Technical Data

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sigma®-tronic b

Logic units

Contents

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AND gate R 411.1

Inverted AND gate R 412.1
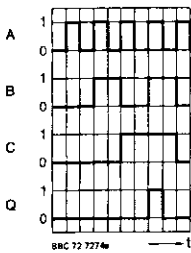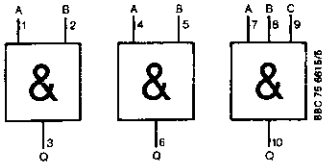
Description

The AND gate R 411.1 contains three independent AND functions, two of which have two inputs and one with three inputs.

The output Q of one function gives a 1-signal, as soon as a 1-signal is applied simultaneously to all inputs of this function. In all other cases the output will carry a 0-signal.

$$Q = A \wedge B \wedge C$$
$$Q = A \cdot B \cdot C$$

Order code for module:	**GH R411 0001 R1**
Order code for circuit symbol transparency:	**GH R700 1901 R1**
Order code for application:	**D GEF 31014 D**
Identifying colour:	black
Mechanical structure:	single width
Weight:	approx. 130 g

Technical data

Current consumption, 0-signal at the outputs	5 mA
1-signal at the outputs	27 mA
Input	1 load
Fan out	100 loads

The functions are not delayed.
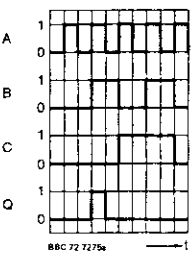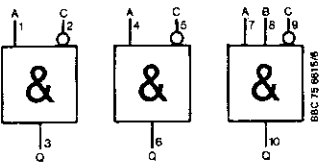
Description

The inverted AND gate R 412.1 contains three independent inverted AND functions, two of which have two inputs and one with three inputs.

The output Q of one function gives a 1-signal, as soon as a 1-signal stands at all true inputs (A and B) and an 0-signal at the inverted input (C). A 1-signal at the inverted input will block the output, consequently carrying a 0-signal.

$$Q = A \wedge B \wedge \overline{C}$$
$$Q = A \cdot B \cdot \overline{C}$$

Order code for module:	**GH R412 0001 R1**
Order code for circuit symbol transparency:	**GH R700 1901 R2**
Order code for application:	**D GEF 31014 D**
Identifying colour:	black
Mechanical structure:	single width
Weight:	approx. 130 g

Technical data

Current consumption, 0-signal at the outputs	5 mA
1-signal at the outputs	27 mA
Input	1 load
Fan out	100 loads

The functions are not delayed.

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AND gate R 413
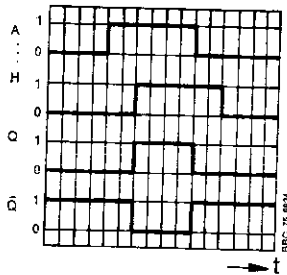
OR gate R 414
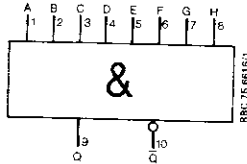
Description

The AND gate R 413 incorporates eight inputs and two outputs, one normal and one inverted. When a 1-signal appears at the inputs A ... H then the output Q gives a 1-signal and the output $\bar{Q}$ a 0-signal.

$$Q = A \wedge B \wedge C \wedge D \wedge E \wedge F \wedge G \wedge H$$
$$Q = A \cdot B \cdot C \cdot D \cdot E \cdot F \cdot G \cdot H$$

The output $\bar{Q}$ always carries the opposite signal to output Q.

Order code for module:	**GH R413 0000 V0**
Order code for circuit symbol transparency:	**GH R700 1901 R32**
Order code for application:	**D GEF 31014 D**
Identifying colour:	black
Mechanical structure:	single width
Weight:	approx. 100 g

Technical data

Current consumption, 0-signal at output Q		5 mA
1-signal at output Q		10 mA
Input		1 load
Fan out at Q		100 loads
at $\bar{Q}$		40 loads

The function is not delayed.
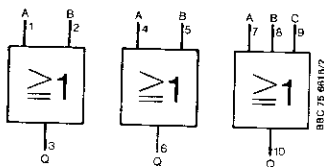
Description

The OR gate R 414 contains three independent OR functions, two of which have two inputs and one with three inputs.

The output Q of one function will give a 1-signal as soon as at least one input carries a 1-signal. An 0-signal will not appear at the output unless all inputs of a function carry 0-signal.

The input signals are not amplified, therefore not more than four OR functions may be connected directly in series with an input voltage of 24 V.

The device will not burden the supply voltage.

$$Q = A \vee B \vee C$$
$$Q = A + B + C$$
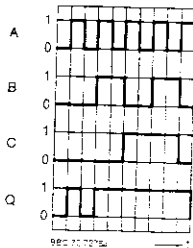
|	
Order code for module:	**GH R414 0000 V0**
Order code for circuit symbol transparency:	**GH R700 1901 R3**
Order code for application:	**D GEF 31014 D**
Identifying colour:	black
Mechanical structure:	single width
Weight:	approx. 110 g

Technical data

The input load depends on the load connected at the output side.
The fan out is a function of the units on the line side.
The functions are not delayed.
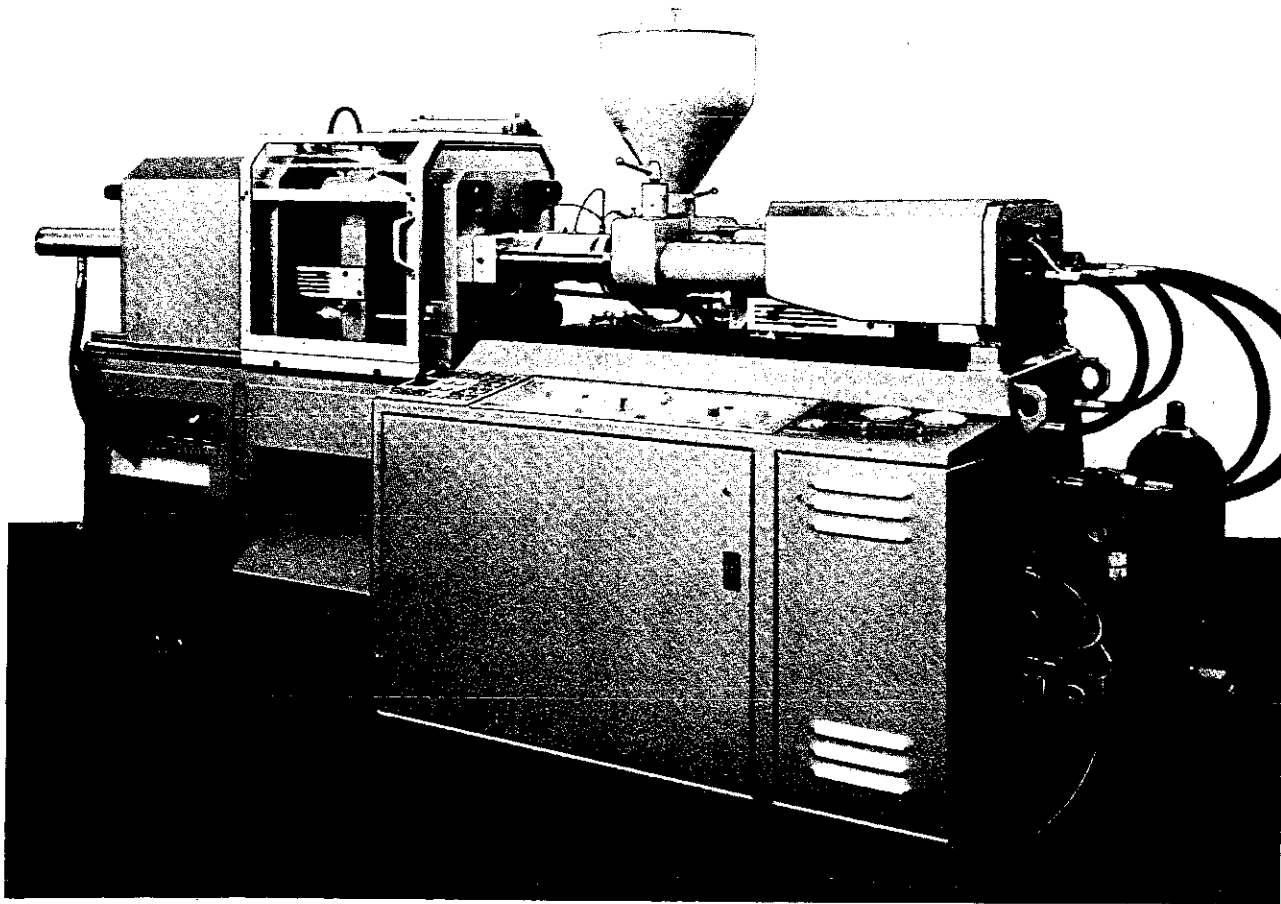
SIGMA-tronic controlled injection moulding machine
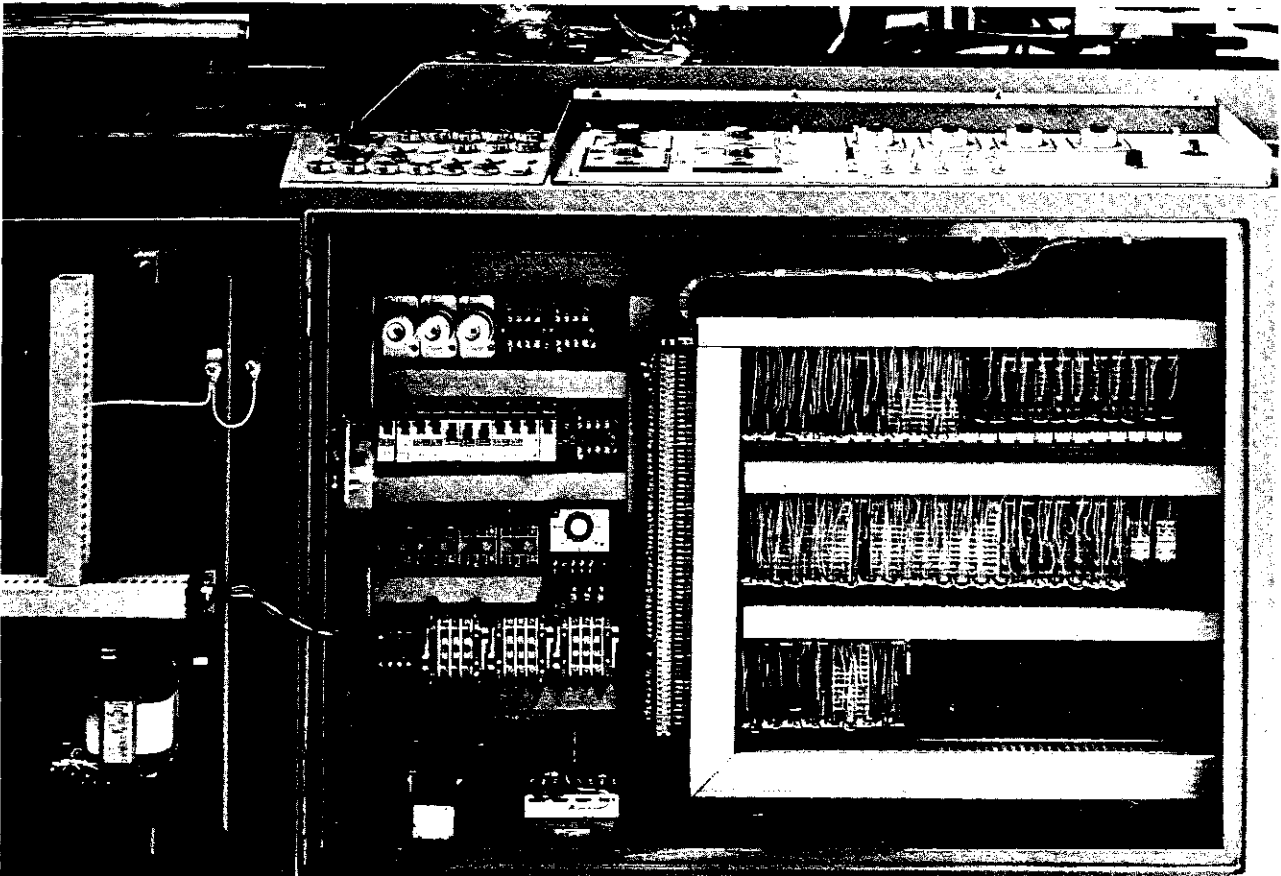
SIGMA-tronic control for injection moulding machine