Symbol Naming

Schematic Symbol Naming - General Rules

If a symbol can be used for more than one part, it should be named generically (not with the manufacturer part number). Connectors, switches, filters, passives, etc. can often be used many times. Generally, try to name the symbol such that someone else creating a part could find it easily. If the symbol defines a specific part and is not re-usable, use of the manufacturer part number for the symbol name is acceptable.

The Basics:

1. For connectors, CONN_#ofPins
2. For reusable symbols, TYPE
3. For ICs, Manufacturer part number
4. ALL CAPS
5. No spaces or slashes. Please use underscores (_) or dashes (-).

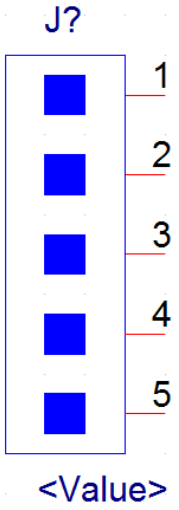
Specific Parts

- ICs: ManufPN
- Other non-reusable symbols: TYPE_ManufPN (e.g. RELAY_AZ733W-2A-9DE)
- Suffix for symbol with same name as another: *_ALT
- Suffix for mounting pins: *_MT
- Suffix for heterogeneous part: *_MULTI
- Suffix for distinguishing by # of pins: *_#ofPinsP (e.g. OPAMP_DUAL_8P)
- Suffix for alphanumeric numbering: *_ALPHA
- Connectors: CONN_#ofPins
- Connector with all pins on one side: CONN_#ofPins_INLINE
- Connector with X spots, but only Y pins: CONN_#ofSpots_#ofPinsPOS
- Switches: SW_SwitchType (SPST, DPST, etc)

Examples

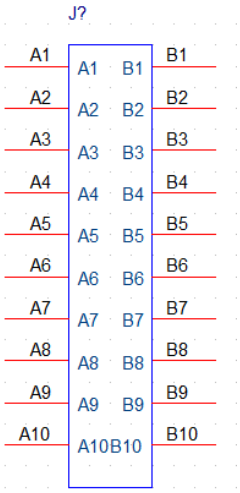
Unacceptable Names	(Reasons)	Acceptable Names
CONN - DB37 RA MALE	No spaces	CONN_DB37
Connector-6pins-2pos	Six spots with 2 pins	CONN_6_2POS
8_HEADER_28	Should be CONN_*	CONN_16
BZX84C3V9/SOT	No slashes	BZX84C3V9-SOT
CONN_DB9F_MTGTABS_0	Delete _0 suffix	CONN_DB9_MT
Mounting_Hole100	Keep size universal	MOUNTING_HOLE
CAP_22nf	Keep value universal	C_NONPOL
AZ733W-2A-9DE	Relay, not IC. Need type.	RELAY_AZ733W-2A-9DE
AD8220ARMZ-R7	Mult. 8-pin INAs use symbol	AD_INA_8P
VOLTAGE_TRANSLATOR_1	Specific IC symbols need specific names	TXB0102DCUR

Connector Examples



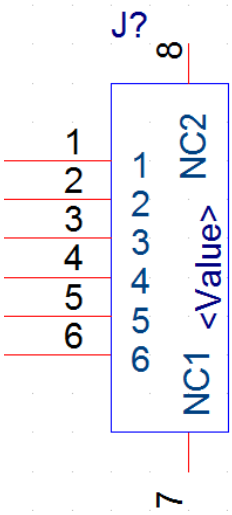
CONN_5_INLINE2

Connector, 5 pins, all in one line. In this case, a previous symbol already fit that category, so this is a stylistic alternate. CONN_5_INLINE_ALT would also be acceptable, but a bit long.



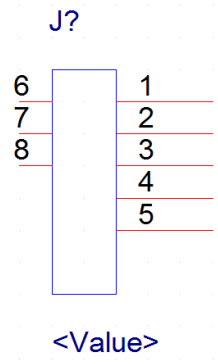
CONN_20_ALPHA

Connector, 20 pins, numbered alphanumerically in the datasheet.



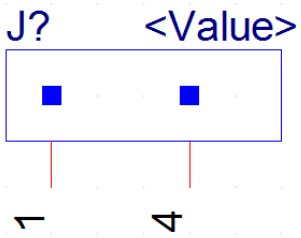
CONN_6_MT

Connector, 6 pins plus two mounting pins.



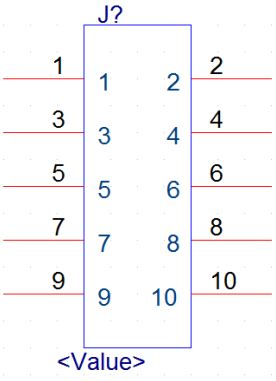
CONN_MICRO-B

Connector, USB Micro-B specific. Looks just like a generic connector symbol, but the pins are named specifically for the USB connector.



CONN_5_2POS1_4

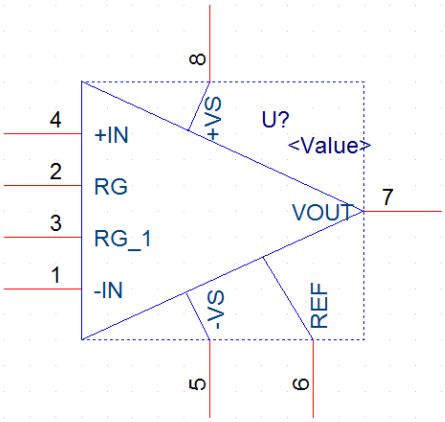
Special connector with 5 “pin spots”, but only contains two pins (placed in positions 1 & 4).

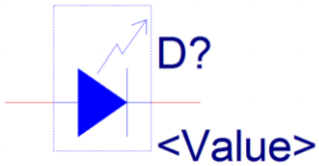


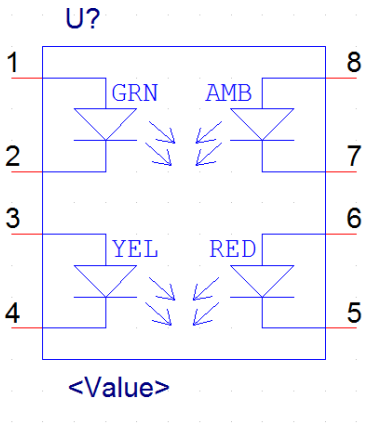
CONN_10_ALT

Connector, 10 pins. ALT suffix added because another 10-pin connector symbol already existed, and the only difference between them is stylistic.

More Examples







AD_INA_8P

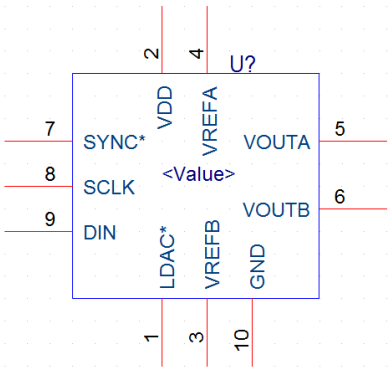
Several Analog Devices INAs have this same symbol, so it is named generically. The suffix defines the number of pins, in order to differentiate from future AD INA symbols.

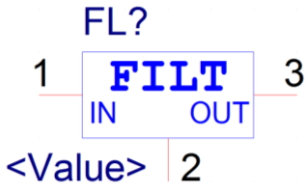
LED_ALT

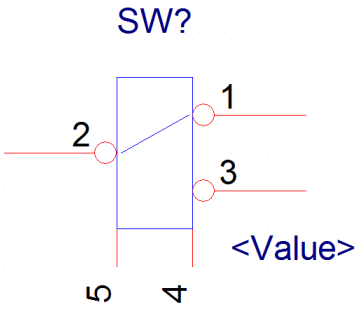
Universal LED symbol. ALT suffix added because another universal LED symbol already existed, and the only difference between them is stylistic.

LED_ARRAY_5684F

The specific configuration of this LED array is unlikely to be reused as a general symbol, so the manufacturer's series number is used. The LED_ARRAY prefix makes the type of symbol clear.







AD5322BRMZ

This part is an IC with very specific pin names and is unlikely to be reused. Therefore, it is simply named with the manufacturer part number.

FILTER_DIRECTIONAL

This filter symbol could be used for a number of 3-pin filters, so is saved under the generic name FILTER. It is unique in that it is directional, so this suffix is added to differentiate the symbol.

SW_SPDT_5P

Many switch symbols can be reused, so they are named with the simple switch nomenclature. This particular switch has two mounting pins, so the suffix 5P differentiates it. Alternatively, it could be named **SW_SPDT_MT**.