italtec

ISO 9001-2000

BT-1005/DE
DIGITAL ELECTRONIC

CONFIGURATION

COMPOSITION:

- 6 modular blocks devoted to:
  DE-01: Logic gates (NOT, AND, OR, BUFFERS)
  DE-02: Logic gates (NAND, NOR, EXOR, EXNOR, AOI)
  DE-03: Combinational logic
  DE-04: Memory elements
  DE-05: Counters
  DE-06: Input-Output
- 1 Ledger-shaped support suited to hold 4 blocks (on two ranks)
- 1 Set of multi-coloured cables AWG standard for interconnection

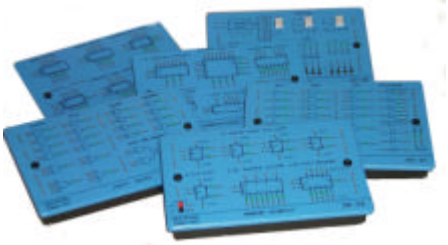
ACCESSORIES

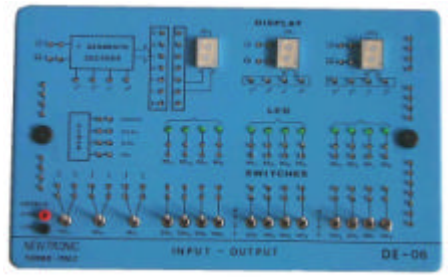
Technical manual with electric diagrams
Didactic manual with 43 proposed exercises
Container case
Volume: cm 55x55x20h
Weight: kg 22

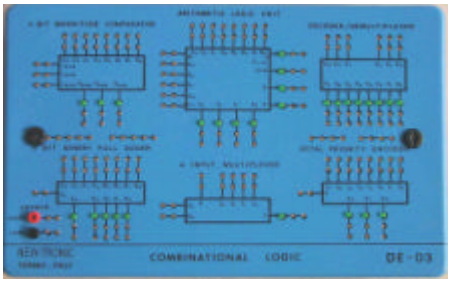
FEATURES

Common features for all the modular blocks are as follows:

Components set on printed circuit board
SSI and MSI TTL integrated circuits
Miniature wire lead sockets for circuit connection
Interconnected sockets for multiconnections
Distributed power supply input to the various circuits foreseen
High-reliable pins for rigid wire circuit connection (AWG)
Knots for signal multiplication
Short circuit and overvoltage protection
Protection against polarity inversion
5V to 15 V.D.C. power supply required (no regulation needed)
LED for visualisation of logic state of digital circuit outputs
Silk-screened synoptic panel
Unbreakable plastic case
Magnetic fastening device mounted at the rear of the blocks







TOPIC COVERAGE

COMBINATORIAL CIRCUITS:

1. OR Logic gate (OR GATE)
2. AND Logic gate (AND GATE)
3. Inverter (NOT)
4. Reciprocal conversion of OR and AND gate
5. Inhibition operation (ENABLE)
6. The exclusive OR (EXCLUSIVE OR GATE)
7. EX-NOR Logic gate (EXCLUSIVE NOR GATE)
8. The NOR and NAND logic gates (NOR and NAND GATES)
9. The AND-OR-INVERTER functions (AOI)
10. Elementary binary adder (Half Adder)
11. Full adder
12. BCD -7 segments decoder
13. 4-bits Parallel Adder
14. 4-bits binary full adders
15. Binary subtracter
16. 4-bits Adder - Subtracter
17. 4-bit Magnitude comparator
18. Digital comparator
19. 3 to 8 Decoder
20. Digital multiplexer
21. Priority encoder
22. Buffer Open collector
23. Buffer Three-State
24. ALU: Arithmetic-Logic Unit

SEQUENTIAL CIRCUITS:

A) 1 bit memory:

25. SET-RESET Flip-Flop (SRFF)
26. The clocked SRFF
27. JK Flip-Flop
28. JK Master Slave Flip-Flop
29. D type Flip-Flop and T type Flip-Flop

B) N bit Memory:

30 Serial IN Parallel- OUT Shift-Register
31 Serial IN Serial - OUT Shift Register
32 Parallel IN Serial OUT Shift Registerer
33 Parallel IN Parallel OUT Shift Registerer

C) Asynchronous counters:

34 Asynchronous Binary Up-Counter
35 Asynchronous Binary Dawn-Counter
36 Fixed Modules Counter
37 Decade Counter
38 Variable Module Counter
39 Presettable Binary Down Counter
40 Decade counter as frequency divider

D) Synchronous counters:

41 Series Carry Synchronous Binary Counter
42 Parallel Carry Synchronous Binary Counter
43 Synchronous Decade Counter