表 **6-1-3** 指令助记符、格式及功能

|  |  |  |
| --- | --- | --- |
| 0100 | RS | RD |

|  |  |  |
| --- | --- | --- |
| 0000 | RS | RD |

|  |  |  |
| --- | --- | --- |
| 0001 | RS | RD |

|  |  |  |
| --- | --- | --- |
| 0111 | \*\* | \*\* |

|  |  |  |
| --- | --- | --- |
| 1000 | \*\* | \*\* |

|  |  |  |
| --- | --- | --- |
| 1001 | RS | \*\* |

|  |  |  |
| --- | --- | --- |
| 1010 | \*\* | RD |

|  |  |  |
| --- | --- | --- |
| 1011 | \*\* | \*\* |

|  |  |  |  |
| --- | --- | --- | --- |
| 1100 | M | RD | D |

|  |  |  |  |
| --- | --- | --- | --- |
| 1101 | M | RD | D |

|  |  |  |  |
| --- | --- | --- | --- |
| 1110 | M | \*\* | D |

|  |  |  |  |
| --- | --- | --- | --- |
| 1111 | M | \*\* | D |

|  |  |  |  |
| --- | --- | --- | --- |
| 0010 | \*\* | RD | P |

|  |  |  |  |
| --- | --- | --- | --- |
| 0011 | RS | \*\* | P |

|  |  |  |  |
| --- | --- | --- | --- |
| 0110 | \*\* | RD | D |

|  |  |  |
| --- | --- | --- |
| 0101 | \*\* | \*\* |

表 **6-1-4** 微指令格式

停机

HALT

RD

D

LDI RD,D

[P] RD

RS [P]

IN RD,P OUT P,RS

E PC

PC

当FC或FZ=1时,

E

E

RD

RD

E

LAD M D,RD STA M D,RS JMP M D

BZC M D

中断返回

RD

堆栈

堆栈

RS

RD + RS RD

RD RS RD

CPU开中断CPU关中断

RD

RS

MOV RD,RS ADD RD,RS AND RD,RS STI

CLI PUSH RS POP RD IRET

指令功能

指令格式

助记符号

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 | 22 | 21 | 20 | 19 | 18-15 | 14-12 | 11-9 | 8-6 | 5-0 |
| M23 | INTA | WR | RD | IOM | S3-S0 | A字段 | B字段 | C字段 | MA5-MA0 |

A字段 B字段 C字段

|  |  |  |  |
| --- | --- | --- | --- |
| 14 | 13 | 12 | 选择 |
| 0 | 0 | 0 | NOP |
| 0 | 0 | 1 | LDA |
| 0 | 1 | 0 | LDB |
| 0 | 1 | 1 | LDRi |
| 1 | 0 | 0 | LDSP |
| 1 | 0 | 1 | LOAD |
| 1 | 1 | 0 | LDAR |
| 1 | 1 | 1 | LDIR |

|  |  |  |  |
| --- | --- | --- | --- |
| 11 | 10 | 9 | 选择 |
| 0 | 0 | 0 | NOP |
| 0 | 0 | 1 | ALU\_B |
| 0 | 1 | 0 | RS\_B |
| 0 | 1 | 1 | RD\_B |
| 1 | 0 | 0 | RI\_B |
| 1 | 0 | 1 | SP\_B |
| 1 | 1 | 0 | PC\_B |
| 1 | 1 | 1 | 保留 |

|  |  |  |  |
| --- | --- | --- | --- |
| 8 | 7 | 6 | 选择 |
| 0 | 0 | 0 | NOP |
| 0 | 0 | 1 | P<1> |
| 0 | 1 | 0 | P<2> |
| 0 | 1 | 1 | P<3> |
| 1 | 0 | 0 | P<4> |
| 1 | 0 | 1 | LDPC |
| 1 | 1 | 0 | STI |
| 1 | 1 | 1 | CLI |

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