

FLUID POWER Design Data Sheet



Revised Sheet 80 - Womack Design Data File

JIC STANDARD GRAPHIC SYMBOLS FOR ELECTRICAL LADDER DIAGRAMS

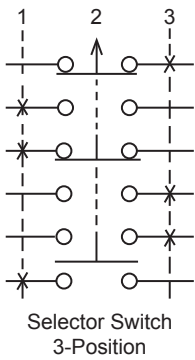
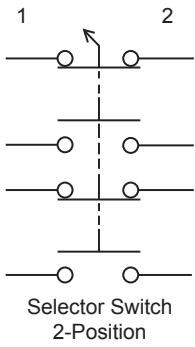
These graphic symbols are the ones used most often on ladder diagrams for fluid power electrical control circuits. They are standard JIC (Joint Industrial Council) symbols as approved and adopted by the NMTBA (National Machine Tool

Builders Association). They have been extracted from the Appendix of the NMTBA Specification EGPI-1967. Remember that JIC Standards are advisory only. Their use in industry or trade is entirely voluntary.

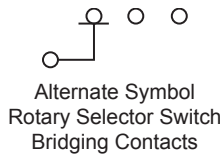
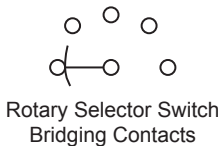
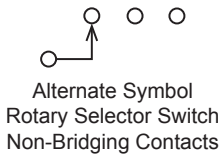
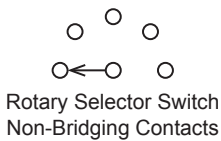
Limit Switches	Proximity Switches	Foot Switches	Relay Coils and Contacts	Pushbuttons
 Limit Switch, N.O. Non-Actuated	 Proximity Switch Normally Open	 Foot Switch Normally Open	 Relay or Timer Coil	 Pushbutton Normally Open
 Limit Switch, N.O. Held Closed	 Proximity Switch Normally Closed	 Foot Switch Normally Closed	 Relay Contact Normally Open	 Pushbutton Normally Closed
 Limit Switch, N.C. Non-Actuated	 Proximity Switch Normally Closed	Flow Switches Flow Switch Normally Open	 Relay Contact Normally Closed	 Pushbutton Double Circuit
 Limit Switch, N.C. Held Open	Pressure or Vacuum Switches Vacuum or Pressure Switch, Norm. Open	 Flow Switch Normally Closed	 Relay Contact, Time Delay After Coil Energized - Normally Open	 Pushbutton Mushroom Head
 Limit Switch Neutral Position Non-Actuated	 Vacuum or Pressure Switch, Norm. Closed	Liquid Level Switches Liquid Level Switch Normally Open	 Relay Contact, Time Delay After Coil Energized - Normally Closed	 Pushbutton Maintained Contact
 Limit Switch Neutral Position Actuated	Temperature Switches Temperature Switch Normally Open	 Liquid Level Switch Normally Closed	 Relay Contact, Time Delay After Coil De-energized - Normally Open	Meters Voltmeter
 Limit Switch Maintained Position	 Temperature Switch Normally Closed	Load Devices Load Device Solenoid Valve, etc.	Disconnect Switch Disconnect Switch	 Ammeter
Toggle Switches Toggle Switch				

Continued on the back side of this sheet.

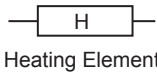
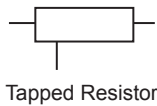
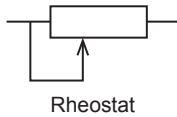
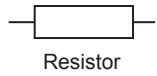
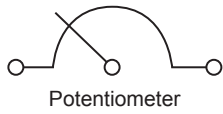
Selector Switches



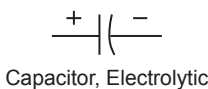
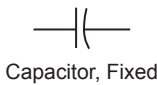
Rotary Selector Switches



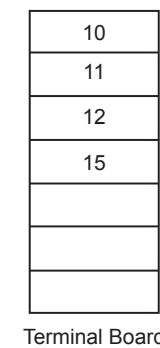
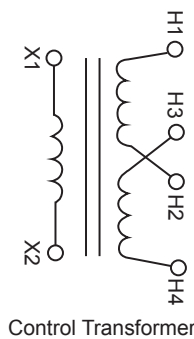
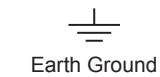
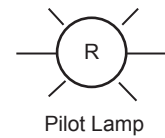
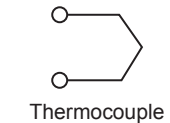
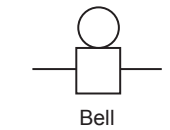
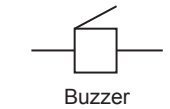
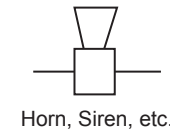
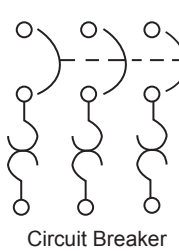
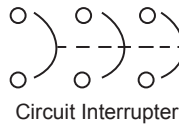
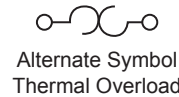
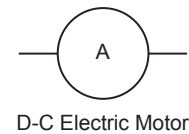
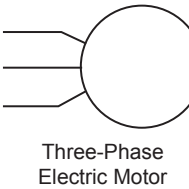
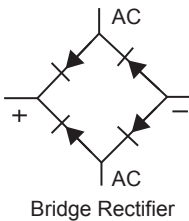
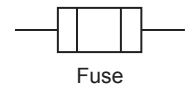
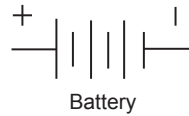
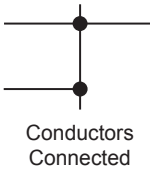
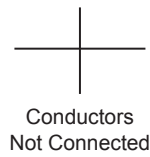
Resistors



Capacitors



Miscellaneous



DEVICE DESIGNATIONS

These abbreviations are intended for use on diagrams in connection with the corresponding symbol from the charts above to amplify the information on the function of a device. Suitable prefix numbers (1, 2, 3, 4, etc.) may be added to distinguish between several similar devices. Suffix letters (A, B, C, D, etc.) may be added to distinguish between several sets of contacts on the same device.

Examples: 1-CR-A, 1-CR-B, 3-CR-A, etc.

AM - Ammeter	FLS - Flow Switch
CAP - Capacitor	FS - Float Switch
CB - Circuit Breaker	FTS - Foot Switch
CI - Circuit Interrupter	HTR - Heating Element
CON - Contractor	FU - Fuse
CR - Control Relay	GRD - Ground
CS - Cam Switch	LS - Limit Switch
CTR - Counter	LT - Pilot Light
F - Forward	M - Motor Starter
FB - Fuse Block	MTR - Motor

PB - Pushbutton	SOC - Socket
POT - Potentiometer	SOL - Solenoid
PRS - Proximity Switch	SS - Selector Switch
PS - Pressure Switch	T - Transformer
R - Reverse	TAS - Temp. Actuated Switch
REC - Rectifier	TB - Terminal Block
RECEP - Receptacle	T/C - Thermocouple
RES - Resistor	TGS - Toggle Switch
RH - Rheostat	TR - Time Delay Relay
RSS - Rotary Selector Switch	VM - Voltmeter
S - Switch	VS - Vacuum Switch

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