

FC3/Series 程式編寫 PROGRAMMING

G Code 元件 (準備機能) G Code (functions of preparation)

| G Code | M | 說明 | Description |
|--------|---|-------------------|--|
| G00 | ○ | 快速定位 | Rapid positioning |
| G01 | ○ | 直線補間切削 | Linear cutting |
| G02 | ○ | 圓弧補間切削正轉 | Circular cutting (Clockwise) |
| G03 | ○ | 圓弧補間切削反轉 | Circular cutting (Counter clockwise) |
| G04 | ○ | 程式暫停 | Dwell |
| G09 | ○ | 正確停止檢查 | Exact stop |
| G17 | ○ | 平面選擇 X-Y | Plane selection X-Y |
| G18 | ○ | 平面選擇 X-Z | Plane selection X-Z |
| G19 | ○ | 平面選擇 Y-Z | Plane selection Y-Z |
| G27 | | 機械原點檢查 | Reference zero point return check |
| G28 | | 參考原點復歸 1st | 1st reference point return |
| G29 | | 參考原點返回 1st & 2nd | 1st & 2nd reference point return |
| G40 | ○ | 刀具半徑補正取消 | Tool nose R compensation cancel |
| G41 | ○ | 刀具半徑補正設定(左) | Tool nose R compensation left |
| G42 | ○ | 刀具半徑補正設定(右) | Tool nose R compensation right |
| G43 | ○ | 刀具長補正量(+)方向 | Tool length compensation (+) direction |
| G44 | ○ | 刀具長補正量(-)方向 | Tool length compensation (-) direction |
| G49 | ○ | 刀具長補正取消 | Tool length compensation cancel |
| G54 | ○ | 工作座標系 1 | Work coordinate system 1 selection |
| G55 | ○ | 工作座標系 2 | Work coordinate system 2 selection |
| G56 | ○ | 工作座標系 3 | Work coordinate system 3 selection |
| G57 | ○ | 工作座標系 4 | Work coordinate system 4 selection |
| G58 | ○ | 工作座標系 5 | Work coordinate system 5 selection |
| G59 | ○ | 工作座標系 6 | Work coordinate system 6 selection |
| G61 | ○ | 正確停止檢查模式 | Exact stop check point |
| G64 | ○ | 切削模式 | Cutting mode |
| G73 | | | |
| G80 | ○ | 鑽孔循環取消 | Hole drilling cycle cancel |
| G81 | ○ | 鑽孔循環(無暫停,快退) | Hole drilling (no dwell, quick retract) |
| G82 | ○ | 鑽孔循環(孔底暫停,快退) | Deep hole drilling (dwell at bottom, quick retract) |
| G83 | ○ | 深孔鑽循環 | Deep hole drilling cycle |
| G84 | ○ | 攻牙循環(暫停,主軸反轉) | Tapping cycle (dwell, spindle reverse rotation) |
| G85 | ○ | 鑽孔循環(無暫停,進給退出) | Boring cycle (no dwell, feed and retract) |
| G86 | ○ | 鑽孔循環(孔底主軸停止,快退) | Boring cycle (spindle stop at bottom, quick retract) |
| G87 | ○ | 固定循環(反鑽孔) | Fixed cycle (reverse boring) |
| G88 | ○ | 固定循環(鑽孔,主軸停,手動退出) | Fixed cycle (boring, spindle stop, manual retract) |
| G89 | ○ | 鑽孔循環(孔底主軸暫停,進給退出) | Boring cycle (spindle dwell at bottom, feed and retract) |
| G90 | ○ | 絕對座標指令 | Absolute coordinate command |
| G91 | ○ | 增量座標指令 | Incremental coordinate command |
| G92 | ○ | 機械座標系設定 | Machine coordinate system setting |
| G98 | ○ | 固定循環(起始點復歸) | Fixed cycle (begin of zero point return) |
| G99 | ○ | 固定循環(參考 R 點復歸) | Fixed cycle (reference point return) |

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Specification given herein are subject to change without notice.

M Code 機能表

| Micode | 功能 | Description |
|--------|---------|--------------------------------------|
| M00 | 程式暫停 | Program pause |
| M01 | 選擇性程式暫停 | Optional program pause |
| M02 | 程式結束 | Program end |
| M03 | 主軸正轉 | Spindle rotation (clockwise) |
| M04 | 主軸反轉 | Spindle rotation (counter clockwise) |
| M05 | 主軸停止 | Spindle rotation (stop) |
| M08 | 開啟液體冷卻劑 | Coolant liquid ON |
| M09 | 關閉液體冷卻劑 | Coolant liquid OFF |
| M30 | 程式結束 | program end |
| M98 | 副程式呼叫 | subprogram call |
| M99 | 副程式返回 | subprogram return to command |

PLC 元件表 Elements List

| 元件 Element | 參數 Parameter | 說明 | Description |
|---------------|-----------------|----------------|--------------------------------|
| LD | x,y,a,b,tim,cnt | A 接點載入 | A point load in |
| LDI | x,y,a,b,tim,cnt | B 接點載入 | B point load in |
| AND | x,y,a,b,tim,cnt | "和"運算 | "AND" operation |
| ANI | x,y,a,b,tim,cnt | "和"反向運算 | "AND" reverse operation |
| OR | x,y,a,b,tim,cnt | "或"運算 | "OR" operation |
| ORI | x,y,a,b,tim,cnt | "或"反向運算 | "OR" reverse operation |
| OUT | y,a,b,tim,cnt | 輸出、計時器設定、計數器設定 | Output, timer set, counter set |
| ANDB | x,y,a,b,tim,cnt | 區塊"和"運算 | Block, "AND" operation |
| ORB | x,y,a,b,tim,cnt | 區塊"或"運算 | Block, "OR" operation |
| DiffUP | y,a,b | 上微分輸出 | DiffUP output |
| DiffDOWN | y,a,b | 下微分輸出 | DiffDown output |
| BJMP | label | 跳躍起始 | Begin jump |
| EJMP | label | 跳躍終止 | End jump |
| RL | y,a,b | 位元組左旋 | Rotation left |
| RR | y,a,b | 位元組右旋 | Rotation right |
| FLASH | t | 閃爍 (Y2xx.x 專用) | Flash (Special use for Y2xx.x) |
| RST | tim,cnt | 計時器、計數器重置 | Timer, counter reset |

PLC 參數表 Parameters List

| 元 件 Element | 點 數 Point number | | 範 圍 Scope | |
|----------------|---------------------|-----|-------------------------|--|
| | 312 | 316 | | |
| X | Local | 28 | 28 | X000.0~X003.3 |
| | Remote | 32 | 64 | X200.0~X203.7 (312) X200.0~X207.7 (316) |
| Y | Local | 24 | 24 | X000.0~Y002.7 |
| | Remote | 32 | 64 | Y200.0~Y203.7 (312) Y200.0~X207.7 (316) |
| a | | 64 | 256 | A000.0~A007.7 (312) A000.0~A031.7 (316) |
| | b | 32 | 128 | B000.0~B003.7 (312) B000.0~B015.7 (316) |
| tim | 0.1Sec | 8 | 8 | T000.0~T000.7 (1~255) |
| | 1.0Sec | 8 | 8 | T001.0~T001.7 (1~255) |
| cnt | 16 | 16 | C000.0~C001.7 (1~65535) | |
| label | 256 | 256 | 1~255 | |
| t(0.1Sec) | 256 | 256 | 1~255 | |