

# ORDER FORM

To order the e<sup>2</sup>TANGO-2000 protections, please fill in this part of the form according to the INSTRUCTIONS FOR FILLING IN THE FORM on the next page.

## STEP 1

① panel version	<input checked="" type="checkbox"/> 2000-LRR <sup>3)</sup>
② central unit version	<input checked="" type="checkbox"/> J6 <input type="checkbox"/> J10 <input type="checkbox"/> J14 <input type="checkbox"/> J6H <sup>2)</sup> <input type="checkbox"/> J10H <sup>2)</sup> <input type="checkbox"/> J14H <sup>2)</sup>
③ TR measuring card version	<input type="checkbox"/> TR (standard, 5I+4U) <input checked="" type="checkbox"/> TRS (4I+5U)
④ measuring card parameters	<input checked="" type="checkbox"/> 5 A <input type="checkbox"/> 1 A
⑤ power supply voltage	<input checked="" type="checkbox"/> UNI (110/230 V AC/DC) <input type="checkbox"/> 24 V (24/48 V AC/DC) <input type="checkbox"/> others
Ethernet communication port (standard on each central unit)	
⑥ COM1	<input checked="" type="checkbox"/> x-none <input type="checkbox"/> RS485 <input type="checkbox"/> CANx2 <input type="checkbox"/> OPTOMM <input type="checkbox"/> OPTOP <input type="checkbox"/> Profibus <input type="checkbox"/> others
⑦ COM2	<input type="checkbox"/> x-none <input type="checkbox"/> RS485 <input type="checkbox"/> CANx2 <input type="checkbox"/> OPTOMM <input checked="" type="checkbox"/> OPTOSM <input type="checkbox"/> OPTOP <input type="checkbox"/> Profibus <input type="checkbox"/> others
⑧ installation method	<input checked="" type="checkbox"/> Z - flush <input type="checkbox"/> N1 - surface ver. 1 <input type="checkbox"/> N2 - surface ver. 2 <input type="checkbox"/> N3 - surface ver. 3 <input type="checkbox"/> M - Mixed <input type="checkbox"/> ZR - flush in rack cabinet
⑨ panel-unit cable length	<input checked="" type="checkbox"/> S-1 m <input type="checkbox"/> L-2 m <input type="checkbox"/> other
⑩ IP protection class	<input checked="" type="checkbox"/> IP 4X <input type="checkbox"/> IP 54 <sup>3)</sup>
⑪ Communication IEC 61850	<input checked="" type="checkbox"/> x-none <input type="checkbox"/> 0-ETH fibre optic <input type="checkbox"/> 02-ETH fibre optic with PRP <input type="checkbox"/> 02G-02+G00SE <input type="checkbox"/> E2-electric <input type="checkbox"/> E-ETH electric <input type="checkbox"/> EG-ETH electric+G00SE <input type="checkbox"/> OG-ETH fibre optic+G00SE <input type="checkbox"/> E2G-electric+G00SE

1) the e<sup>2</sup>TANGO-2000-LRR version requires using the OPTOSM communication card in COM2 for communication with the device on the other end of the protected line

2) reinforced W1, W2, W3 outputs

3) protection class IP 54 only available in version with flush and mixed installation

## STEP 2

Card name	Kod	Slot													
		A	B	C	D	E	F	G	H	I	J	K	L	M	N
CPU processor card	-	standard in every device													
PSU power supply card - 7 relay outputs	-	standard in every device													
Ethernet communication port	-	standard in every device													
8 binary inputs	8IN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 binary inputs	12IN	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 binary inputs 24-48 V*	8IN24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 binary inputs 24-48 V*	12IN24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 relay outputs	8OUT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 relay outputs, reinforced	OUTH1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 analogue inputs 0-10 V	AI10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 analogue inputs 4-20 mA	AI20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 analogue outputs 0-10 V	AO10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 analogue outputs 4-20 mA	AO20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 temperature inputs PT100	PT1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 temperature inputs PT1000	PT10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		J6				J10				J14					

\* universal card for voltages between 24-48 V AC/DC

additional requirements:

## STEP 3

Your code:

e <sup>2</sup> TANGO	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪		
A	B	C	D	E	F	G	H	I	J	K	L	M	N

# INSTRUCTIONS FOR FILLING IN THE FORM

## STEP 1

The presented table includes basic technical parameters of the e<sup>2</sup>TANGO-2000 protections. Only 1 item should be selected from each item numbered from 1 to 10. If "other" is selected, enter the ordered value in the corresponding field in STEP 3.

Explanation for step 1.

- recommended basic configuration
- OPTOMM - multi-mode fibre optic
- N1 - surface installation ver. 1
- N2 - surface installation ver. 2
- N3 - surface installation ver. 3

## STEP 2

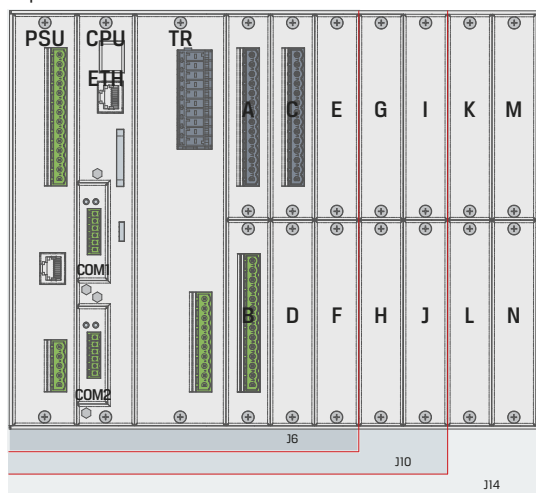
The presented table includes a list of available expansion cards and possible places for their installation in the e<sup>2</sup>TANGO-2000 HV protection central unit. No tick box  means that the given card cannot be installed in a given place. Select the cards to be ordered from the list and mark with the "X" slot in which they are to be installed. The cards' distribution should start with the A slot. The unit capacities are marked with a background colour in the table, respectively.

Explanation for step 2.

- recommended basic configuration
- maximum 4 8OUT cards
- maximum 1 AI10 card or 1 AI20 card
- maximum 1 AO10 card or 1 AO20 card
- maximum 1 PT1 card or 1 PT10 card

Describe additional requirements in the designated area.

View of the central unit with a selection of the slot arrangement for expansion cards



## STEP 3

The above-selected parameters of the e<sup>2</sup>TANGO bay controller should be completed in appropriate fields. The e<sup>2</sup>TANGO code created in such a way together with other requirements or a scanned page of the form should be sent with the order to: [eaz@elektrometal-energetyka.pl](mailto:eaz@elektrometal-energetyka.pl)

Example of the e<sup>2</sup>TANGO-2000 HV protection unit configuration:

① e <sup>2</sup> TANGO-2000-LRR	⑧ mixed installation
② J10 central unit	⑨ 8 m cable
③ TRS measuring card	⑩ protection class IPX4
④ rated current of the measuring card 5 A	⑪ IEC 61850 communication (electric)
⑤ universal binary inputs voltage	A slot A: card 8IN
⑥ RS485	B slot B: card 8OUT
⑦ OPTOSM	C slot C: card 12IN

Example of correct code completion:

e <sup>2</sup> TANGO	2000-LRR	J10	TRS	5A	UNI	RS485	OPTOSM	M	8	IP4X	E
8IN	8OUT	12IN									