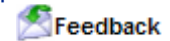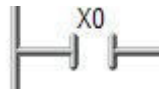# (CONTACT) - Normally Open

The Normally Open contact mimics the behavior of a momentary, normally open relay. When the assigned bit is ON, the contacts are Closed, allowing power flow. When the assigned bit is OFF, the contacts are Open, interrupting power flow.

Parameters:

Note: Use the F9 key (Element Browser) or Down-Arrow key (Auto-Complete) at any time to see a complete list of the memory locations that are valid in the current field of the instruction.

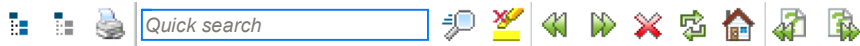**Element** - designates the bit location use. This can be any readable bit location.

Hotkey: F2

See Also:

- (CONTACT) - Normally Closed
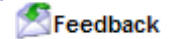- (CONTACT) - Normally Open

Related Topics:

- (CONTACT) - Delta

- (CONTACT) - Negative Differential
- (CONTACT) - Positive Differential

Rung Example:

If X0 is ON then Y0 will be ON.

```
1      X0                                                              Y0
    ──┤ ├──────────────────────────────────────────────────────(  OUT  )
```
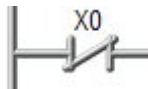
(CONTACT) - Normally Closed

The Normally Closed contact mimics the behavior of a momentary, normally closed relay. When the assigned bit is ON, the contacts are Open, interrupting power flow. When the assigned bit is OFF, the contacts are Closed, allowing power flow.

Parameters:

Note: Use the F9 key (Element Browser) or Down-Arrow key (Auto-Complete) at any time to see a complete list of the memory locations that are valid in the current field of the instruction.

Element - designates the bit location to use. This can be any readable bit location.
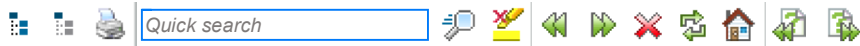
Hotkey: F3

See Also:

- (CONTACT) - Normally Closed
- (CONTACT) - Normally Open

Related Topics:

- (CONTACT) - Delta

- (CONTACT) - Negative Differential
- (CONTACT) - Positive Differential

Rung Example:

If X0 is OFF then Y0 will be ON.
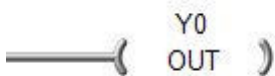
```
         X0                                                    Y0
1    ─┤/├─────────────────────────────────────────────(  OUT  )
```
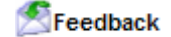
OUT- Output Coil

The Output Coil (OUT) instruction reflects the status of the input logic in the specified discrete memory location. It is necessary for the input logic to remain ON for the output to remain ON.

```
            Y0
——————(  OUT  )
```

Avoid using multiple OUT instructions that reference the same discrete memory location; the last OUT or OUTI instruction that is executed will always determine the status of the discrete memory location.

It is advisable that you avoid referencing the same discrete output point with an OUT or OUTI instruction that you also reference with a SET / RST or SETI / RSTI pair of instructions.

Parameters:

Note: Use the **F9 key** to open the Default Element Selection Tool (the Element Picker or the Element Browser) or use the **Down-Arrow** key (Auto-Complete) on any parameter field to see a complete list of the memory locations that are valid for that parameter of the instruction.

Element Reference - designates the discrete memory location to use. This can be any writable Bit location.

Termination Scan Behavior:

Termination behavior describes the actions that the Output Coil (OUT) instruction perform when they stop executing.

If the Output Coil (OUT) instruction is contained within a Program, a Task, or a Stage the Output Coil (OUT) instruction will be turned OFF during the termination scan of the containing element.

Refer to the Help topic on Termination Behavior for detailed information on the programming elements that have termination logic.

See Also:

NOP - No Operation

OUT - Output Coil

OUTI - Output Immediate Coil

RST - Reset Coil
SET - Set Coil

RSTR - Reset Range
SETR - Set Range

RSTI - Reset Immediate Bit
SETI - Set Immediate Bit

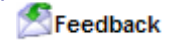---

Rung Example:

When X0 is ON output Y0 will be ON.

```
        X0                                              Y0
1   ┤ ├                                            (   OUT   )
```

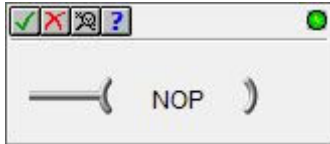
NOP - No Operation

The No Operation (NOP) instruction does nothing except use memory.

Note: it is possible to add a Comment to a rung containing only a No Operation (NOP) instruction, but, any such rungs after the last rung with a "real" instruction will not be saved as part of the project.

Parameters:

This instruction has no parameters. It wouldn't know what to do with a parameter if it had one ...

Status Display:
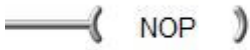
There is no status to display.

See Also:

- NOP - No Operation

- OUT - Output Coil

- RST - Reset Coil
- SET - Set Coil

Rung Example:

Here is the NOP instruction in it's natural habitat, doing what it does best, nothing at all.

1 ───(NOP)