

Format	AddressMod	Size	Type of Instruction	Affected Flags	Example
MOV Rd, Rs	Register	1 byte	Data Transfer (Move)	None	MOV A, B
MOV Rd, M / MOV M, Rs	Register Indirect (HL)	1 byte	Data Transfer (Move)	None	MOV A, M
MVI R/M, data8	Immediate	2 bytes	Data Transfer (Load Immediate)	None	MVI C, 56H / MVI M, 3EH
LDA addr16	Direct	3 bytes	Data Transfer (Load)	None	LDA 2050H
STA addr16	Direct	3 bytes	Data Transfer (Store)	None	STA 2050H
LDAX B / LDAX D	Register Indirect (BC/DE)	1 byte	Data Transfer (Load Indirect)	None	LDAX B
STAX B / STAX D	Register Indirect (BC/DE)	1 byte	Data Transfer (Store Indirect)	None	STAX D
LHLD addr16	Direct	3 bytes	Data Transfer (Load Register Pair)	None	LHLD 2050H
SHLD addr16	Direct	3 bytes	Data Transfer (Store Register Pair)	None	SHLD 2050H
LXI Rp, data16	Immediate (16-bit)	3 bytes	Data Transfer (Load Register Pair Immediate)	None	LXI H, 3540H
XCHG	Implicit	1 byte	Data Transfer (Exchange)	None	XCHG
XTHL	Implicit / Stack	1 byte	Data Transfer (Exchange with Stack)	None	XTHL
SPHL	Implicit	1 byte	Stack/Control	None	SPHL
PUSH Rp / PUSH PSW	Implicit / Stack	1 byte	Stack	None	PUSH B / PUSH PSW
POP Rp / POP PSW	Implicit / Stack	1 byte	Stack	None (but POP PSW restores flags)	POP D / POP PSW
PCHL	Implicit	1 byte	Branching / Control	None	PCHL
ADD R / ADD M	Register / Register Indirect	1 byte	Arithmetic (Add)	All flags (S,Z,AC,P,CY)	ADD C
ADI data8	Immediate	2 bytes	Arithmetic (Add Immediate)	All flags	ADI 56H
ADC R / ADC M	Register / Register Indirect	1 byte	Arithmetic (Add with Carry)	All flags	ADC M
ACI data8	Immediate	2 bytes	Arithmetic (Add Immediate with Carry)	All flags	ACI 56H
DAD Rp	Register Pair	1 byte	Arithmetic (16-bit Add)	Carry (CY) only	DAD B
SUB R / SUB M	Register / Register Indirect	1 byte	Arithmetic (Subtract)	All flags	SUB C
SUI data8	Immediate	2 bytes	Arithmetic (Subtract Immediate)	All flags	SUI 56H
SBB R / SBB M	Register / Register Indirect	1 byte	Arithmetic (Subtract with Borrow)	All flags	SBB M
SBI data8	Immediate	2 bytes	Arithmetic (Subtract Immediate with Borrow)	All flags	SBI 56H
INR R / INR M	Register / Register Indirect	1 byte	Arithmetic (Increment)	All except Carry (CY)	INR B / INR M
DCR R / DCR M	Register / Register Indirect	1 byte	Arithmetic (Decrement)	All except Carry (CY)	DCR M
INX Rp	Register Pair	1 byte	Arithmetic (Increment Pair)	None	INX B
DCX Rp	Register Pair	1 byte	Arithmetic (Decrement Pair)	None	DCX B
DAA	Implicit	1 byte	Arithmetic (BCD Adjust)	All flags	DAA
ANA R / ANA M	Register / Register Indirect	1 byte	Logical (AND)	All flags	ANA B
ANI data8	Immediate	2 bytes	Logical (AND Immediate)	All flags	ANI 32H
ORA R / ORA M	Register / Register Indirect	1 byte	Logical (OR)	All flags	ORA B
ORI data8	Immediate	2 bytes	Logical (OR Immediate)	All flags	ORI 32H
XRA R / XRA M	Register / Register Indirect	1 byte	Logical (XOR)	All flags	XRA B
XRI data8	Immediate	2 bytes	Logical (XOR Immediate)	All flags	XRI 32H
CMA	Implicit	1 byte	Logical (Complement)	None	CMA
CMC	Implicit	1 byte	Logical (Complement Carry)	Carry (CY)	CMC
STC	Implicit	1 byte	Logical (Set Carry)	Carry (CY)	STC
CMP R / CMP M	Register / Register Indirect	1 byte	Logical (Compare)	All flags (result not stored)	CMP C
CPI data8	Immediate	2 bytes	Logical (Compare Immediate)	All flags	CPI 32H
RLC	Implicit	1 byte	Rotate / Logical	Carry (CY)	RLC
RRC	Implicit	1 byte	Rotate / Logical	Carry (CY)	RRC
RAL	Implicit	1 byte	Rotate / Logical	Carry (CY)	RAL

RAR	Implicit	1 byte	Rotate / Logical	Carry (CY)	RAR
IN port8	I/O Immediate	2 bytes	I/O	None	IN 32H
OUT port8	I/O Immediate	2 bytes	I/O	None	OUT 56H
NOP	Implicit	1 byte	Machine Control	None	NOP
HLT	Implicit	1 byte	Machine Control	None	HLT
JMP addr16	Direct	3 bytes	Branching (Jump)	None	JMP 2050H
JZ addr16	Direct	3 bytes	Branching (Conditional Jump)	None (uses flags)	JZ 2050H
JNZ addr16	Direct	3 bytes	Branching (Conditional Jump)	None (uses flags)	JNZ 2050H
JC addr16	Direct	3 bytes	Branching (Conditional Jump)	None (uses flags)	JC 2050H
JNC addr16	Direct	3 bytes	Branching (Conditional Jump)	None (uses flags)	JNC 2050H
JP addr16	Direct	3 bytes	Branching (Conditional Jump)	None (uses flags)	JP 2050H
JM addr16	Direct	3 bytes	Branching (Conditional Jump)	None (uses flags)	JM 2050H
JPO addr16	Direct	3 bytes	Branching (Conditional Jump)	None	JPO 2050H
JPE addr16	Direct	3 bytes	Branching (Conditional Jump)	None	JPE 2050H
CALL addr16	Direct	3 bytes	Branching (Call)	None	CALL SUB
CZ addr16	Direct	3 bytes	Branching (Conditional Call)	None (uses flags)	CZ 2050H
CNZ addr16	Direct	3 bytes	Branching (Conditional Call)	None	CNZ 2050H
RET	Implicit / Stack	1 byte	Branching (Return)	None	RET
RZ	Implicit / Stack	1 byte	Branching (Conditional Return)	None (uses flags)	RZ
RNZ	Implicit / Stack	1 byte	Branching (Conditional Return)	None	RNZ
RST n (0-7)	Implicit	1 byte	Interrupt/Call	None	RST 5 (jump to 28H)
RIM	Implicit	1 byte	Interrupt Control	None	RIM
SIM	Implicit	1 byte	Interrupt Control	None	SIM
EI	Implicit	1 byte	Machine Control / Interrupt	None	EI
DI	Implicit	1 byte	Machine Control / Interrupt	None	DI