SIEMENS

Climatix™

Climatix extension module 15 I/Os

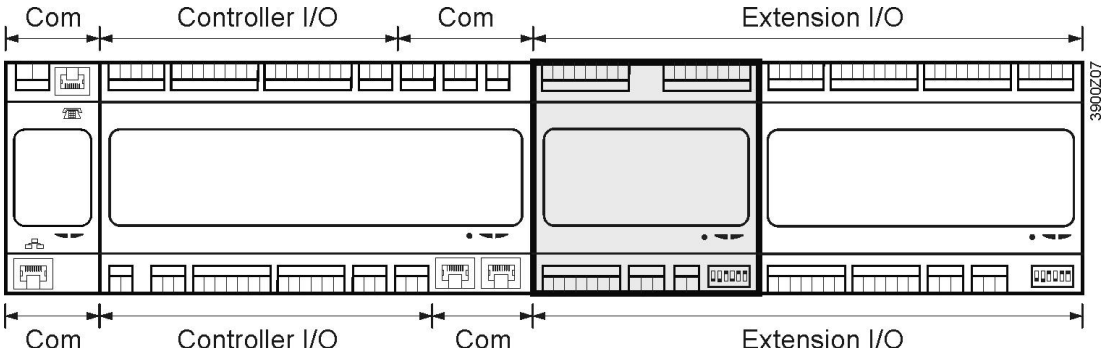
POL965.00/STD

The POL965.00/XXX extension module extends the I/O numbers of Climatix 600 controllers. It is part of the Climatix product range and offers the following features:

- Power supply AC 24 V or DC 24 V
- 8 universal I/Os
- AC 24 V and DC 5 V onboard power supply for active sensors
- 4 relay outputs
- 2 triac outputs (AC 24…230 V)
- 1 digital input galvanically isolated for AC 115/230 V
- Peripheral bus interface for local/remote extension I/Os

Climatix product range

Installation concept



Ordering

Type	Stock number (SSN)	Description	MOQ*
POL965.00/STD	S55663-J650-A100	Extension module 15 I/Os	1
POL096.56/STD	BPZ:POL096.56/STD	Connector set (spring cage, cable top entry)	1
POL096.55/STD	S55843-Z965-F100	Connector set (screw, cable side entry)	1
POL002.43/STD	S55843-Z124-D100	Board-to-wire connector	50

* MOQ: Minimum order quantity

Accessories

Accessory type	Phoenix type
POL096.56/STD	1 x Phoenix FKCT 2,5/2-ST GY7035
	1 x Phoenix FKCT 2,5/3-ST GY7035
	1 x Phoenix FKCT 2,5/7-ST GY7035
	2 x Phoenix FKCT 2,5/8-ST GY7035
	1 x Phoenix ZEC 1,0 / 4-LPV-3,5 GY35AUC2CI1
POL096.55/STD	1 x Phoenix MVSTBW 2,5/2-ST GY7035
	1 x Phoenix MVSTBW 2,5/3-ST GY7035
	1 x Phoenix MVSTBW 2,5/7-ST GY7035
	2 x Phoenix MVSTBW 2,5/8-ST GY7035
	1 x Phoenix ZEC 1,0 / 4-LPV-3,5 GY35AUC2CI1
POL002.43/STD	2 x Phoenix ZEC 1,0 / 4-ST-3,5 GY35AUC1R1,4

Notes

Engineering notes

NOTICE	
!	To ensure protection against accidental contact with relay connections carrying voltages above 42 V_{eff}, the extension module must be installed in an enclosure (preferably a control panel). It must be impossible to open the enclosure without the aid of a key or tool.

AC 230 V cables must be double-insulated against safety extra low-voltage (SELV) cables.

Disposal

This symbol or any other national label indicate that the product, its packaging, and, where applicable, any batteries may not be disposed of as domestic waste. Delete all personal data and dispose of the item(s) at separate collection and recycling facilities in accordance with local and national legislation.
For additional details, refer to Siemens information on disposal.

Technical data

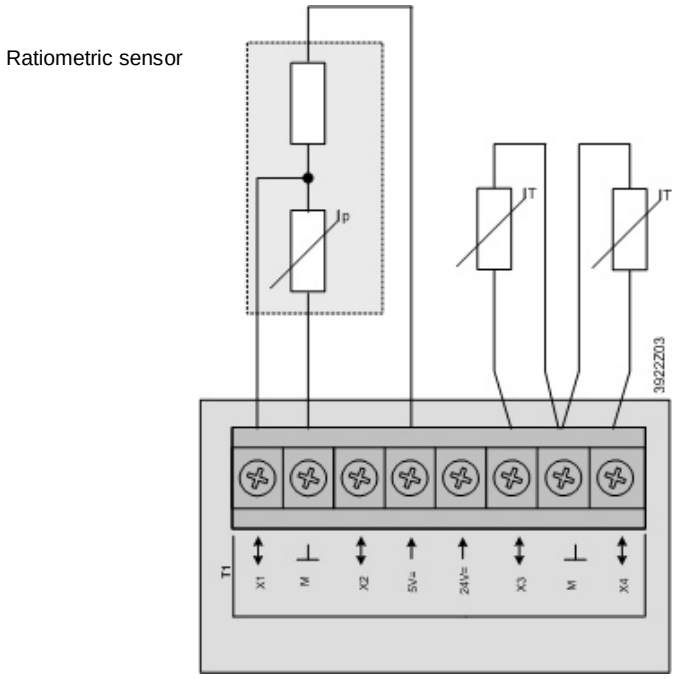
Power supply	
Operating voltage	AC 24 V ± 20 %; DC 24 V ± 10 %
Frequency	45…65 Hz
Max. AC-Current consumption	750 mA
Max. DC-Current consumption	420 mA
Connection	Peripheral bus

Power distribution	
Max. pass through current	3.25 A at AC 24 V 3.58 A at DC 24 V

Universal I/Os X1…X8 (T1, T2)	
Configurable	By software
Reference potential	Terminals ⊥
Contact voltage	Max. DC 24 V (SELV)
Overvoltage protection	Up to 40 V

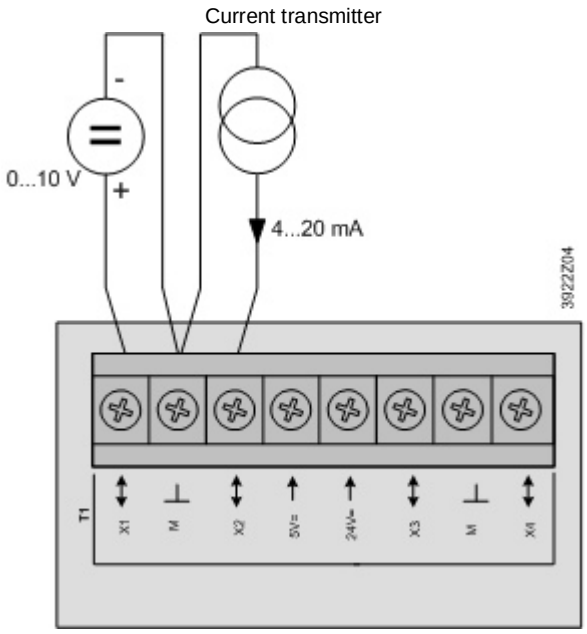
Analog inputs (X1…X8)	
Ni1000	
Sensor current	Max. 1.4 mA
Resolution	0.1 K
Accuracy in the range -50…150 °C	0.5 K
Pt1000	
Sensor current	Max. 1.8 mA
Resolution	0.1 K
Accuracy in the range -40…120 °C	0.5 K
NTC 10k ($B_{25/85}$ = 3977K)	
Sensor current	Max. 140 µA

Analog inputs (X1…X8)		
Temperature range	Accuracy	Resolution
-50…-26 °C	1 K	0.2 K
-25…74 °C	0.5 K	0.1 K
75…99 °C	1 K	0.3 K
100…124 °C	3 K	1 K
125…150 °C	6 K	2.5 K
NTC 100k ($B_{25/85}$ = 3977K)		
Sensor current	Max. 140 µA	
Temperature range	Accuracy	Resolution
-25…-11 °C	3 K	0.2 K
-10…9 °C	1 K	0.1 K
10…99 °C	0.5 K	0.1 K
100...150 °C	1 K	0.2 K
0...2.5 kΩ		
Sensor current	Max. 1.8 mA	
Resolution	1 Ω	
Accuracy	4 Ω	
DC 0…5 V input for ratiometric sensors		
Resolution	1 mV	
Accuracy at 0 V	2 mV	
Accuracy at 5 V	25 mV	
Input resistance	100 kΩ	



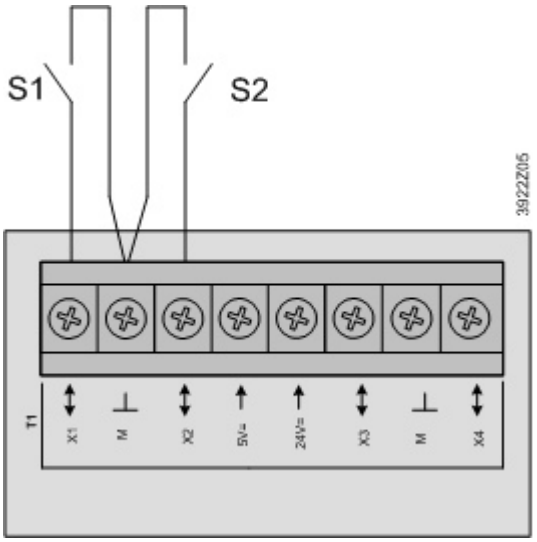
Connecting a ratiometric sensor to universal I/Os
Connecting NTC to universal I/Os

Analog inputs (X1…X8)	
DC 0...10 V input	
Resolution	1 mV
Accuracy at 0 V	2 mV
Accuracy at 5 V	25 mV
Accuracy at 10 V	50 mV
Input resistance	100 kΩ
DC 0/4…20 mA input	
Resolution	1 µA
Accuracy at 4 mA	25 uA
Accuracy at 12 mA	70 uA
Accuracy at 20 mA	120 uA
Impedance of DC 0/4…20 mA input	Typ. 450 Ω



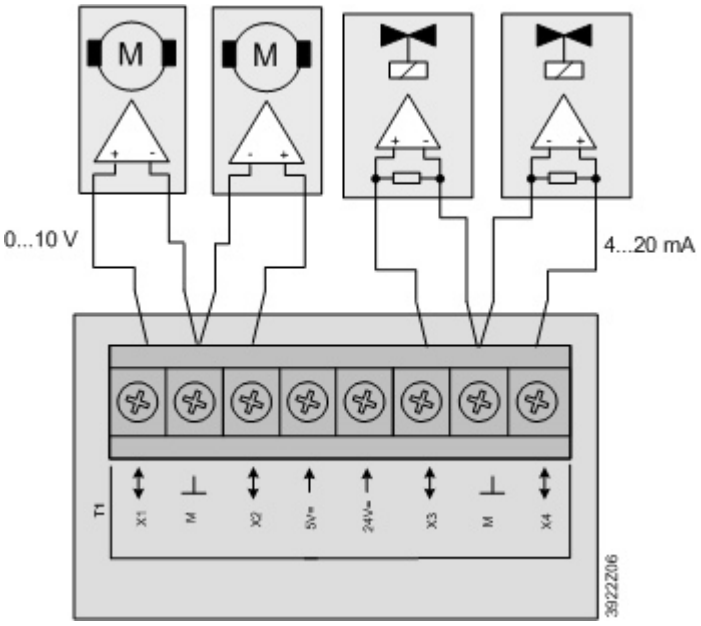
Voltage input DC 0…10 V
Current input 4…20 mA

Digital inputs (X1…X8)	
0/1 digital signal (binary)	For potential-free contacts
Sampling voltage/current	DC 24 V / 8 mA
Contact resistance	Max. 200 Ω (closed) Min. 50 kΩ (open)
Delay	10 ms
Pulse frequency	Max. 30 Hz



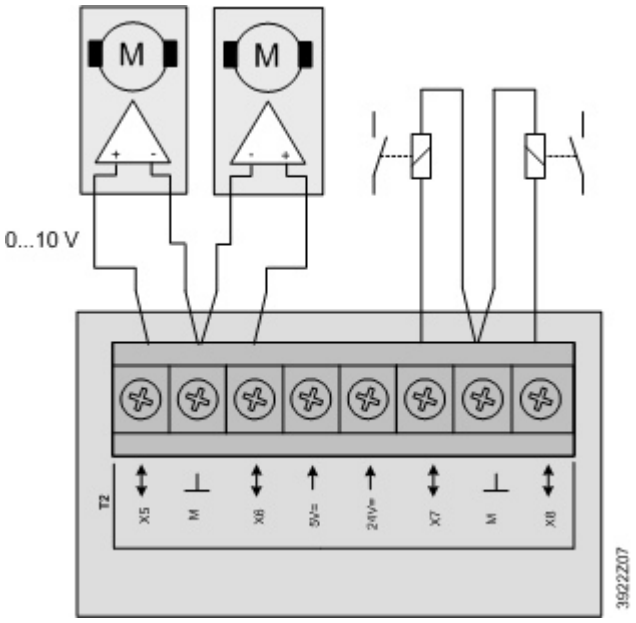
Connecting floating contacts to universal I/Os

Analog outputs (X1…X4)	
DC 0...10 V output	
Resolution	11 mV
Accuracy at 0 V	66 mV
Accuracy at 5 V	95 mV
Accuracy at 10 V	124 mV
Output current	1 mA (short-circuit-proof)
DC 4…20 mA output	
Resolution	22 µA
Accuracy at 4 mA	150 µA
Accuracy at 12 mA	196 µA
Accuracy at 20 mA	243 µA



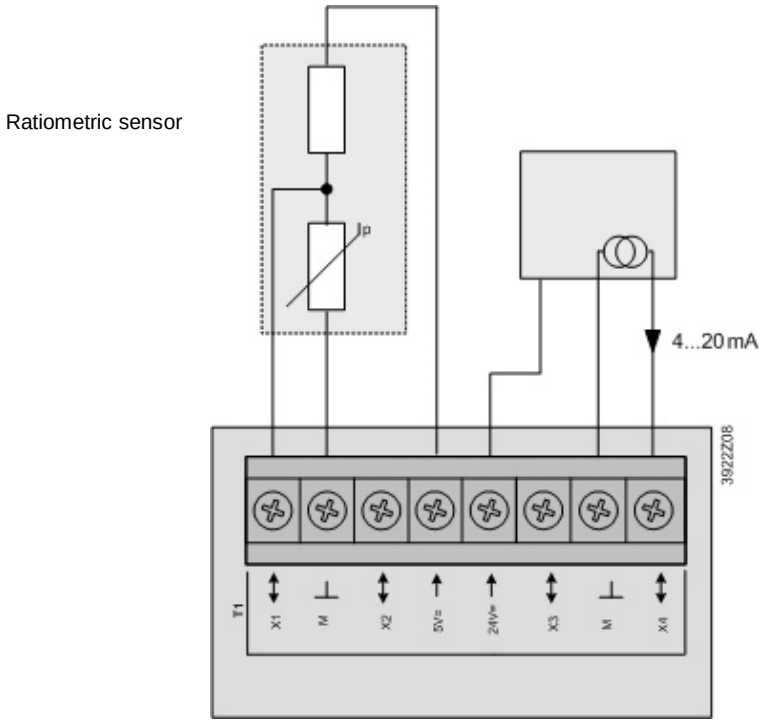
Connecting voltage output and current output to universal I/O

Analog/Digital outputs (X5-X8)	
DC 0…10 V output	
Resolution	11 mV
Accuracy at 0 V	66 mV
Accuracy at 5 V	95 mV
Accuracy at 10 V	124 mV
Output current	1 mA (short-circuit-proof)
DC output for off board loads	
Switching voltage	DC 24 V
Switching capacity	Max. 25 mA



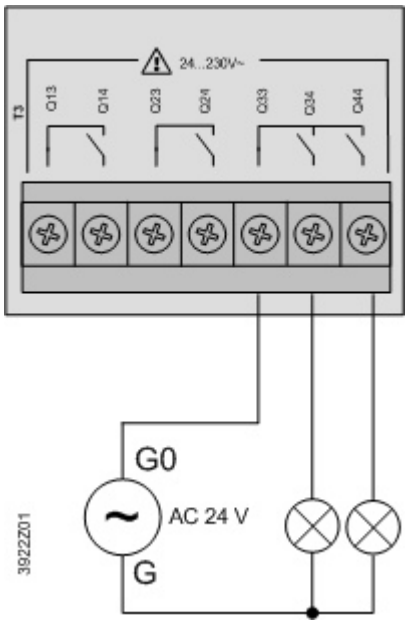
Connecting voltage output and offboard relays to universal I/Os

Powering sensors (active / ratiometric) 5 V, 24 V (T1, T2)	
2 x 2 outputs	
Voltage / current	DC 5 V ± 2.5 % / 2 x 20 mA
Voltage / current	DC 24 V (-25 %, +10 %) / 2 x 40 mA
Reference potential	Terminals ⊥
Connection	Short-circuit-proof



Connecting a ratiometric sensor
AC 24 V sensor supply voltage

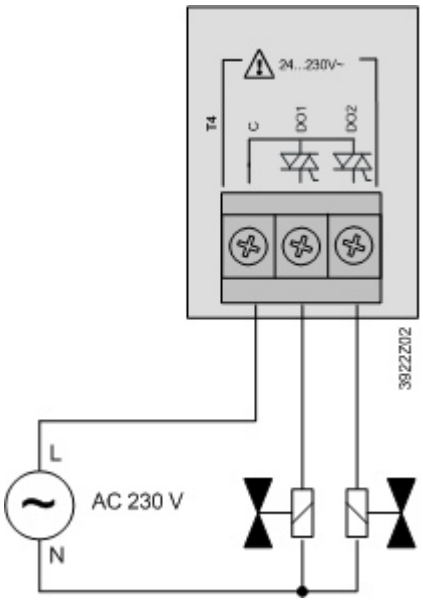
Relay outputs Q1...Q4 (T3)	
Relay: type, contact	Monostable, NO contact
Contact rating	
Switching voltage	AC 24…230 V
Nominal current (res. / ind.)	Max. AC 3 A / 2 A (cosφ 0.6)
Switching current at AC 19 V	Min. AC 30 mA



Connecting indicator lamps to relay outputs

⚠ WARNING	
⚠	Do not mix SELV/PELV and line voltage on the same terminal. Use external protection for inductive load.

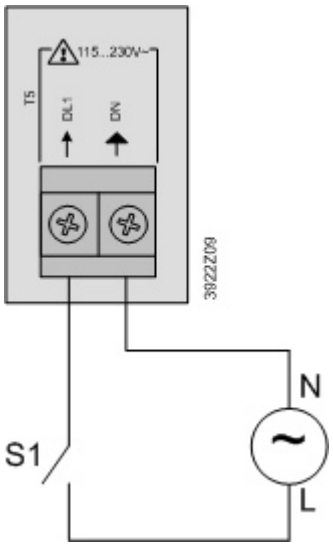
Triac outputs DO1, DO2 (T4)	
Triac output values	
Switching voltage	AC 24…230 V
Switching capacity	Max. 0.5 A
Min. current	10 mA
Max. external supply line fusing	2.0 A slow wire fuse or circuit breaker



Connecting solenoid valves to triac output

⚠ WARNING	
	Do not mix SELV/PELV and line voltage on the same terminal. Use external protection for inductive load.

Digital input DL1 (T5) AV 230 V	
0/1 digital signal (binary)	Galvanically isolated contact
Nominal voltage	AC 115…230 V
Frequency range	45…65 Hz
Sample current	3 mA at AC 230 V
Delay	100 ms
Pulse frequency	Max. 5 Hz



Connecting a AC 230 V signal to a galvanically isolated digital input

Connection terminals	
Optional plugs for I/O signals	Phoenix FKCVW 2,5 / x-ST Phoenix FKCT 2,5 / x-ST Phoenix MVSTBW 2,5 / x-ST
Solid wire	0.5…2.5 mm²
Stranded wire (twisted and with ferrule)	0.5…1.5 mm²
Cable lengths	In compliance with load, local regulations and installation documents

Peripheral bus	
Power supply	U_{eff} = AC 24 V ±20 %, f_{main} = 45...65 Hz or U = DC 24 V ±10 %, no internal fuse
Bus termination selectable	(680 Ω / 120 Ω +1 nF / 680 Ω)
Board-to-board (available on request) Board-to-wire (available on request)	ZEC 1,0 / 4-LPV-3,5 GY35AUC2CI1 ZEC 1,0 / 4-ST-3,5 GY35AUC1R1,4
Solid wire	0.2…1.0 mm²
Stranded wire (twisted and with ferrule)	0.2…1.0 mm²
Cable lengths	Max. 30 m
Addressing	DIP switch 1…5
Termination	DIP switch 6

Ambient conditions and protection classification	
Operation as per IEC 60721-3-3 class 3K5	
Temperature	-40...70 °C
Humidity	<90 % r.h. (non-condensing)
Atmospheric pressure	Min. 700 hPa, corresponding to max. 3,000 m above sea level
Transport as per IEC 60721-3-2 class 2K3/2K4	
Temperature	-40...70 °C
Humidity	<95 % r.h. (non-condensing)
Atmospheric pressure	Min. 260 hPa, corresponding to max. 10,000 m above sea level
Protection	
Degree of protection	IP20 (EN 60529)
Safety class	Suitable for use in plants with safety class II

Standards, directives and approvals	
Product standard	EN 60730-1 Automatic electrical controls for household and similar use
Electromagnetic compatibility (applications)	For use in residential, commerce, light-industrial and industrial environments.
EU conformity (CE)	CB1T3920xx *)
RCM conformity (EMC)	CB1T3909en_C1
Listings	UL916, UL873 http://database.ul.com/ CSA Class 4812 http://www.csagroup.org
Environmental compatibility	The product environmental declaration CB1E3920en contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

*) The document can be downloaded from http://siemens.com/bt/download.

General Data	
Dimensions of controller	108 x 110 x 75 mm
Weight excl. packaging	200 g
Base	Plastic, pigeon-blue RAL 5014
Housing	Plastic, light-grey RAL 7035

Status of LEDs

The status of BSP LED is defined as follows:

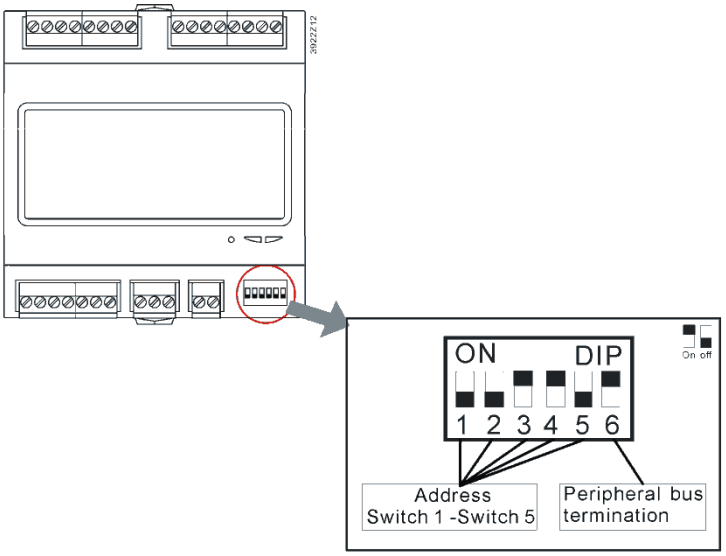
Status	Meaning
Red flashing at 2 Hz	BSP error or address error
Green on	BSP running

The status of BUS LED is defined as follows:

Status	Meaning
Red on	Communication error
Green on	Communication running
Green on and Red on (Yellow)	Communication running but parameter not successfully configured

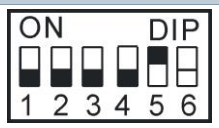
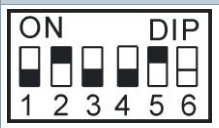
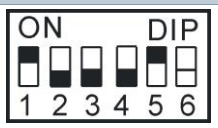
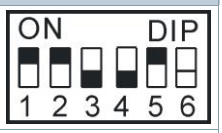
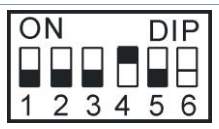
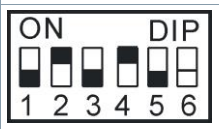
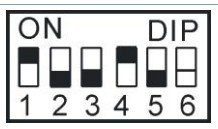
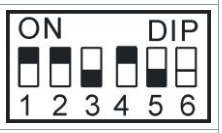
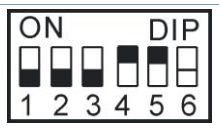
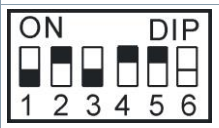
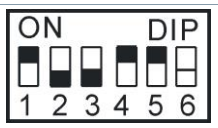
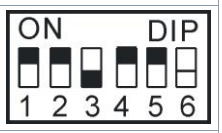
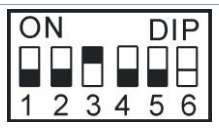
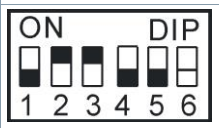
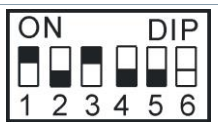
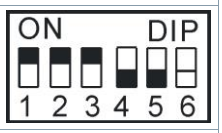
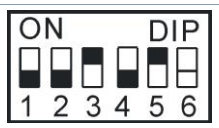
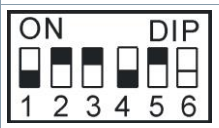
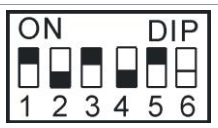
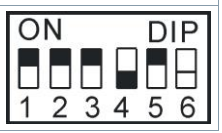
DIP switch

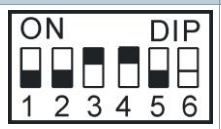
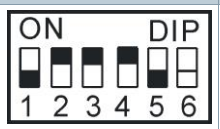
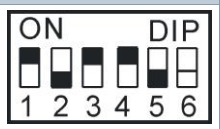
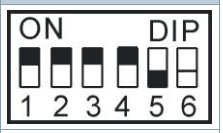
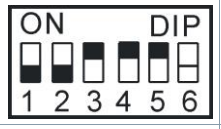
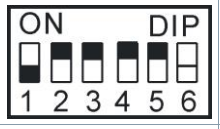
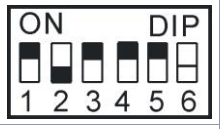
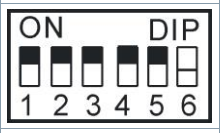
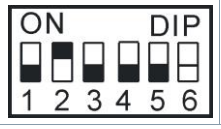
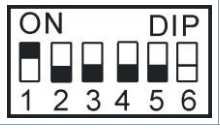
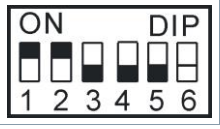
The extension module is equipped with DIP switch to communicate with the controller. Switch 1, 2, 3, 4, and 5 are configurable to set the address, while switch 6 serves as peripheral bus termination. If the extension module works as the termination in the network, switch 6 must be set to ON.



The bit order of DIP switch is from 5 to 1. The lowest bit is 5 while the highest bit is 1. By combining switch 1, 2, 3, 4 or 5, max. 31 addresses can be configured as follows:

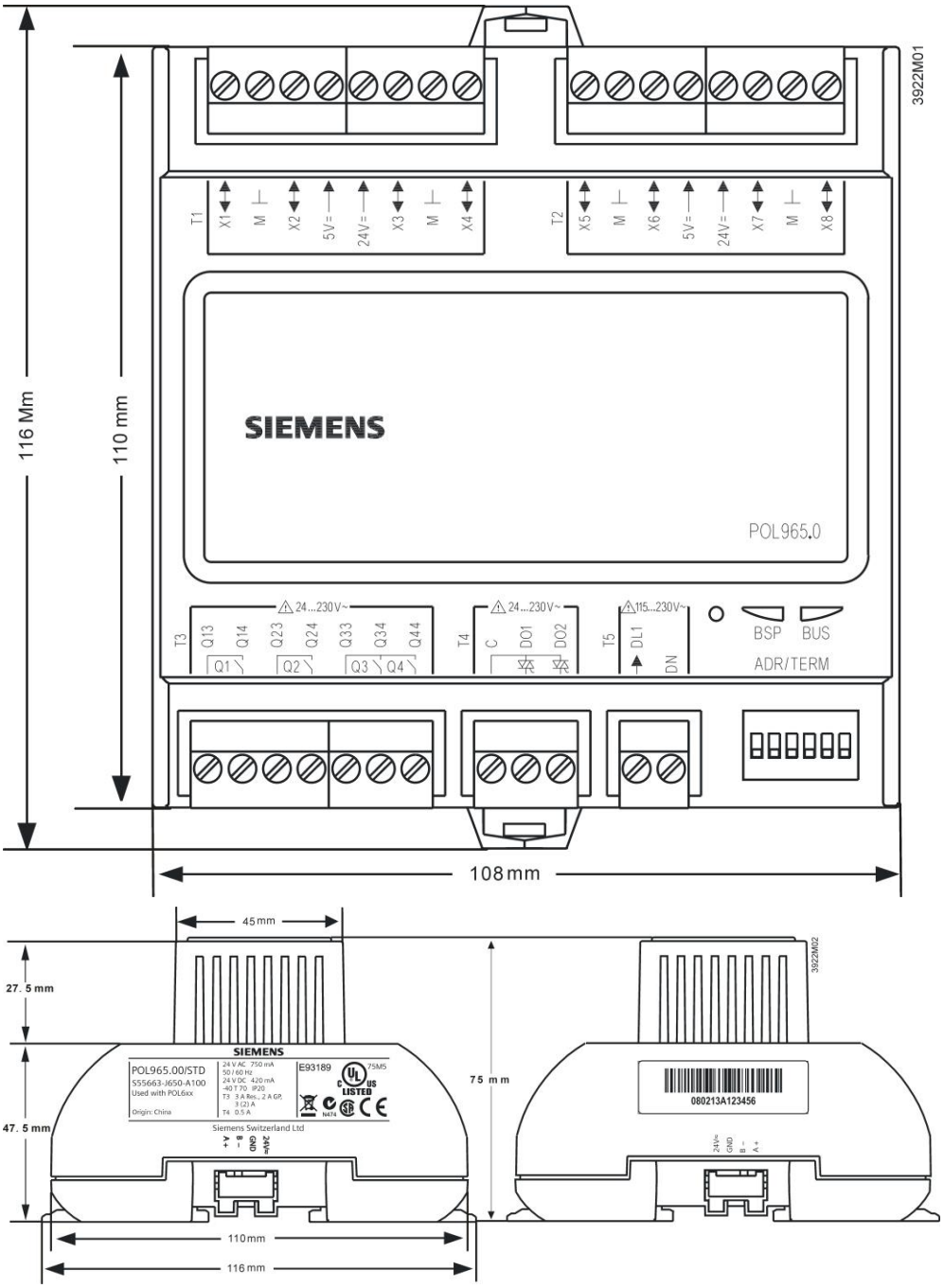
DIP Switch configuration of Extension Module

No.	Schematics	No.	Schematics	No.	Schematics	No.	Schematics
1		9		17		25	
2		10		18		26	
3		11		19		27	
4		12		20		28	
5		13		21		29	

DIP Switch configuration of Extension Module							
No.	**Schematics**	**No.**	**Schematics**	**No.**	**Schematics**	**No.**	**Schematics**
6		14		22		30	
7		15		23		31	
8		16		24			

NOTICE	
!	The same address of extension module must be set respectively in the application program of the controller. 0 cannot be set as the address.

Dimensions (in mm)



Right side **Left side**

Issued by
Siemens Switzerland Ltd
Smart Infrastructure
Global Headquarters
Theilerstrasse 1a
CH-6300 Zug
+41 58 724 2424
www.siemens.com/buildingtechnologies

Document ID CB1N3922en_03

Edition 2024-04-24