

**LOGO! modular**

It couldn't get any easier.



# logo!



**SIEMENS**



**LOGO! modular** – expand your horizons!

LOGO! – used in both trade and industry:



**Transport facilities**

- Conveyor systems
- Hoisting platforms
- Elevators
- Silo works
- Automatic dry feeders



**House and building services management**

- Lighting control (outside and inside lighting)
- Door/gate control
- Shutter, sun blind and awning control
- Watering and sprinkler system control



**Special solutions**

- Solar-electric systems
- Use on ships
- Use under extreme environmental conditions
- Display panels and traffic control signs

**LOGO! is truly technology with a view to the future. Because LOGO! is now modular – and thus even easier and better than before. Now there are only two versions, LOGO! Basic and LOGO! Pure. Together with various expansion modules, they can cover virtually any contingency!**

With its 8 basic and 22 special functions, LOGO!, the logic module, replaces a whole myriad of switching devices, from relays over time switches to contactor relays. And the new modular LOGO! saves room in the control cabinet, requires fewer accessories and less warehouse space, and can be expanded whenever necessary. So it saves not only costs, but time as well – as much as 70 %. It's easy to install, needs hardly any wiring, is very easy to program, and that's all there is to it. And to top it off, LOGO! is also vibration-resistant, has a very high level of electromagnetic compatibility (EMC), conforms fully to industrial standards, and can withstand virtually all climatic conditions. It also comes with Class B radio interference suppression and all necessary certifications. For use anywhere in the world.



#### Heating/ventilation/air conditioning

- Energy management
- Heating
- Cooling systems
- Ventilation systems
- Air conditioning systems



#### Machine controls

- Motor, pump and valve controls
- Air compressors
- Exhaust and filtering systems
- Water-treatment plants
- Sawing machines and planing machines
- Etching and purification plants



#### Operational monitoring systems

- Access control
- Vehicle control monitoring
- Alarm systems
- Limit-value monitoring
- Traffic light control systems
- Baggage control



**LOGO! modular** – never wrong.

i0901

4

**LOGO! reduces costs by up to 50 %**

- Replaces many conventional switching devices
- Requires less space in the control cabinet
- Fewer accessories
- Less warehouse space
- Saves on service because it is wear-free

**LOGO! reduces time requirements by up to 80 %**

- Snaps right onto the DIN rail
- Requires almost no wiring
- Can be programmed at the push of a button
- Pre-tested sample programs can be used at no charge or generated on the PC, tested, and transferred quickly and without error
- User-friendly configuring

**LOGO! reduces space requirements by up to 70 %**

- Four modules suffice to replace a wide variety of relays, time switches and contactor relays
- 8 basic and 22 special functions
- Saves space on accessories and mounting fixtures

**With LOGO! modular, you're always on the right track. The new expansion modules make LOGO! extraordinarily flexible. And they take up only two width modules.**



They can be docked to the two LOGO! basic modules in order to expand LOGO!'s functionality. Just snap them onto the DIN rail and flange-mount them to LOGO!. You can expand each LOGO! up to a total configuration of 24 digital inputs, 16 digital outputs and 8 analog inputs whenever you want to! The advantage: LOGO! is never oversized and remains extremely flexible throughout its life.

The following module types are available:

The digital module LOGO!DM, the analog module LOGO!AM, and the communications module LOGO!CM. By the way, each of these modules is only half as wide as a LOGO!

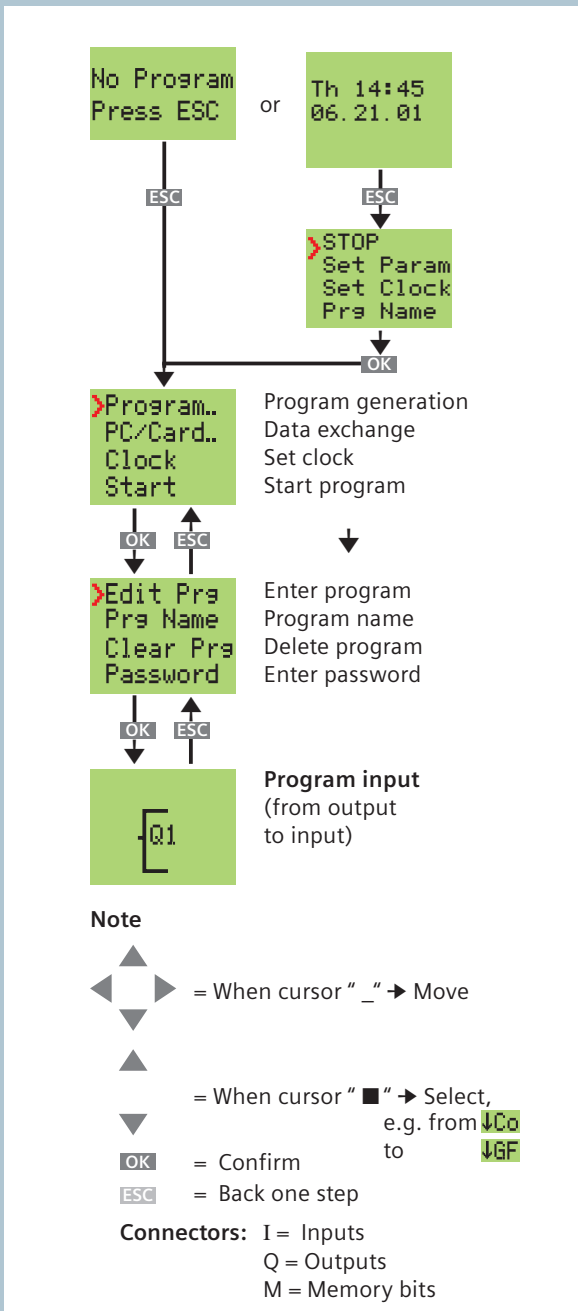
#### An extraordinary number of options

- 16 timers
- 24 counters
- 8 time switches
- 3 elapsed time counters
- 42 current impulse relays
- 42 latching relays and
- Functions for analog-value processing and message texts

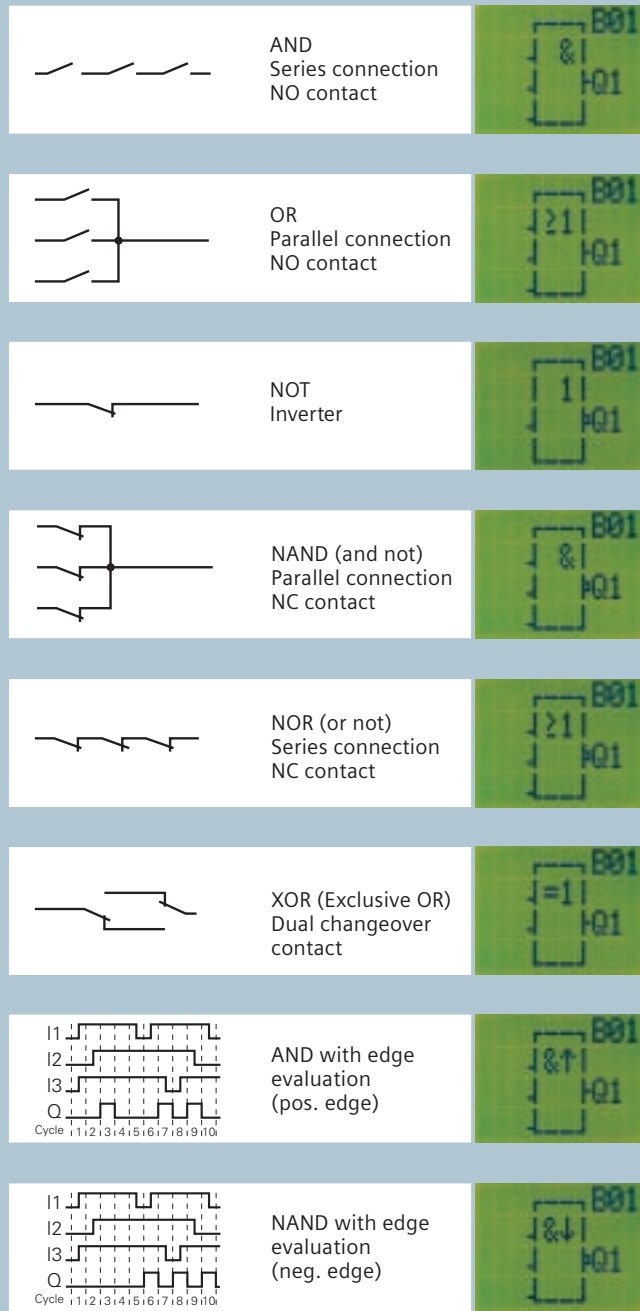
#### Extremely well-equipped

- Vibration-resistant
- High level of electromagnetic compatibility (EMC)
- Industrial standard
- For all climatic conditions
- Radio interference suppression class 8
- All necessary certifications
- Suitable for use anywhere in the world

# Supereasy: Operation

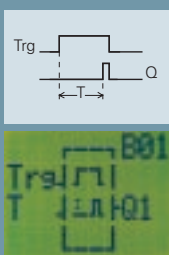


# Preprogrammed: The eight basic functions

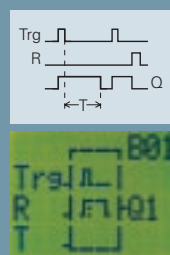


## The 22 integrated special functions:

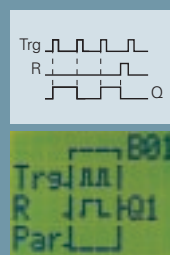
ON delay



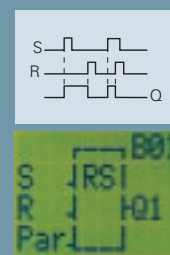
OFF delay



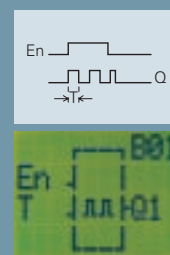
Current impulse



Latching



Clock-pulse generator



# The two: LOGO!Basic and LOGO!Pure



## LOGO!Basic

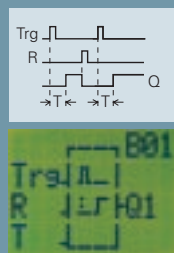
In addition to modularization, there are many other technical innovations:

- Different voltages, i.e. 12 V DC, 24 V AC/DC, 115/230 V AC/DC
  - Can be used for a wide range of applications
- Automatic changeover from daylight savings time to winter time
  - Reduces maintenance overhead
- Password protection
  - Protects your know-how
- 30 integrated, pre-tested functions
  - No additional devices, such as elapsed time counter, are required
- Eight digital inputs (incl. two AIs at 12/24 V DC) and four digital outputs on board

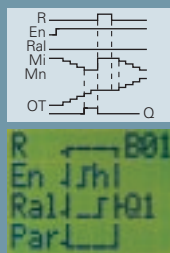
## LOGO!Pure

- Displays of message texts as well as parameters and current values
  - Makes separate display unnecessary
- Integrated data latch
  - Protects current values against loss in the event of a power failure
- Flexibly expandable
  - Protects original investment
  - Suitable for a wide variety of applications
- Software LOGO!Soft Comfort V 3.0 for user-friendly generation of control programs on PC; suitable for a variety of operating systems, such as WIN95, MAC and Linux

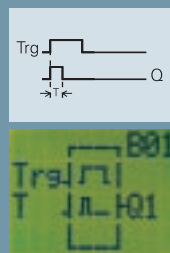
Retentive ON delay



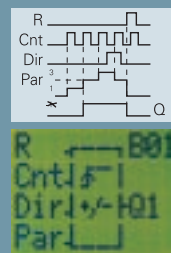
Operating hours counter



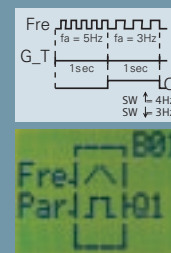
Impulse relay/pulse output



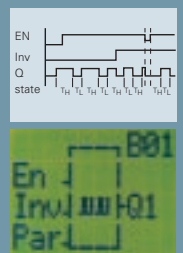
Up and down counter



Trigger



Pulse generator



# The three: LOGO!DM, LOGO!AM, LOGO!CM



## LOGO!DM

Digital modules

Digital input/output expansion module in three versions:

- **DM8 230R**
  - Supply voltage 120/230 V AC/DC
  - Four 120/230 V AC/DC digital inputs
  - Four digital output relays, 5 A per relay
- **DM8 24**
  - Supply voltage 24 V
  - Four 24 V DC digital inputs
  - Four digital output transistors, 0.3 A
- **DM8 12/24R**
  - Supply voltage 12/24 V DC
  - Four 12/24 V digital inputs
  - Four digital output relays, 5 A per relay



## LOGO!AM

Analog module

Analog input expansion module:

- **AM2**
  - Supply voltage 12/24 V DC
  - 0 to 10 V or 0 to 20 mA typ.



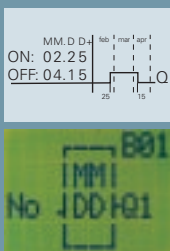
## LOGO!CM

Communications module

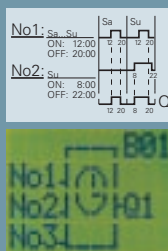
Customized modules are also available for communication:

- **KNX (instabus EIB)**
  - Supply voltage 24 V AC/DC
  - 16 DIs, 12 DOs, 8 AIs
  - DIs/DOs also variable via ETS
- **AS-Interface slave**
  - Supply voltage 24 V DC
  - 4 DIs/4 DOs

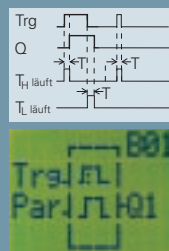
Twelve-month time switch



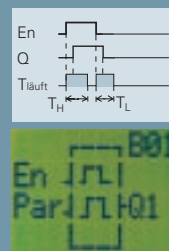
Time switch



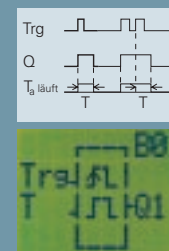
ON/OFF delay



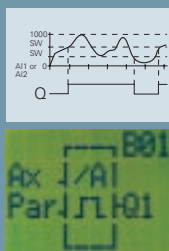
Random-check generator



Edge-triggered interval time-delay relay



Analog trigger



## Well-equipped: The software

User-friendly: LOGO!Soft Comfort programming software, the multi-language programming software for generating, testing, simulating, modifying, archiving and printing control programs on PC.

LOGO!Soft Comfort is a well-structured, user-friendly software package which allows you to generate and modify your control programs.

Connectors, basic functions and special functions are called up via the toolbar, then simply inserted in the control program using drag & drop, making everything completely flexible.

Documenting your programs is easy and user-friendly. Comments can be entered for inputs, outputs and function blocks. A wide variety of print options allow you to create professional-looking documentation.

LOGO!Soft Comfort provides extensive, multi-lingual online help in PDF format. All you need is a PC with a CD-ROM drive and the Microsoft® Windows® 95 operating system or a newer Windows® version or Macintosh/MAC or Linux.



## Ready for anything: The accessories

### 1 LOGO!PC cable

- The simplest direct connection to and from LOGO!
- For easy transfer of LOGO! control programs from and to the PC



### 2 LOGO!Program modules

- Yellow card for duplicating
- Red card for copy protection



### 3 LOGO!Manual

- Detailed information on operating LOGO!
- Descriptions of all integrated functions
- Many practical sample applications



### 4 LOGO!Power: the power supply

For problem-free conversion of 120/230 V AC mains voltage to the relevant operating voltage

- For all 12 V DC and 24 V DC LOGO!s
- Two versions each for different output currents



### 5 LOGO!Contact

Hum-free switching module

- For switching resistive loads up to 20 A
- For direct switching of motors up to 4 kW
- For powerful loads in noise-sensitive environments



### 6 LOGO!Prom

For reproducing program modules

- Copying modules
- Writing into modules using LOGO!Soft Comfort



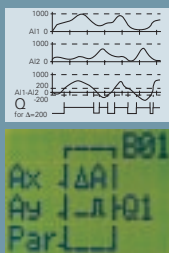
### 7 Front-panel mounting frame

For installation in the switching cabinet door

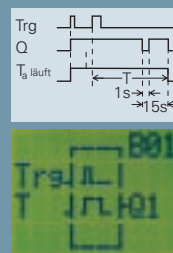
- Front panel with IP 65 protection (IP 30 without insulator disc)



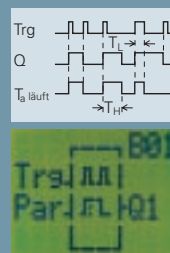
Analog comparator



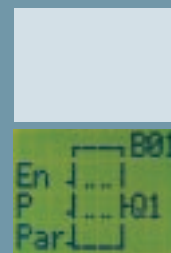
Staircase lighting switch



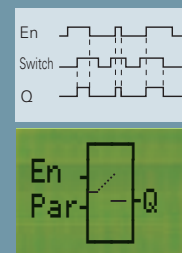
Convenience switch



Message texts



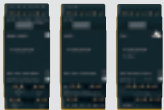
Softkeys



## LOGO! modular – any more questions?



Technical specification	LOGO!12/24RC LOGO!12/24RCo	LOGO!24	LOGO!24RC LOGO!24RCo	LOGO!230RC LOGO!230RCo
Inputs, of these, usable as analog inputs	8 2 (0 to 10 V)	8 2 (0 to 10 V)	8 –	8 –
Input/supply voltage	12/24 V DC	24 V DC	24 V AC	115/240 V AC/DC
Permissible range	12 V: 10.8 V DC to 15.6 V DC 24 V: 20.4 V DC to 28.8 V DC	20.4 V DC to 28.8 V DC	20.4 V AC to 26.4 V AC	85 to 253 V AC/DC
On "0" signal On "1" signal	Max. 5 V DC Min. 8 V DC	Max. 5 V DC Min. 8 V DC	Max. 5 V AC Min. 12 V AC	Max. 40 V AC/30 V DC Min. 79 V AC/79 V DC
Input current	1.5 mA (I1 to I6) 0.1 mA (I7 to I8)	1.5 mA (I1 to I6) 0.1 mA (I7 to I8)	2.5 mA	0.08 mA
Outputs	4 relays	4 transistors	4 relays	4 relays
Continuous current	10 A for resistive load; 3 A for inductive load	0.3 A	10 A for resistive load; 3 A for inductive load	10 A for resistive load; 3 A for inductive load
Short-circuit protection	External fuse required	Electronic (approx. 1 A)	External fuse required	External fuse required
Operating frequency	2 Hz for resistive load; 0.5 Hz for inductive load	10 Hz	2 Hz for resistive load; 0.5 Hz for inductive load	2 Hz for resistive load; 0.5 Hz for inductive load
Power loss	0.1 to 1.2 W (12 V) 0.2 to 1.8 W (24 V)	0.2 to 0.6 W	0.5 to 2.9 W	1.1 to 3.5 W (115 V AC) 2.4 to 4.8 W (240 V AC) 0.5 to 1.8 (115 V DC) 1.2 to 2.4 (240 V DC)
Integrated time switches/ reserve power	8/typ. 80 h	–	8/typ. 80 h	8/typ. 80 h
Connecting cables	2 x 1.5 mm <sup>2</sup> , 1 x 2.5 mm <sup>2</sup>			
Ambient temperature	0 °C to +55 °C			
Storage temperature	–40 °C to +70 °C			
Radio interference suppression	To EN 55011 (limit-value class B)			
Type of protection	IP 20			
Certification	To VDE 0631, IEC 1131, UL, FM, CSA, ship-building certifications			
Installation	On 35-mm DIN rail, 4 WM wide, or wall mounting			
Dimensions	72 (4 WM) x 90 x 55 mm (W x H x D)			



Technical specifications	LOGO! DM8 12/24R	LOGO! DM8 24	LOGO! DM8 230R
Inputs	4	4	4
Input/ supply voltage	12/24 V DC	24 V DC	115/240 V AC/DC
Permissible range	10.8 to 15.6 V DC 20.4 to 28.8 V DC	20.4 to 28.8 V DC	85 to 253 V AC 85 to 253 V DC
On "0" signal	Max. 5 V DC	Max. 5 V DC	Max. 40 V AC
On "1" signal	Min. 8 V DC	Min. 8 V DC	Min. 79 V AC
Input current	1.5 mA	1.5 mA	0.08 mA
Outputs	4 relays	4 transistors	4 relays
Continuous current $I_{th}$ (per terminal)	5 A for resistive load 3 A for inductive load Max. 20 A over all four relays	0.3 A	5 A for resistive load 3 A for inductive load Max. 20 A over all four relays
Short-circuit protection	External fuse required	Electronic (approx. 1 A)	External fuse required
Operating frequency	2 Hz for resistive load 0.5 Hz for inductive load	10 Hz	2 Hz for resistive load 0.5 Hz for inductive load
Power loss	0.4 to 1.2 W at 12 V DC 0.8 to 1.8 W at 24 V DC	0.8 to 1.1 W	1.1 to 3.5 W (115 V AC) 2.4 to 4.8 W (240 V AC) 0.5 to 1.8 W (115 V DC) 1.2 to 2.4 W (240 V DC)
Dimensions (W x H x D)	36 (2 WM) x 90 x 55 mm	36 (2 WM) x 90 x 55 mm	36 (2 TE) x 90 x 55 mm

Technical specifications LOGO! AM2	
Supply voltage	12/24 V DC
Permissible range	10.8 to 15.6 V DC 20.4 to 28.8 V DC
Analog inputs	2
Input range	0 to 10 V or 0 to 20 mA
Resolution	10 bits scaled to 0 to 1000
Cable length (shielded and twisted)	10 m
Sensor supply	None
Power loss for 12 V DC	0.3 to 0.6 W
for 24 V DC	0.6 to 1.2 W
Dimensions (W x H x D)	36 (2 T) x 90 x 55 mm

Technical specifications CM KNX coming soon		CM AS-i (Slave) coming soon
Supply voltage	24 V AC/DC	24 V DC
Permissible range	20.4 to 28.8 V DC 20.4 to 26.4 V AC	19.2 to 28.8 V DC
Digital inputs*	16	4
Analog outputs*	8	–
Digital outputs*	12	4
Dimensions (W x H x D)	2 WM 36 x 90 x 55 mm	2 WM 36 x 90 x 55 mm

\* Mapped to LOGO! inputs/outputs



# LOGO! modular – clear!

## Ordering data

### LOGO! Basic/Pure versions

LOGO! 24 <sup>1) 2)</sup>	6ED1 052-1CC00-0BA3
LOGO! 12/24RC <sup>1) 2)</sup>	6ED1 052-1MD00-0BA3
LOGO! 12/24RCo <sup>1) 2)</sup>	6ED1 052-2MD00-0BA3
LOGO! 24RC <sup>1) 2)</sup>	6ED1 052-1HB00-0BA3
LOGO! 24RCo <sup>1) 2)</sup>	6ED1 052-2HB00-0BA3
LOGO! 230RC <sup>1) 2)</sup>	6ED1 052-1FB00-0BA3
LOGO! 230RCo <sup>1) 2)</sup>	6ED1 052-2FB00-0BA3

### Expansion modules

LOGO! DM8 24	6ED1 055-1CB00-0BA0
LOGO! DM8 12/24R	6ED1 055-1MB00-0BA0
LOGO! DM8 230R	6ED1 055-1FB00-0BA0
LOGO! AM2	6ED1 055-1MA00-0BA0

### Communications modules

LOGO! AS-i*	3RK1 400-0CE10-0AA2
LOGO! KNX (instabus EIB)**	in Vorbereitung

### Optional accessories

LOGO! Manual, German	6ED1 050-1AA00-0AE4
LOGO! Manual, English	6ED1 050-1AA00-0BE4
LOGO! Manual, French	6ED1 050-1AA00-0CE4
LOGO! Manual, Italian	6ED1 050-1AA00-0EE4
LOGO! Manual, Spanish	6ED1 050-1AA00-0DE4
LOGO! Manual, Portuguese	6ED1 050-1AA00-0GE4
LOGO! Program Module, yellow <sup>2)</sup>	6ED1 056-1BA00-0AA0
LOGO! Program Module, red <sup>2)</sup>	6ED1 056-4BA00-0AA0
LOGO! Soft Comfort V3.0	6ED1 058-0BA00-0YC2
LOGO! Soft Comfort Upgrade	6ED1 058-0CA00-0YC1
LOGO! PC cable	6ED1 057-1AA00-0BA0
LOGO! Contact	
24 V switching voltage	6ED1 057-4CA00-0AA0
230 V switching voltage	6ED1 057-4EA00-0AA0
LOGO! Power, 24 V/1.3 A	6EP1 331-1SH01
LOGO! Power, 24 V/2.5 A	6EP1 332-1SH41
LOGO! Power, 12 V/1.9 A	6EP1 321-1SH01
LOGO! Power, 12 V/4.5 A	6EP1 322-1SH01
LOGO! Prom	6AG1 057-1AA01-0AA0
LOGO! Installation Kit	6AG1 057-1AA00-0AA0

<sup>1)</sup> 56 functions combinable

<sup>2)</sup> Subject to export regulations ALN and ECCN; EAR99

\* On request

\*\* Anticipated availability date Feb. 2002

### LOGO! in your vicinity

At all Siemens regional offices, through selected electronics wholesalers, through catalog orders with drop shipping, or on the Internet.

### LOGO! on the Internet

On the Internet you can find products and downloads (such as free demonstration software, software upgrades, preprogrammed applications), news (such as our customer magazine GO!); you can make purchases online (such as LOGO! software, hardware or action packages), and you can go to Service and Dialog for personal support.

[www.siemens.de/logo](http://www.siemens.de/logo)

## Siemens Aktiengesellschaft

Automation and Drives  
Industrial Automation Systems  
P.O. Box 48 48  
D-90327 Nuremberg

[www.siemens.de/logo](http://www.siemens.de/logo)