

From our WIT (Wire-in-tube) Products range:

## WS2 - Slot-wit-2 (2-input gate)

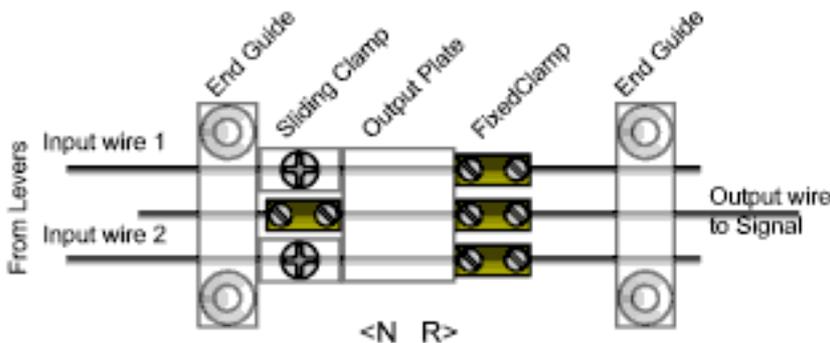
Slot-wit is a mechanical gate which can be configured to perform a logical AND or OR function.

As an AND gate it is used for “slotting” where a single semaphore arm is controlled by more than one lever frame. An example is the situation in which the “distant” arm for the following section is mounted on the same post as the starting “home” arm for the previous section. The “distant” arm clears only when the “distant” lever AND the “home” lever are both pulled. Another application is the control of 3-position semaphores (see note below).

As an OR gate it is used to simulate conditional interlocking where a single arm can be controlled by a number of interlocked levers in one frame (not prototypical). The arm will clear if one lever OR another is pulled.

The following components make up the gate:

- End Guides (2)
- Fixed Clamps (4)
- Sliding Clamps (2)
- Output Plate (1)



### AND (SLOTTING) GATE

The general arrangement of the gate is shown above. This is the AND configuration. Note the following points:

1. A small plastic “clutch” must be inserted into each Sliding Clamp such that it is located between the adjusting screw and the input wire.
2. The Fixed Clamps on the input wires should be adjusted such that the Output Plate presses the Sliding Clamp against the End Guide when the Lever is in the **Normal** position.
3. The Fixed Clamps on the output wire should both be hard against the Output Plate.
4. The screw on the Sliding Clamps should be adjusted so that there is just sufficient grip to operate the output wire. **Do not over-tighten.**

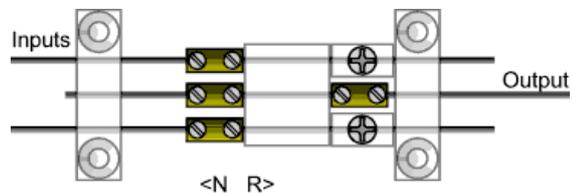
5. If using the gate to slot a home and distant combination, the input wire from the home lever should be extended to operate the home arm, while the output wire is used to operate the distant arm.

6. The location of each wire is not important - its function is determined by how it is clamped.

7. If the Normal/Reverse directions of the wires are swapped, the gate produces the OR function.

### 3-POSITION SEMAPHORES

To set up the Slot-wit to control a 3-position semaphore, consider input wire 1 to be connected to the lever associated with the signal being controlled while wire 2 is linked to the lever controlling the next signal. Leave a gap between the Output Plate and the Fixed Clamp of wire 2 equal to half of the total travel of the wires. (You may need to space the End Guides further apart for long travels.)



### OR GATE

The above diagram shows the standard arrangement for an OR gate. Note the following points:

1. As for AND gate.
2. The Fixed Clamps on the input wires should be adjusted such that the Output Plate presses the Sliding Clamp against the End Guide when the Lever is in the **Reverse** position.
3. As for AND gate.
4. As for AND gate.
5. Not applicable.
6. As for AND gate.
7. If the Normal/Reverse directions of the wires are swapped, the gate produces the AND function.

