cooling fan     | 冷卻風扇  | Non                      |         | 80*80 (220AVC) |          | Non           |            | 80*80 (220AVC) |              |
| Block voltage   | 最低耐壓  | 600VAC                   | 1200VAC |                |          | 600VAC        | 1200VAC    |                |              |
| Output voltage  | 輸出電壓  | 90 ~ 250 VAC             |         |                |          | 250 ~ 480 VAC |            |                |              |

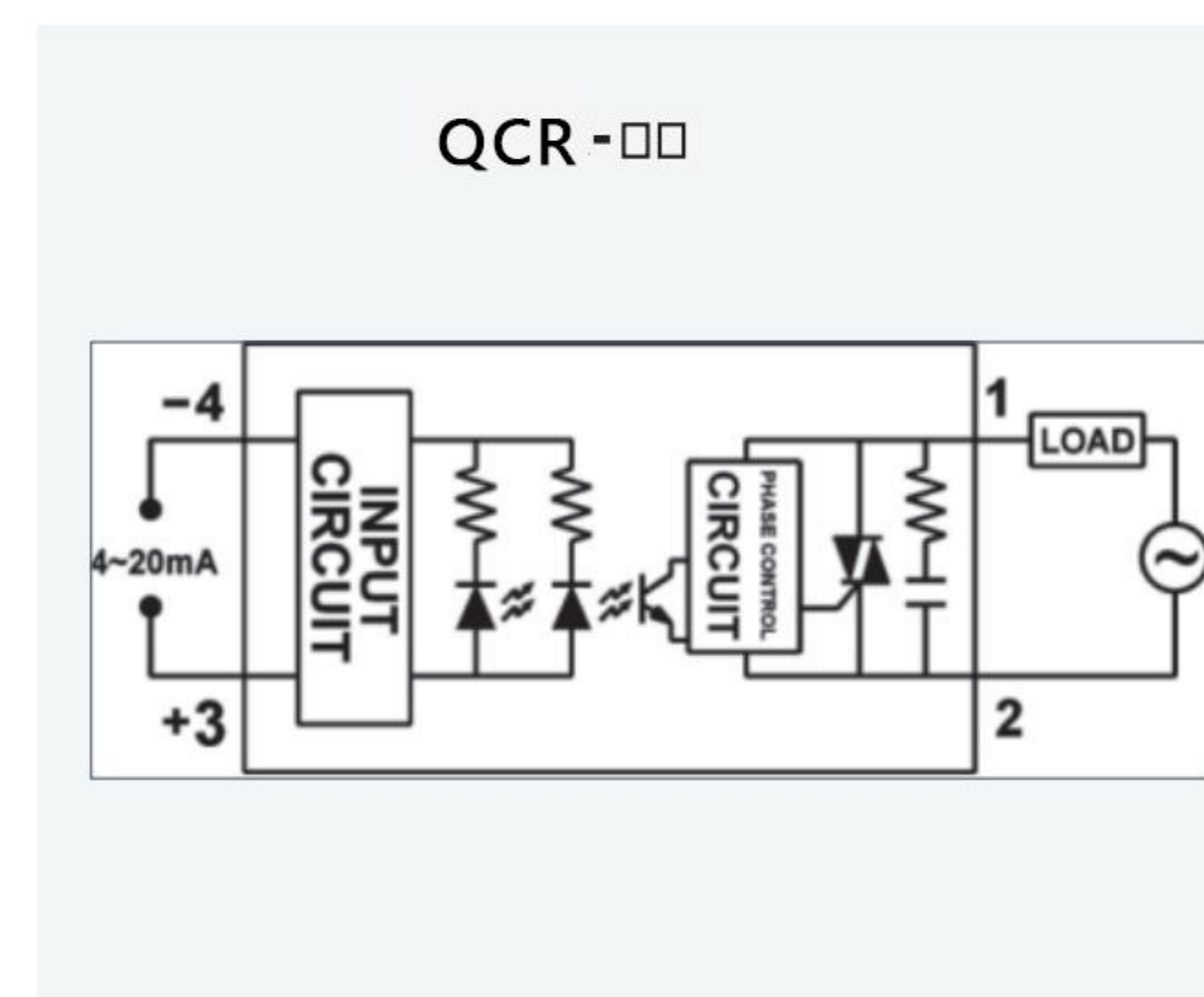
### General specification / 共同規格

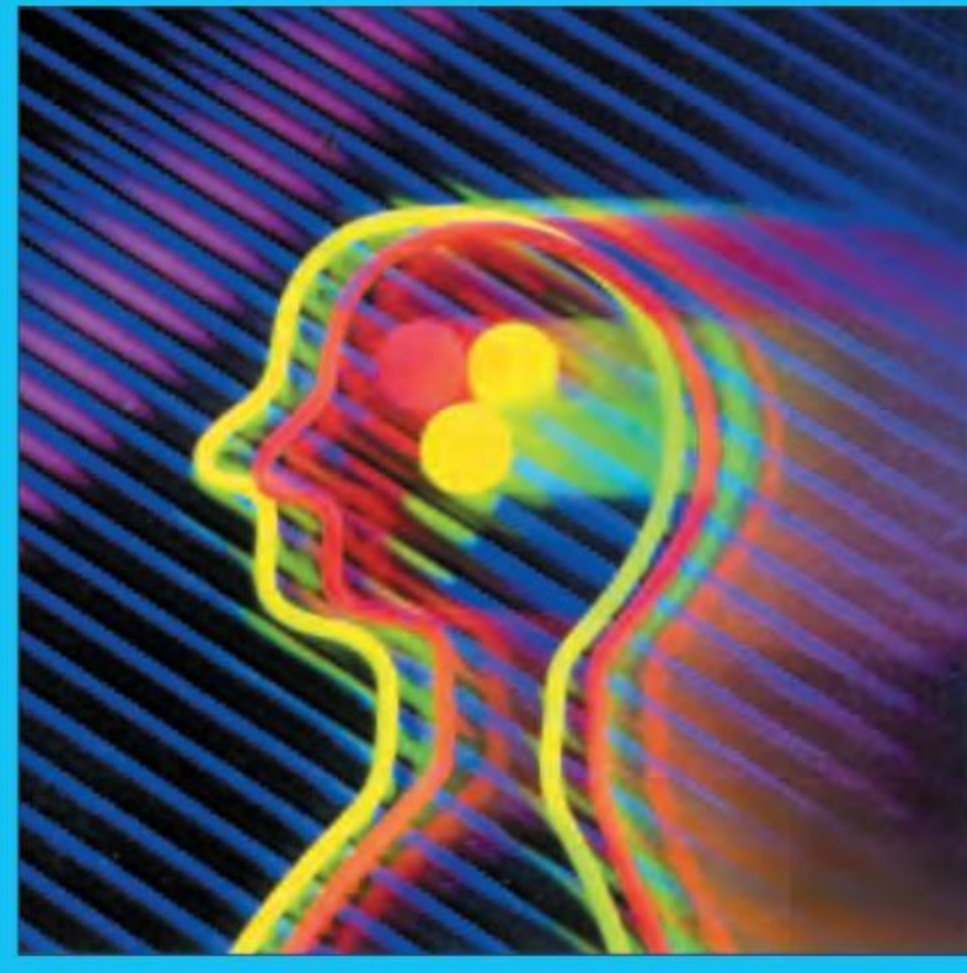
| Control             |       | DC to AC type                    | AC to AC type | Linear control type |
|---------------------|-------|----------------------------------|---------------|---------------------|
| Type                |       | ASR                              | ASR           | ACR                 |
| Input voltage       | 輸入電壓  | 4 ~ 32 VDC                       | 80 ~ 250 VAC  | 4 ~ 20 mA           |
| Turn off voltage    | 關閉電壓  | <3.5 VDC                         | <40 VAC       |                     |
| Trigger current     | 觸發電流  | 12.0mA max.                      | 1.0VA max.    |                     |
| Control method      | 控制方式  | Zero cross                       | Zero cross    | Phase control       |
| Response time       | 反應時間  | 8.3 ms (60Hz)                    | 8.3 ms (60Hz) | 1ms max.            |
| Leakage current     | 洩漏電流  | 5 mA max.                        |               |                     |
| Input immunity      | 輸入耐突波 | 2 KV (EN61000-4-4)               |               |                     |
| Isolation strength  | 電介強度  | 4 KV rms (EN60950/VDE0805)       |               |                     |
| Insulation strength | 絕緣強度  | 100MΩ / 500VDC (EN60950/VDE0805) |               |                     |
| Terminal material   | 端子材質  | Intensive nylon (UL : 94V0)      |               |                     |
| Circumstance        | 工作環境  | -40°C ~ +80°C ; 35 ~ 85%RH       |               |                     |

### Outline dimension / 外形尺寸



### Connection / 接線圖





**Think Controls**

- ※ 以使用者角度設計『實用耐用的電控產品』
- ※ 以量產標準化製造『世界標準的電控產品』
- ※ 以滿足客戶需求追求『企業永續經營』
- ※ On user's position, to develop more 「Performance & Reliable controls」
- ※ By mass-quantity producing, To produce 「World standard controls」
- ※ By satisfying customer's requirements, To manage company foreverly.

#### ■ Notice of safety / 安全注意事項



**Warning**

Potentially hazardous situation, if mishandling, may result in death or serious injury.  
潛在危險，如果操作失當可能導致死亡或嚴重傷害。

- 1) Please do not touch any terminal of this module while power supply is supplied, if do, it may result in electronic shock.  
送電中，請勿碰觸本固態模組任何接線端子以避免觸電。
- 2) 「Power supply system」 must to be shutdown before renew the fuse, if not, it may result in electronic shock.  
更換保險絲前，請務必關閉電源系統以避免觸電。
- 3) Please rated the load current within the specified value, if not, it may result to burn up this module or fuse.  
負載電流請勿超過額定電流，以避免保險絲或本固態模組燒毀。
- 4) Please tighten the screw terminal over 100kg-cm, if not, it may result to burn up this module or fuse.  
請務必鎖緊端子螺絲，扭力須超過100kg-cm，否則可能導致本固態模組或保險絲燒毀。
- 5) If this module is burned up, it may be in short circuit condition or malfunction, Please settle an independent alarm system to ensure safety protection, if not, it may result in a serious accident.  
本固態模組燒毀後可能是短路或失控狀態，請加裝獨立警報系統以確保安全，否則可能造成嚴重意外事故。

# FOTEK

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Specification may be modified without notice in advance (2013/12/25)

規格變更恕不事先通知