6 Controllers

6/2 Controllers

6/5 N 360 peak load controllers

For further technical information please refer to the GAMMA building management systems manual or visit our Web site at:

http://www.siemens.de/gamma

Controllers

Selection and ordering data

	MW	Order No.	Price	PG	Weight 1 item	PS*/ P. unit
	(1 MW =18 mm)		1 item		kg	Items
Modular installation devices						
	**N 300 scene module** Using the scene module it is possible to save as many as four different scenes. A scene may consist, for example, of switching/dimming settings for lights and of limit positions for shutters/blinds, which can be called up by pushing a button as and when required. Other data that can be saved in a scene include whether the heating or ventilation system should be switched off, the basic setpoint value for the room temperature be set to a new value, or a new setpoint value for brightness be sent to the constant light control system. As many as eight group addresses assigned to four scenes can be saved per scene module.					
	1	**5WG1 300-1AB01**		030	0.092	1
	**N 301 logic module** The logic module gates binary signals that can be sent and received by means of telegrams. Three application programs are currently available • AND operations, OR operations • 4 inverters • telegram reproduction.					
	1	**5WG1 301-1AB01**		030	0.092	1
	**N 302 time module** The time module is used to control the timing of binary signals that can be sent and received by means of telegrams. Application program: • 4 inputs, 4 outputs, • Inverting possible • ON/OFF delays, • Stairwell light function (time switch), • Inhibiting of inputs possible					
	1	**5WG1 302-1AB01**		030	0.092	1
	**N 341 event module** The event module is an N-type modular device. The application program manages as many as 255 communication objects. It is possible to program up to 200 event programs, which together can contain as many as 200 event jobs. A module-internal clock, which must be regularly synchronized by a master clock, is used for the time programs. As master clock or time source, there are various time switches (e.g. 5WG1 372-5EY01) or the N 147 ISDN interface (5WG1 147-1AB01), the AP 146 IP interface (5WG1 146-3AB01) or the Touch Manager wave (e.g. 5WG3 583-2AB71) available. The event module manages as many as 125 diary entries/day programs. Together these diary entries/day programs can contain up to 400 timed jobs. Using the event module it is possible to send up to 60 texts, each with as many as 14 characters, to the *instabus* KNX *EIB*.					
	1	**5WG1 341-1AB01**		030	0.092	1

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	MW	Order No.	Price	PG	Weight 1 item	PS*/ P. unit
	(1 MW =18 mm)		1 item		kg	Items
Modular installation devices (Continued)						
	**N 342 dimmer control module** The dimmer control module is an N-type modular device and contains ten mutually independent light controllers that control the indoor lighting in accordance with the outdoor light intensity. For each light controller it is possible to enter a separate brightness characteristic, which is used as the basis for calculating dimming commands that are sent to dimming actuators (e.g. the GE 525 switching/ dimming actuator) for continuous control. The actual value of outdoor light intensity, which is the same for all ten light controllers, is measured and sent to the dimmer control module by the GE 253 brightness sensor. If the dimming setting is changed manually (e.g. by means of a push-button), the corresponding brightness characteristic will be adapted (shifted) to the preferred new indoor light intensity. The original will be reactivated the next time the lighting is switched on/off. Each light controller can also be operated as a 2-point controller with hysteresis, i.e. the indoor lighting is not dimmed but switched on and off in accordance with the outdoor light intensity, e.g. using binary output devices.					
	1	**5WG1 342-1AB01**		030	0.092	1
	**N 343 operating hours and switching operations counter** The N-type modular device can be used to count the operating hours and switching operations of as many as 36 sensor/actuator channels with 1-bit switching objects. For all counter values it is possible to select limit values which enable a corresponding signal to be sent to the *instabus* KNX *EIB* in case of overshooting or undershooting. The operating hours and switching operations counter listens to the switch telegrams for all parameterized channels on the bus or cyclically interrogates channels that have been parameterized for the purpose. The corresponding operating hours value will be updated if an activated channel (or sensor that has issued a switch-on telegram) is detected, and the switching operations count will be increased if there is a change of status from OFF to ON. All counter and limit values can be interrogated or set to any new value during operation. The maximum runtime of the operating hours counters equals approximately 136 years, and as many as 4.3 billion switching cycles can be detected. The Siemens visualization system with matching auxiliary function is required to set and evaluate the counting and limit values. The application program is selected and the specific parameters and addresses issued and transferred to the operating hours and switching operations counter with the help of the ETS (***E****IB* **T**ool **S**oftware).					
	1	**5WG1 343-1AB01**		030	0.092	1
	**N 345 presence-simulation module** The presence-simulation module can record switching, dimming and shutter/blind activities on selected channels (up to 32) and replay them in the same order. A total of approximately 5400 actions can be recorded over a maximum period of 4 weeks. Prerequisite for using the N 345 is the availability of a time source at the KNX *EIB* which cyclically transmits the date and time. As master clock or time source, there are various time switches (e.g. 5WG1 372-5EY01) or the N 147 ISDN interface (5WG1 147-1AB01), the AP 146 IP interface (5WG1 146-3AB01) or the Touch Manager wave (e.g. 5WG3 583-2AB71) available. A weekly cycle is assumed for the recording of telegrams, which means that the module jumps back a period of 1 to 4 weeks for the presence simulation, after which playback of the recorded telegrams begins.					
	1	**5WG1 345-1AB01**		030	0.100	1

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Controllers

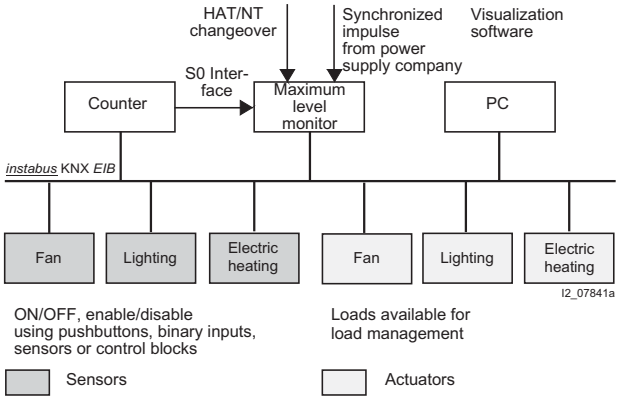
	MW (1 MW =18 mm)	Order No.	Price 1 item	PG	Weight 1 item kg	PS*/ P. unit Items
Modular installation devices (Contd.)						
	**N 347/02 logic operation module** The logic operation module is an N-type modular device that enables the logical linking of binary data. It manages up to 255 1-bit communication objects (group addresses) of type EIS 1, which can be randomly assigned to the inputs or the output of a logic gate. Therefore the user is not tied to a fixed gate size with always the same number of inputs. On the contrary, he can stipulate how many inputs each gate is to have and which logic operation is to be performed. Send conditions, ON/OFF delays or time functions of the gates can be parameterized. The user can assign one of the following functions to a gate: AND, NAND, OR, NOR. The inverting (negating) of binary data can be effected through a NAND or NOR gate with only one input.					
	1	UL	**5WG1 347-1AB02**	030	0.092	1
	**N 350 event schedule logic module** The N 350 event, time program, logic module provides the following features in a compact module unit: • 10 event programs • 100 time switch programs (7-day time switch) and • 10 logic functions for binary input and output signals. Ten event programs, each with up to ten event jobs, are available. Event programs are tripped by corresponding event objects using selectable tripping criteria. Event jobs within an event program can be performed with a delay from the trip time setting. The 7-day time switch provides 100 timed jobs for twenty time objects. Each time job activates or deactivates a time object accurately to the minute at a specific time on one or more days of the week. A module-internal clock, which must be regularly synchronized by a master clock, is used for the time programs. As master clock or time source, there are various time switches (e.g. 5WG1 372-5EY01) or the N 147 ISDN interface (5WG1 147-1AB01) or the AP 146 IP interface (5WG1 146-3AB01) or the Touch-Manager wave (e.g. 5WG3 583-2AB71) available. Ten logic gates, each with up to six inputs and one output, are available. AND, OR, NAND, NOR can be selected as logic for each gate. Each input can be inverted. The moment when the result of a logic gate is transmitted can be parameterized by means of a send condition and send filter.					
	1	UL	**5WG1 350-1AB01**	030	0.092	1
	**N 350 E IP controller** NEW The N 350 E IP controller enables communication with the KNX *EIB* over data networks using the Internet protocol (IP). Up to 80 communication objects can be configured so that they can be used for switching, dimming, moving blinds, for count values, measured values and texts. Using the network connection to a PC, the current values of the communication objects can be visualized and operated with the IPAS ComBridge Studio Software. The device also offers the functions: time switching, event switching, logic and limit value evaluation. The integrated realtime clock can be set locally, over bus or synchronized over the data network and is buffered for a minimum of two years in the event of a power failure. Connection to the KNX *EIB* is established over a bus terminal. Connection to the data network (IP over 10BaseT) is over an RJ45 socket. In order to operate, the IP controller also requires an 24 V AC/DC power supply, which is fed in over a second terminal module. The IP Controller supports the*EIB*net/IP standard so that the bus can be accessed from a PC over an IP network. The software required for parameter assignment over the network is included in delivery on CD-ROM free of charge. Power supply: 12 V to 36 V AC/DC Number of time switch programs: 100 Number of event programs: 200 Number of logic gate: 10 Number of objects: 80					
	4	UL	**5WG1 350-1EB01**	030		1

* You can order this quantity or a multiple thereof.

N 360 peak load limiter

Overview

- Adjustable power limit from 30 kW to 1000 kW
- Adjustable warning limit from 25 kW to 1000 kW
- Adjustable integration period for determining the average power value of 15, 30 and 60 minutes
- Adjustable cycle time for load extrapolation intervals of 15, 30, 60, 120 and 240 seconds
- Up to 120 switching channels can be controlled
- Adjustable switching priorities per channel from 1 to 10
- Inputs
  - S0 interface for optionally potential-free contacts or S0 interface according to DIN 43864 or 62053-31
  - Power supply company synchronized pulse, optionally 230 V AC or potential-free
  - High tariff/low tariff switching, optionally 230 V AC or potential-free
  - High tariff/low tariff switching can also be performed using the *instabus* KNX *EIB*.
- Indicators
  - Operating voltage
  - BUS voltage
  - Status channel 1 to 8
  - Indication of the actual time interval within the integration period
  - Missing synchronization pulse



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Application

The peak load limiter effectively suppresses potential peak loads – and hence unnecessary costs. Once the process is suitably configured, the power reserves provided can be considerably reduced.

The peak load limiter requires a counter with an S0 interface. If no synchronized pulse is available from the power supply company, the peak load limiter adopts an asynchronous calculating mode.

Another requirement for operating the peak load limiter is the availability of a master clock, which the monitor needs for the synchronization of its internal software clock. As master clock or time source, there are various time switches (e.g. 5WG1 372-5EY01) or the N 147 ISDN interface (5WG1 147-1AB01) or the AP 146 IP interface (5WG1 146-3AB01) or the Touch Manager wave (e.g. 5WG3 583-2AB71) available.

Loads/consumers are switched off or on again on the basis of a defined maximum average power value.

Operational switching by the user always has top priority, which means that the peak load limiter can only draw on operationally activated loads.

Each load can be inhibited and enabled again by the accordingly assigned bus sensor, i.e. this load is not available to the peak load limiter for switching when inhibited.

Parameterization per channel

- Heat output
- Switching priority (1 to 10)
- Minimum operating interval
- Minimum break time
- Maximum break time
- Number of permissible switching cycles per 24 h.

Selection and ordering data

	Auxiliary voltage U_c	MW	Order No.	Price	PG	Weight 1 item	PS*/ P. unit
	V AC	(1 MW =18 mm)		1 item		kg	Items
Modular installation devices							
	**N 360 peak load limiter** Bus connection through data rail and in addition through bus terminal. Terminal can be used as connector. Voltage is supplied through an integrated power supply unit.						
	230	4	**5WG1 360-1AB01**		030	0.267	1
Statistics							
	The performance statistics software for the peak load limiter is available free of charge on the Internet at http://www.siemens.de/gamma.						

* You can order this quantity or a multiple thereof.

N 360 peak load limiter

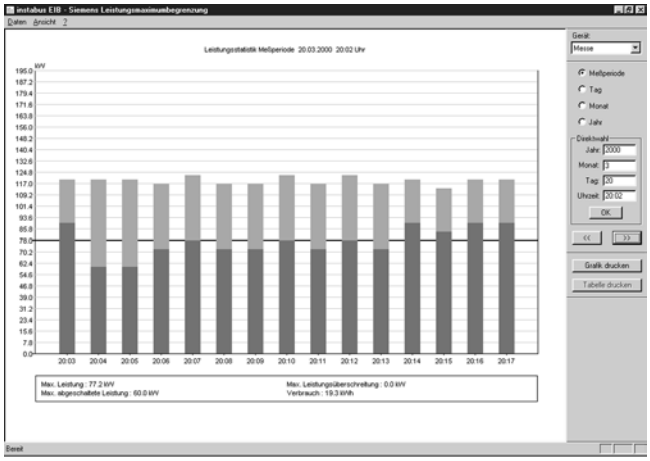
Accessories

Statistics

The performance statistics software enables the setting of measuring period, day, month and year statistics, which can then also be exported to Excel in order to carry out additional evaluations. The peak load limiter used as a measuring unit records the load curves. It is therefore possible to produce statistics – essential if the customer wants to negotiate lower-cost contracts with his power supply company.
The statistics of an integration period of 15 minutes normally show:

- Bright and dark: the power demand (incl. base load)
- Bright: the cut-off power
- Dark: the enabled power (incl. base load).

Typical: The small power undershooting at the beginning of the integration period and the small power overshooting at the end. This results in a balanced ratio over the integration period as a whole.



The evaluation "Day characteristic" shows individual integration periods. The cut-off power and the enabled power reflect the power demand of all the consumers. Power overshooting is inevitable when consumers are switched by hand. In spite of changes to the power demand the peak load limiter limits the enabled power and thus prevents overshooting of the permissible limit value.

Hardware requirements

Personal computer (PC)

- Type: IBM compatible
- Processor type: Pentium P5 133 MHz or higher
- Main memory (RAM): 32 MB
- Graphics card: at least 256 colors
- Operating system: Windows 95/98/98Me/NT/2000.
- Interfaces
  - for connection of *instabus* KNX *EIB*: a serial interface (RS 232)
  - for connection of pressure: a parallel interface