



Environmental product declaration

DESIGO I/O module range

Product	Device type	PT...1... (Europa) PT...6... (USA)
	Designation	I/O modules and accessories
	Product range	DESIGO I/O modules
Process control	Siemens Building Technologies AG Gubelstrasse 22, CH-6301 Zug	
	Management system certified	since by
	ISO 14001 (environment)	20 Oct. 1998 BSI
	ISO 9001 (quality)	22 July 1986 BSI
Product use	Typical energy consumption per year	see the following pages
	Environmental benefits	see notes on the last page
	Maintenance	none
Environmental risk (fire)	Fire protection as per	EN 60 730 (PT...1...) UL 916 (PT...6...)
	Fire load	see the following pages
	Parts containing halogens (result in corrosive smoke)	circuit boards with components some plastics
Packaging	Paperboard, cardboard boxes, paper	see the following pages
	Notes on disposal	can be recycled – marked on packaging

1. I/O modules general (without PTM6.1PSI20-M)

Materials		total weight of device (*)	95...180 g
Plastics	PC GF10	module housing	37 g
	PC transparent	module front and light guide	13 g
	PC	terminal housing (Eur)	40 g
	PBT FR(17)	terminal housing (USA)	47 g
	PC GF10	address plug and plate	2 g
Metals	CuSn, tin-plated	contact springs in base (*)	3...7 g
	St4 zinc-plated, passivated	clamping body in base (*)	3...8 g
	St zinc-plated, chromated	terminal screws M3x8,6 (*)	2...4 g
Pcb with comp.	FR4, contains halogens, SnPb solder	PCB module housing (*)	20... 73 g
Special comp.	Relays, AgSnO ₂ , AgNi (only for switching and positioning modules)	on the circuit board (*)	(15...30 g)
	PA66 GF25 FR(11) / CuZn37 Zn-plated	plug-in terminal, PCB (*)	(5...10 g)
	PA66/CuAg2 F45 tin and gold plated	5-pole connector, PCB	(2 g)
Packaging	Gray cardboard	push lock bottom box	33 g
Energy consump.	Typical energy consumption per year	depends on module type (*)	4...37 kWh
Fire load		depends on module type (*)	3...4 MJ

Comments

- (*) Weights vary according to the module, information in the following tables.
- Component weights given in parentheses are included in the weight of the circuit board.
- The total weight of a device can deviate from the sum of the weights of all its individual components due to rounding.

1.1 PTM1...D... / PTM6...D...signaling modules

Type PTM1.../6...	2D20	2D20S	4D20/4D20R	2D42/2D250	8D20
Total weight	118 g	142 g	136 g	122 g	146 g
PCB with components	20 g	34 g	28 g	27 g	40 g
Clamping body, 1 g	4 g	8 g	8 g	4 g	8 g
Terminal screws	2 g	4 g	4 g	2 g	4 g
Contact springs	3.5 g	7 g	7 g	3.5 g	7 g
Plug-in terminals, 5 g	5 g	10 g	10 g	5 g	10 g
Consumption kWh/year	4.2	26	28	4.2	37

1.2 PTM1... R/P/U//C... / PTM6... R/P/N/U//C... measuring and counting modules

Type PTM1.../6...	2R1/2P1K	4R1K/2P100	2N100K	2U10	2I25/2I420	2C
Total weight (PTM6 +7g)	125 g	145 g	132 g	140 g	150 g	128 g
PCB with components	28 g	36 g	24 g	34 g	42 g	29 g
Clamping body, 1 g	4 g	8 g	4 g	6 g	6 g	4 g
Terminal screws	2 g	4 g	2 g	3 g	3 g	2 g
Contact springs	3.5 g	7 g	3.5 g	5 g	5 g	3.5 g
Plug-in terminals, 5 g	5 g	10 g	5 g	10 g	10 g	5 g
Consumption kWh/year	2.1	2.1/ 4	4.2	3	6.5	4.2

1.3 PTM1... Q... / PTM6... Q...switching modules

Type PTM1.../6... (PTM6 +7 g)	2QD	2QD-M	2Q250 2Q250B	2Q250-M	4QD	4QD-M2	3Q-M3	4Q250-P 4Q250A-P	4Q250-P3
Total weight in g	130	138	95/107	158	143	163	166	180	176
PCB with components	30	38	41/58	53	41	59	59	68	73
Clamping body, 1 g	3	3	6	6	6	6	5	8	6
Terminal screws	1.5	1.5	3	3	3	3	2.5	4	3
Contact springs	2.5	2.5	5	5	5	5	4	7	5
Plug-in terminals, 5 g	5	5	10	10	10	10	10	10	10
Relay, 7.5 g	15	15	31	15	15	15	22.5	30	30
Consumption kWh/Y	4.2	13	4/17.5	22	8.4	13	22	22	11

1.3 PTM1...Y... / PTM6...Y... positioning modules, electrical

Type PTM1.../ 6...	2Y10S	2Y10S-M	4Y10S	2Y420	2Y250T	2Y250T-M
Total weight (PTM6 +7 g)	142 g	146 g	144 g	140 g	160 g	162 g
PCB with components	35 g	36 g	36 g	32 g	53 g	56 g
Clamping body, 1 g	6 g	6 g	8 g	4 g	5 g	5 g
Terminal screws	3 g	3 g	4 g	2 g	3 g	3 g
Contact springs	5 g	5 g	7 g	3.5 g	4 g	4 g
Plug-in terminals, 5 g	10 g	10 g	10 g	5 g	10 g	10 g
Relays, 7.5 g	----	----	----	----	15 g	15 g
Consumption kWh/year	29	29	20	20	4.2	13

1.4 PTM6.1PSI20-M positioning module, pneumatic

Materials		total weight of device	338 g
Plastics	PC GF10	module housing	37 g
	PC transparent	module front and light guide	14 g
	POM	slider on module front	1 g
	PC GF10	address plug and address plate	2 g
	PBT	terminal base and blind plate	37 g
	PC GF10	transducer unit housing	20 g
	NBR nitrile rubber	seal housing/transducer	1 g
	NBR nitrile rubber	seal transducer/cover	2 g
	Q silicone rubber	seal base/logic plate	<1 g
	PUR	pneumatic tube ¼ "	5 g
Metals	Cast Zn, chromated	transducer plate	92 g
	Steel, zinc-plated chromated	seal plate of transducer unit	46 g
	Spring steel CrNi17/7, gold-plated	switching and contact springs	< 1 g
	CuZn	pneumatic connectors	8 g
	Steel, zinc-plated chromated	4 screws on transducer base	2 g
	Steel, black oxide finish	2 adjustment screws	2 g
	Steel, zinc-plated chromated	8 screws at transducer housing	8 g
	Steel, zinc-plated chromated, 2.5x8 mm	4 screws on logic plate	2 g
	Steel, zinc-plated	3 screws on circuit board	2 g
Circuit board with components	FR4, contains halogens, SnPb solder	circuit board in module housing	42 g
Special components	PA66/CuAg2-F45	5-pole connector	(2 g)
Packaging	Cardboard	box	37 g
Energy consumption	Typical energy consumption per year		31 kWh
Fire load			4,5 MJ

1.5 PTM5...V01 / PTE-ASED.20 interface modules

Type PTM1...	PTM50.16V01 PTM50.32V01	PTM52.16V01 PTM52.32V01	PTM59.20V01 (PTM1.RS232)	PTE-ASED.20
Total weight	147/161 g	138 g	137 g	140 g
PCB with components	47/54 g	40 g	40 g	42 g
Clamping body, 1g	4/8 g	3 g	4 g	3 g
Terminal screws, 0.5 g	2/4 g	1.5 g	1.5 g	1.5 g
Contact springs	3.5/7 g	2.5 g	3.5 g	2.5 g
Plug-in terminals, 5 g	5/10 g	5 g	5 g	5 g
Consumption kWh/year	35	35	35	35

2. PTX... I/O module accessories

2.1 PTX1... (Eur), PTX6... (USA) I/O bars

Materials		total weight of the I/O bar (*)	ca. 580 g/m
Plastics	PBT FR(17)	plastic framework (*) end covers	ca. 410 g/m 4 g
	PBT polyester film	adhesive tape, narrow and wide (*)	ca. 1g /m
Metals	CuZn37 F44 nickel-plated/gold-plated on one side	5 conductor rails extra-low voltage (*)	ca. 120 g/m
	CuZn37 tin-coated/nickel sublayer	2 conductor rails mains voltage (*)	ca. 70 g/m
Packaging	Corrugated cardboard, slide box	depending on type of bar (*)	40 g/m
Fire load		depending on type of bar (*)	12.5 MJ/m

Materials (*) depending on the type

PTX1... / PTX6...	.2	.3	.5	.6	.8	per m	per module
Length with end pieces	261 mm	389 mm	517 mm	645 mm	901 mm	-----	32 mm
Total weight	152 g	226 g	300 g	374 g	522 g	578 g	18.5 g
Plastic framework	104 g	157 g	209 g	262 g	366 g	408 g	13 g
Conductor rail, SELV	30 g	46 g	61 g	76 g	106 g	118 g	4 g
Conductor rail, mains	16 g	25 g	33 g	41 g	58 g	67 g	2 g
Adhesive tapes	0.2 g	0.4 g	0.5 g	0.6 g	0.8 g	0.9 g	0.03 g
Packaging for 10 bars	118 g	168 g	224 g	257 g	392 g	40 g	1.5 g
Fire load in MJ, approx.	3 MJ	5 MJ	6.5 MJ	8 MJ	11 MJ	12.5 MJ	0.4 MJ

2.2 PTX1.01 module supply block

Materials		total weight	90 g
Plastics	PA66	housing bottom	38 g
	PC	upper part of housing	22 g
Metals	Steel, zinc-coated/chromated	8 cylinder-head screws M3x9	4 g
	St, zinc-coated, chromated	1 oval head screw M4x16	2 g
	St4, zinc-coated/passivated	8 clamping bodies	8 g
	CuSn, bronze band	fuse holder, solder lug on PCB	(8 g)
Pcb with comp.	FR4, contains halogens, SnPb solder	PCB with connectors	20 g
Special components	PA66/CuAg2-F45	2 x 5-pole connector, PCB	(4 g)
	CuZn nickel-plated/glass	2 microfuses 5x20 mm	1 g
Packaging	Cardboard tuck bottom box	for 5 supply terminal blocks	65 g
Fire load	Fire load		ca. 2.5 MJ

2.3 PTX1.00 / PTX1.02 mains supply blocks

Materials		total weight	35 g
Plastics	PA66	housing	32 g
Metals	Steel, zinc-plated, chromated	1 cylinder head screw M3x9	<1 g
	Steel, zinc-plated, chromated	1 oval head screw M4x16	2 g
	St4 zinc-plated/passivated	1 clamping body	1 g
	SnBz 6h VSn, bronze band	contact spring	2 g
Packaging	Cardboard tuck bottom box	for 10 mains supply blocks	65 g
Fire load			ca.1 MJ

2.4 PTG1... / PTG6... sets of address plugs

Materials			
Plastics	PC GF10	set of address plugs 16 pcs. weight per I/O module	ca. 30 g ca. 2 g
Packaging	Cardboard	tuck bottom box for 2 sets	20 g
Fire load	Fire load	per set of address plugs per I/O module	ca. 1.5 MJ ca. 0.1 MJ

2.5 PTX1.070 terminal label holder

Material

Plastics	PC	terminal label transparent	0.5 g
Packaging	PE	flat bag for 100 pcs.	2 g

2.6 PTP1.10 blank labels

Material

Paper	Colorsript matt, light gray 120g/m ²	A4 sheet for 8 I/O modules per I/O module	7.5 g 1 g
Packaging	Corrugated cardboard	box for 250 A4 sheets	135 g

3. PHM1.36TL status display unit

Materials

		total weight of device	220 g
Plastics	ABS	front of housing	40 g
	PA	8 distance bushings	1 g
	PBT, transparent foil 0.2 mm	covers, labeling field and circuit board	3 g
	PVC, foil 1 mm	back of circuit board cover	8 g
	Q, HTV silicone rubber	switch pad	6 g
	Metals	CrNi steel sheeting, 0.5 mm	housing base
CrNi spring steel, 0.8 mm		mounting bracket	8 g
Steel, nickel-plated		1 screw M3x0.8	1 g
Steel, nickel-plated		4 screws 2.5x0.6	2 g
CrNi steel sheeting, 2 mm (separate accessory)		bar PHZ1.01, for panel face mounting of several devices	34 g
Circuit boards with components		FR4, containing halogens, SnPb solder	circuit board with terminals and miniature coding switch
Special components	PA66, CuZn/CuSn/St zinc-plated	4-pole connecting terminal, on circuit board	(5 g)
Packaging	Cardboard, paper	box	50 g
		mounting instructions	9 g
Energy consumption	Typical energy consumption per year		8 kWh
Fire load			ca. 3 MJ

4. General notes on the I/O module system

4.1 Disposal



Do not dispose of the devices as part of standard household garbage, but as special waste from electrical and electronic components. This particularly applies to electronic circuit boards.

Additionally, the law may mandate special treatment for specific components or special treatment may be ecologically sensible.

Observe all local and applicable laws.

4.2 Environmental benefits

- As part of a building automation and control system, the I/O module system plays an important role in operating the building's technical installations according to requirements, efficiently and with optimized energy consumption.
- The modular design of the I/O range means that there are virtually no unused IOs, which results in material and energy savings.
- An installed system can be easily expanded and in the event of a service call, any I/O module that needs to be replaced represents a small unit.
- The P-bus connection between I/O modules and the automation station reduces cabling to a minimum.
- Remote P-bus for the I/O modules allows decentralized connection of plant parts with the resulting high savings in line material.
- The robustness and high quality of the module range guarantees long lifetimes.
- Protection of investment for later expansions to new SIEMENS modular systems through upward compatibility and the inclusion of existing hardware in new product ranges (migration).
- The plastics used for housing, bases, I/O bars and accessories do not contain – according to the certification of the manufacturer – additives containing silicone nor are separating agents containing silicone used in their production (Exceptions: silicone seal <1 gram in the PTM6.1PSI20-M pneumatic module.)

4.3 Comment

- The silicone rubber mats were treated at 200 °C for 2 hours. The plastic parts were manufactured without silicone containing separation agents.

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The above information may be inaccurate or incomplete. Siemens Building Technologies Ltd. therefore does not assume liability for any error or for any consequences which may arise from the use of this information to the maximum extent under the law.

If you require further information on environmental aspects and disposal, contact your local Siemens branch office.