

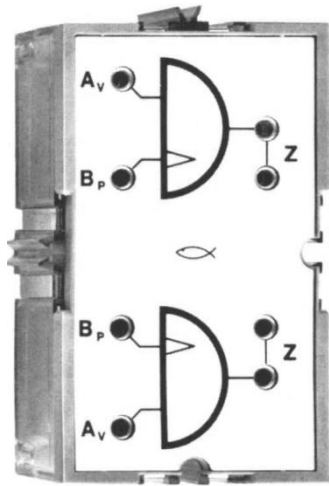
fischertechnik h4 DA

DYN. AND

Electronic-Module

Order No. 30819



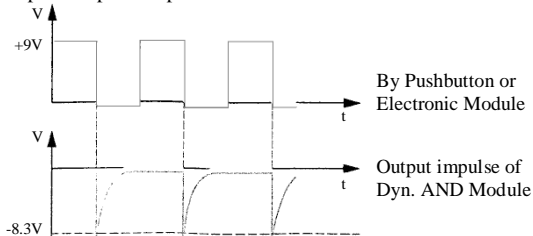


Technical Data:

Rated operating voltage:

9 Volt = $\pm 20\%$

Impulse input at Bp:



The dynamic AND module expands the application area of the flip-flop module. It contains 2 identical, independent dynamic AND gates.

The power supply for this unit is automatically connected by attaching the module to a rectifier or other module and inserting the enclosed red connector.

If the output Z of the dynamic AND element is connected to an input X of a flip-flop, the flip-flop can be controlled via the pulse input Bp of the dynamic AND unit as well as via the pulse input Sp (or Rp) of the flip-flop module itself. The control is independent of whether and how the pulse input Sp (or Rp) is connected.

The operation of the OR-NOR building block is best understood by means of a simple test. The following signal definitions apply to the entire fischertechnik electronics system:

0-Signal	The corresponding socket carries the Voltage $V \geq 3V$
1-Signal	The corresponding socket carries the Voltage $V \leq 2V$
dynamic	
1-Signal	Signal change from "0" to "1", e.g. Switching from "+" to "-" ("0"->"1" transition)

Under no circumstances should the 0-signal be confused with a missing signal (= input terminal not connected).

Via the second input of the dynamic AND element, the "preparation or enable" input Av, the setting (or resetting) of a flip-flop can be suppressed by inhibiting the pulse input Bp. To do this, you have to set Av to "+" (Av = "0"). If Av is connected to "-" or not connected, a 1-signal is present at the enable input, and only if this is the case, a "0-1" transition at the pulse input Bp can be applied to the Flip-Flop through the output Z.

If both the AND elements available in the block are connected and a bridge is formed between the outputs (Z), the block can also be used as a dynamic "OR" block, for example for controlling the mono-flop module.

No relay modules can be directly controlled via outputs Z.

Further explanations and suggestions for model building can be found in the hobby experiment and model book, volume 4-4.

Translator's Note: The dynamic AND unit can also be used as a pulse input to OR-NOR modules such as for the "0" to "1" transition triggering of a SR latch constructed using two OR-NOR gates. For a power-on-reset (POR), connect both the Bp and Av inputs to "-".

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