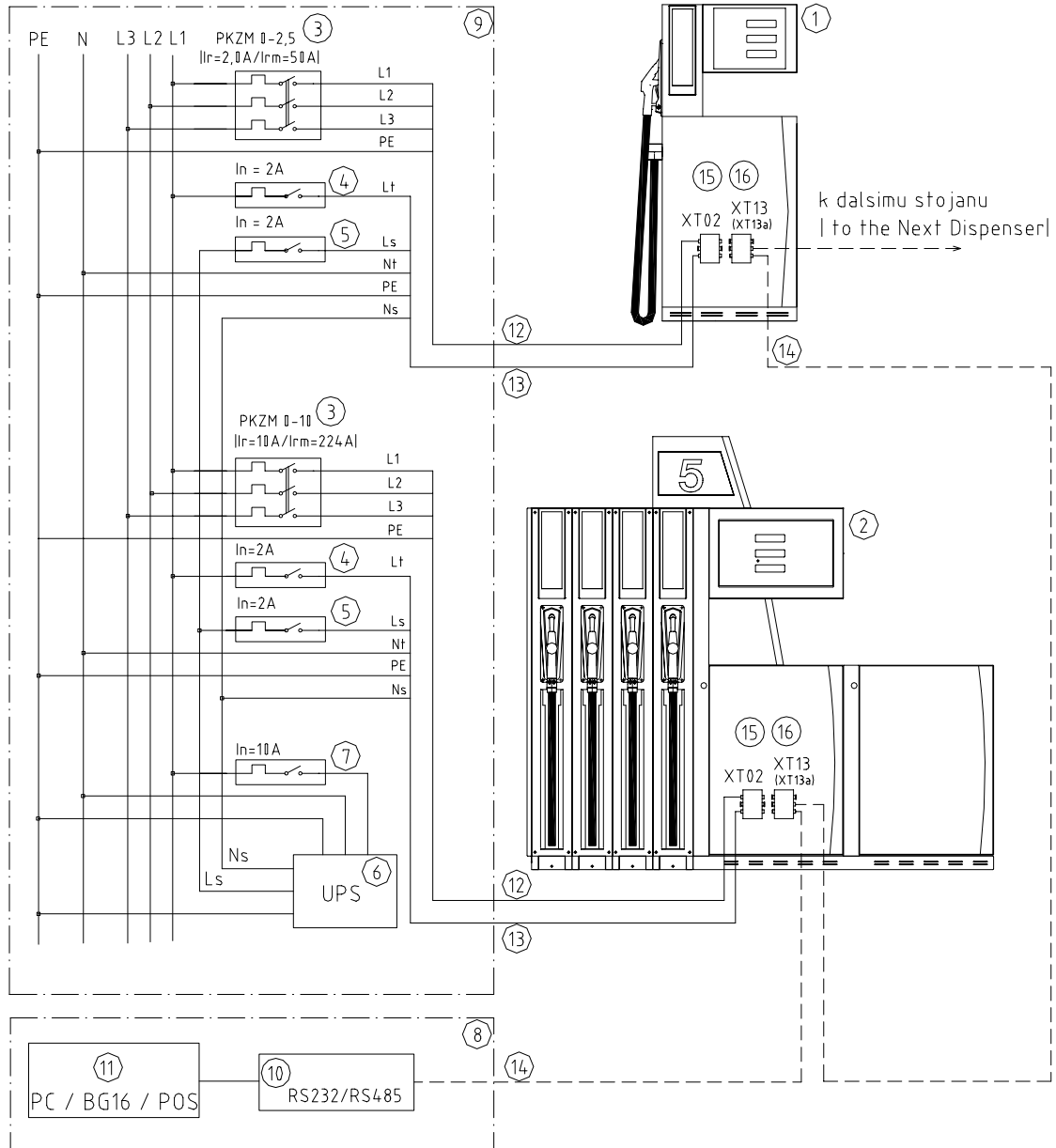


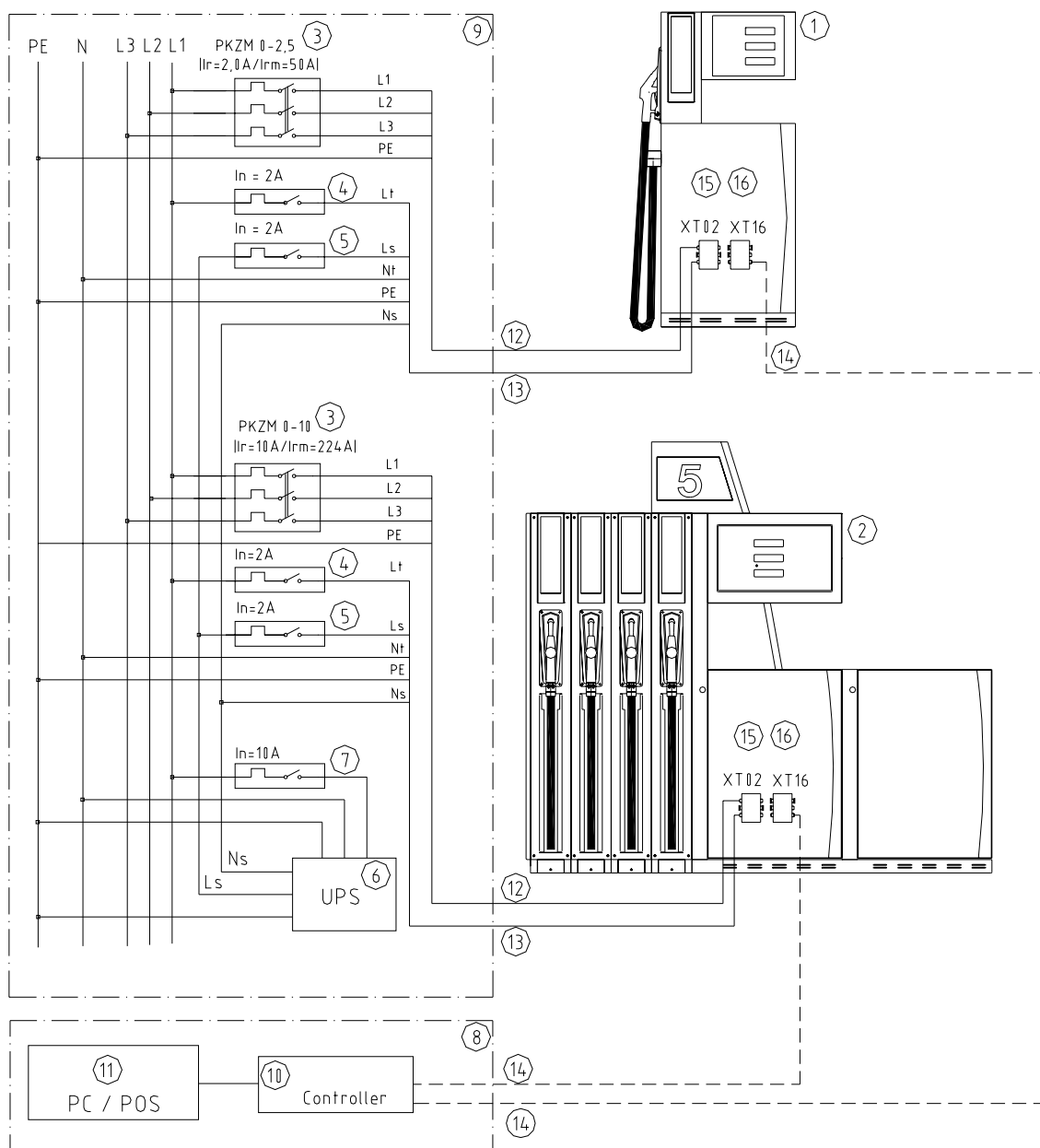
# Appendix G – Electrical schemes

## G.1. Electrical scheme with counters PDE, ADP or IFSF



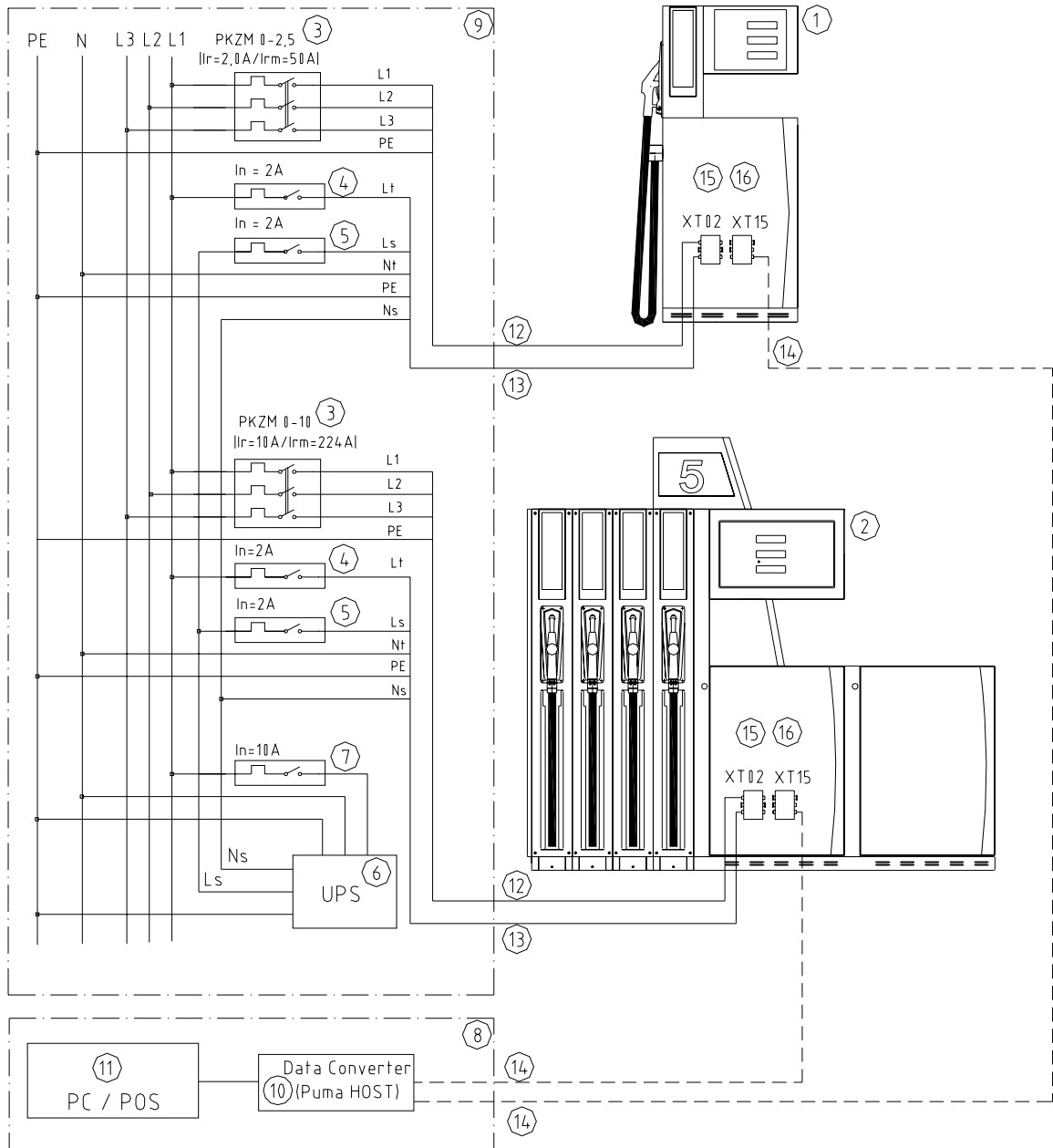
Pos.	Description	Pos.	Description
1	One product dispenser with one electromotor	9	Main power distribution of service station
2	Multiproduct dispenser	10	Data converter (RS485 / RS232)
3	Motor switch with overcurrent circuit breaker	11	Controlling device (PC, controller or console BG16)
4	Overcurrent breaker for switchig elements - In=2A	12	Motor power cable - type CMSM 4B x 1.5
5	Overcurrent breaker for counter - In=2A	13	Counter power cable - type CMSM 5C x 1.5
6	Uninterruptable Power Supply with voltage regulator	14	Data line cable - type CMFM 4D x 1.0
7	Overcurrent breaker for UPS	15	Power distribution box XT02
8	Room of operators (kiosk)	16	Data distribution box XT13 forPDE or IFSF counters (for ADP counters is used box XT13a )

**G.1a. Electrical scheme for pumps with Hectronic ER4  
(or with PDE counter with PDEPRC data converter to ER4 data line)**



Pos.	Description	Pos.	Description
1	One product dispenser with one electromotor	9	Main power distribution of service station
2	Multiproduct dispenser	10	Pump Controller (TMS10, Koppelelectronik,...etc)
3	Motor switch with overcurrent circuit breaker	11	Controlling device (PC, Console, POS)
4	Overcurrent breaker for switchig elements - In=2A	12	Motor power cable - type CMSM 4B x 1.5
5	Overcurrent breaker for counter - In=2A	13	Counter power cable - type CMSM 5C x 1.5
6	Uninterruptable Power Supply with voltage regulator	14	Data line cable - type CMFM 4D x 1.0
7	Overcurrent breaker for UPS	15	Power distribution box XT02
8	Room of operators (kiosk)	16	Data distribution box XT16

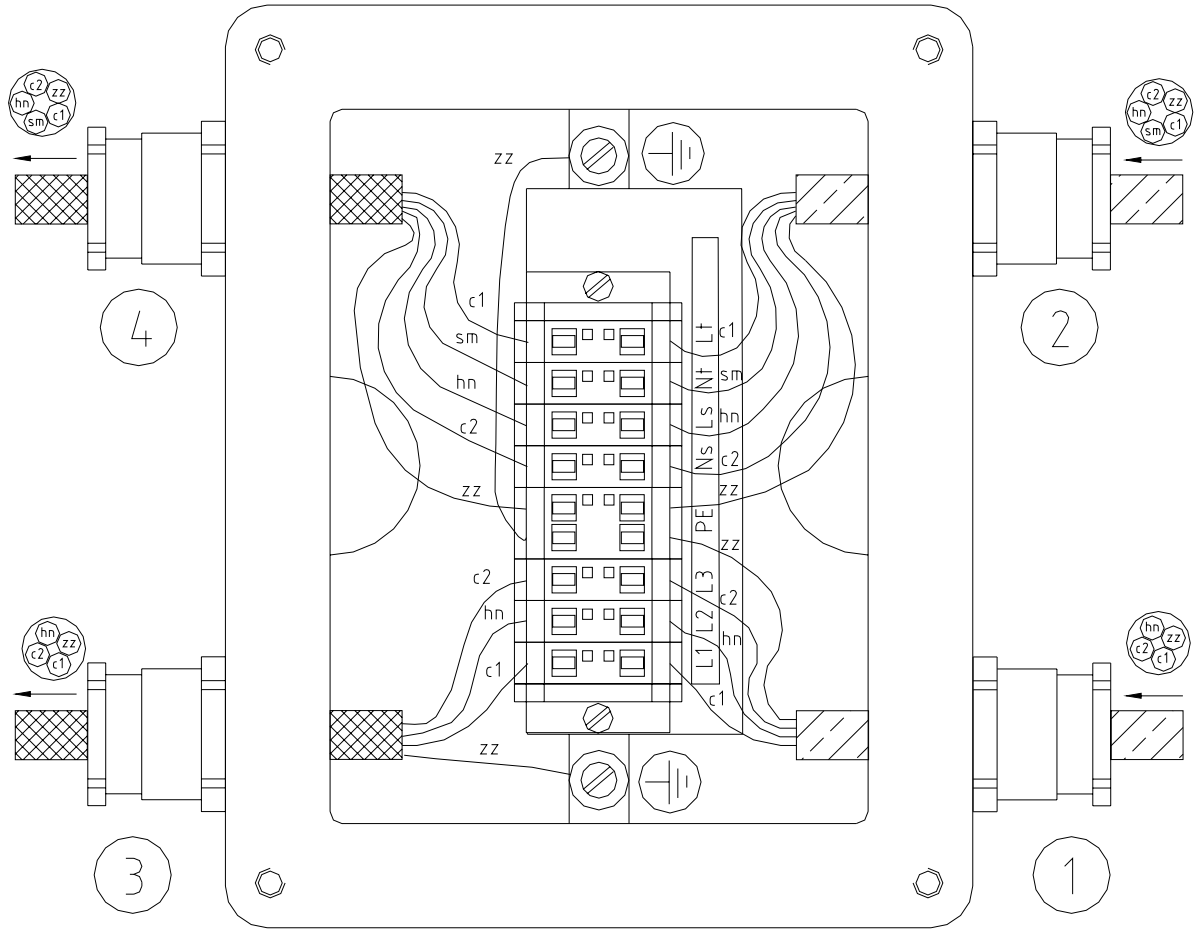
## G.2. Electrical scheme for pumps with counter Logitron (or with PDE counter with PDEPRC data converter to Logitron data line)



Pos.	Description	Pos.	Description
1	One product dispenser with one electromotor	9	Main power distribution of service station
2	Multiproduct dispenser	10	Data converter or device PumaHOST
3	Motor switch with overcurrent circuit breaker	11	Controlling device (PC, controller or console BG16)
4	Overcurrent breaker for switchig elements - In=2A	12	Motor power cable - type CMSM 4B x 1.5
5	Overcurrent breaker for counter - In=2A	13	Counter power cable - type CMSM 5C x 1.5
6	Uninterruptable Power Supply with voltage regulator	14	Data line cable - type CMFM 4D x 1.0
7	Overcurrent breaker for UPS	15	Power distribution box XT02 (XT04 when the original counter Logitron is used)
8	Room of operators (kiosk)	16	Data distribution box XT15



### G.3. Power distribution box scheme - XT01



#### Input

1 Motor Power Supply Cable		
Type: CMSM 4B x 1.5 (recommended)		
Connection: Main distribution <--> XT02		
L1	phase 230V	black1 (c1)
L2	phase 230V	brown (hn)
L3	phase 230V	black2 (c2)
PE	protection earth	green-yellow (zz)

#### Output

3 Motor Power Supply Cable		
Type: CMSM 4B x 1.5		
Connection: XT02 <--> dispenser's counter		
L1	phase 230V	black1 (c1)
L2	phase 230V	brown (hn)
L3	phase 230V	black2 (c2)
PE	protection earth	green-yellow (zz)

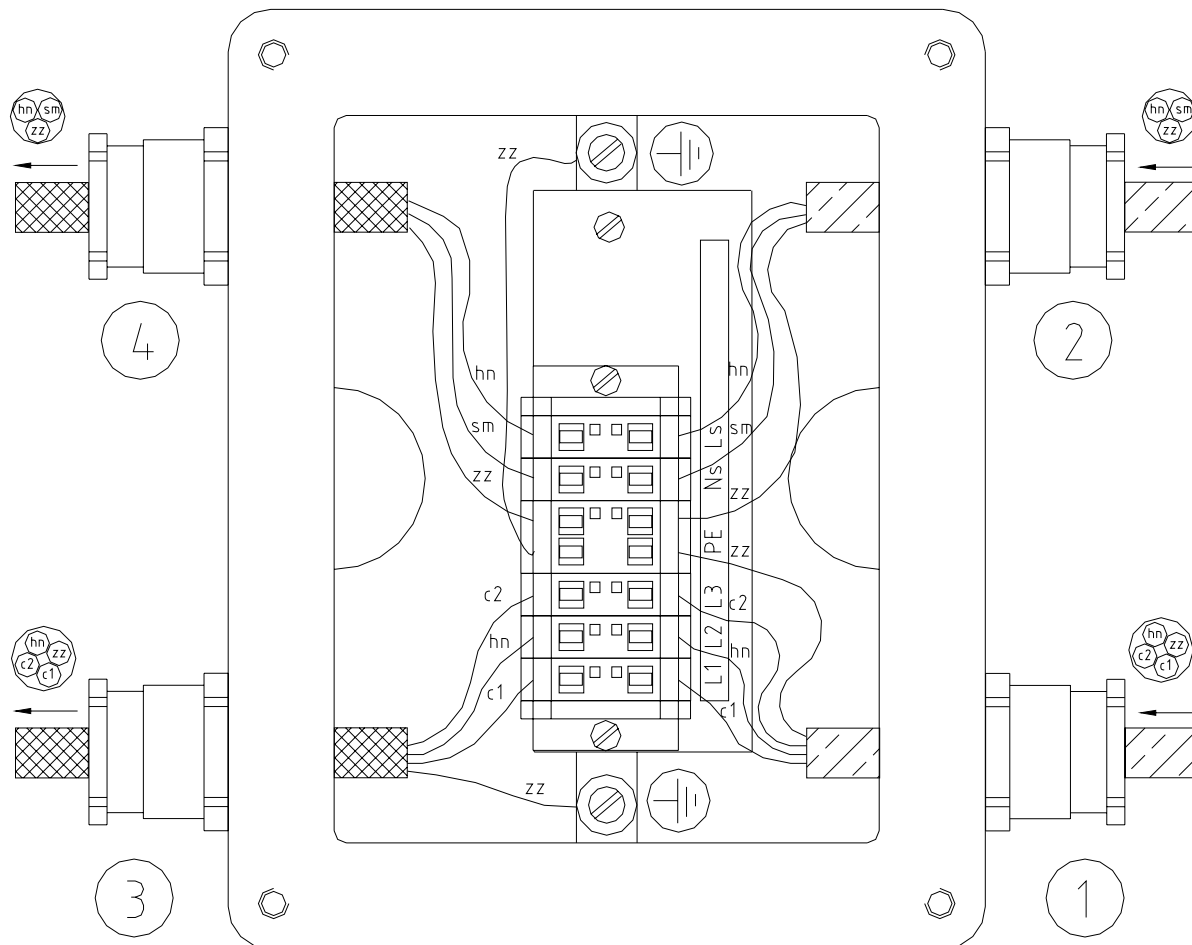
2 Counter Power Supply Cable		
Type: CMSM 5C x 1.5 (recommended)		
Connection: Main distribution <--> XT02		
Ns	neutral wire for counter	black2 (c2)
Ls	stabilized phase 230V for counter	brown (hn)
Nt	neutral wire for switches	light blue (sm)
Lt	phase 230V for switches	black1 (c1)
PE	protection earth	green-yellow (zz)

4 Counter Power Supply Cable		
Type: CMSM 5C x 1		
Connection: XT02 <--> dispenser's counter		
Ns	neutral wire for counter	black2 (c2)
Ls	stabilized phase 230V for counter	brown (hn)
Nt	neutral wire for switches	light blue (sm)
Lt	phase 230V for switches	black1 (c1)
PE	protection earth	green-yellow (zz)

#### Notes:

Distribution box type RK 002/6 is approved Ex II 2G EEx e II T6 with certificate FTZÚ 02 ATEX 0021. Inside box should be used only clamps WAGO type 262-130 and 262-230, that are approved EEx e II. Maximum load of the one clamp is 10A/400V. Allowed wire cross-sections are in range from 0.5 to 2.5 mm<sup>2</sup>. Length of unisolated part of wire is min. 9 mm and max.. 10 mm.

### G.4. Power distribution box scheme - XT04



#### Input

1 Motor Power Supply Cable		
Type: CMSM 4B x 1.5 (recommended)		
Connection: Main distribution <---> XT04		
L1	phase 230V	black1 (c1)
L2	phase 230V	brown (hn)
L3	phase 230V	black2 (c2)
PE	protection earth	green-yellow (zz)

2 Counter Power Supply Cable		
Type: CMSM 3C x 1.5 (recommended)		
Connection: Main distribution <---> XT04		
Ns	neutral wire for counter	brown (hn)
Ls	stabilized phase 230V for counter	light blue (sm)
PE	protection earth	green-yellow (zz)

#### Output

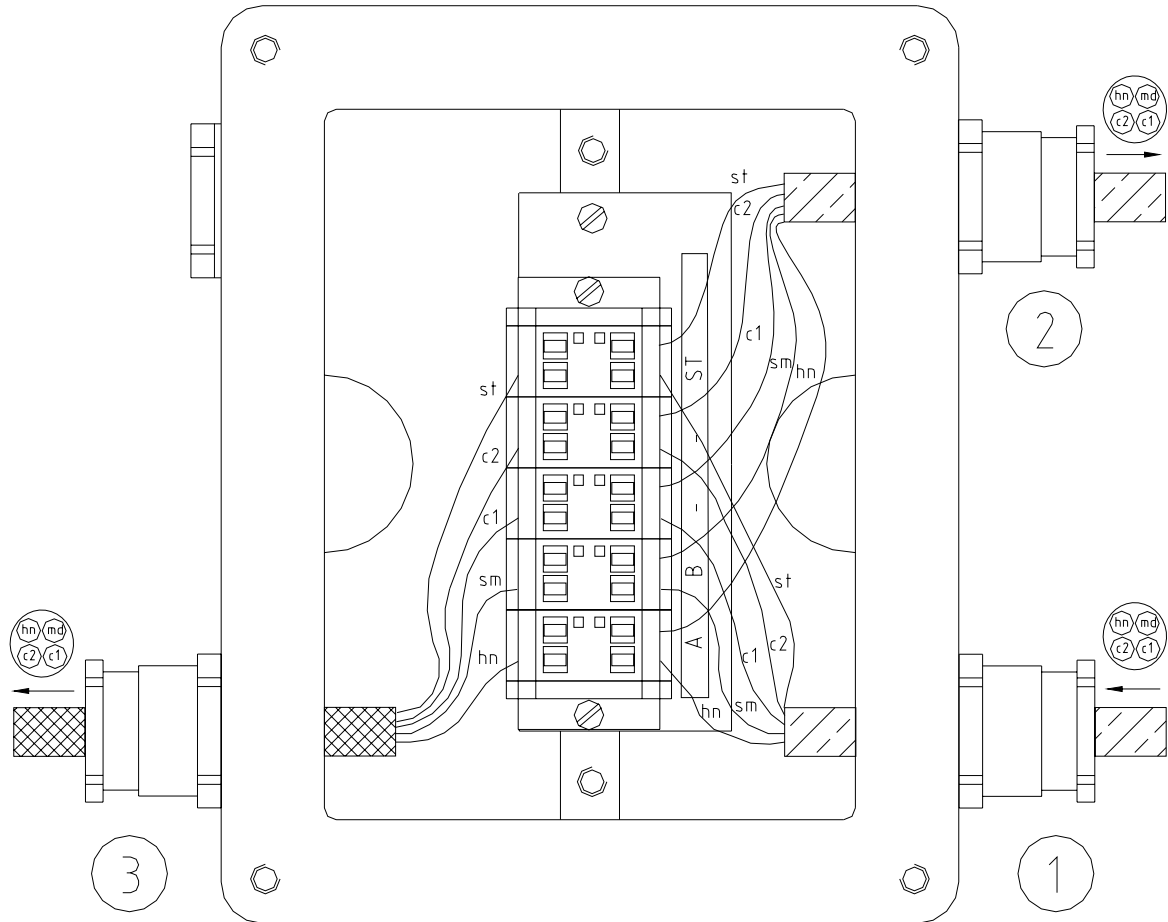
3 Motor Power Supply Cable		
Type: CMSM 4B x 1.5		
Connection: XT04<---> dispenser's counter		
L1	phase 230V	black1 (c1)
L2	phase 230V	brown (hn)
L3	phase 230V	black2 (c2)
PE	protection earth	green-yellow (zz)

4 Counter Power Supply Cable		
Type: CMSM 3C x 1.5		
Connection: XT04<---> dispenser's counter		
Ns	neutral wire for counter	brown (hn)
Ls	stabilized phase 230V for counter	light blue (sm)
PE	protection earth	green-yellow (zz)

**Notes:**

Distribution box type RK 002/6 is approved Ex II 2G EEx e II T6 with certificate FTZÚ 02 ATEX 0021. Inside box should be used only clamps WAGO type 262-130 and 262-230, that are approved EEx e II. Maximum load of the one clamp is 10A/400V. Allowed wire cross-sections are in range from 0.5 to 2.5 mm<sup>2</sup>. Length of unisolated part of wire is min. 9 mm and max.. 10 mm.

## G.5. Data line distribution box scheme - XT13



### Input

1	Shielded Data Line Cable Type: CMFM 4D x 1.0 (recommended) Connection: kiosk/dispenser <--> XT13	
A	Line A	brown (hn)
B	Line B	light blue (sm)
-	not used	black1 (c1)
-	not used	black2 (c2)
ST	shield	shield (st)

### Output

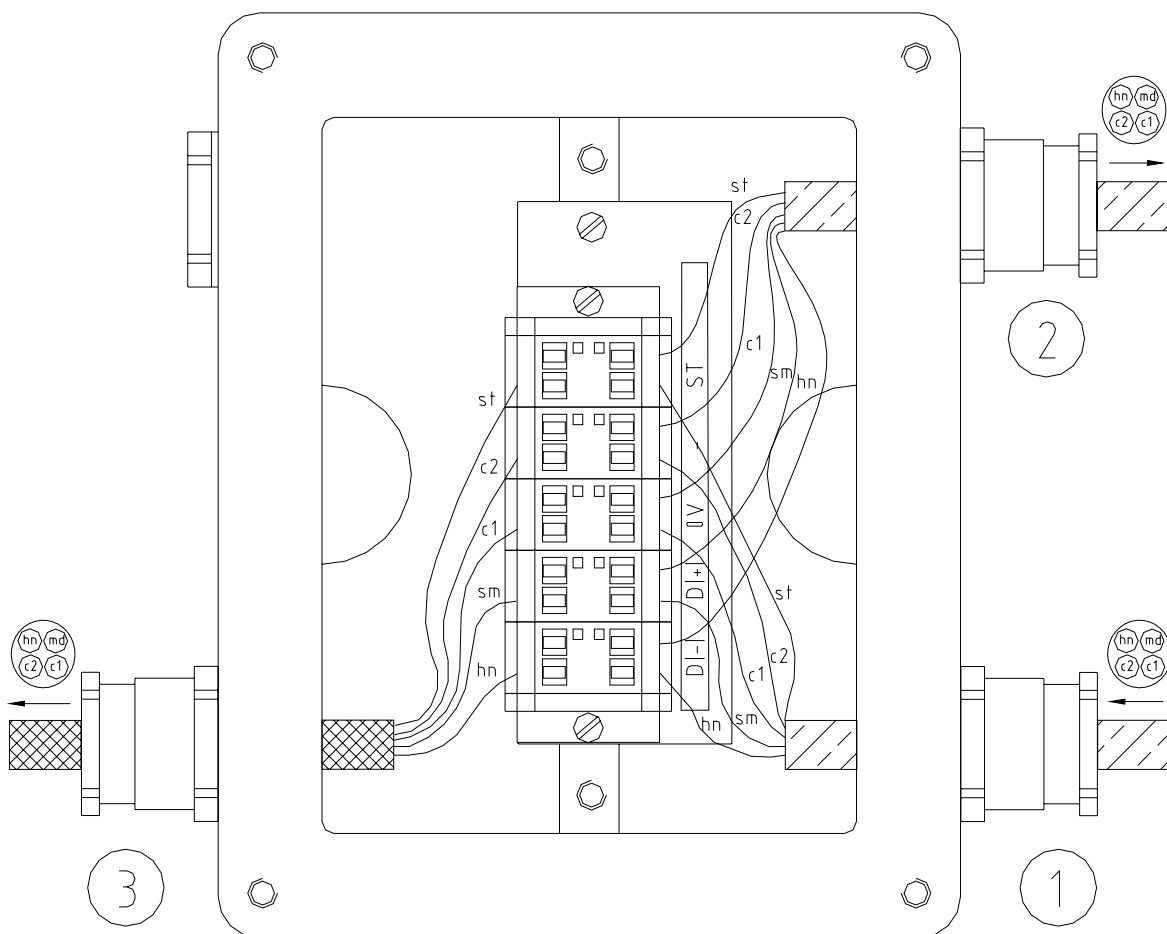
2	Shielded Data Line Cable Type: CMFM 4D x 1.0 (recommended) Connection: XT13 <--> next dispenser	
A	Line A	brown (hn)
B	Line B	light blue (sm)
-	not used	black1 (c1)
-	not used	black2 (c2)
ST	shield	shield (st)

3	Shielded Data Line Cable Type: CMFM 4D x 0.5 Connection: XT13 <--> dispenser's counter	
A	Line A	brown (hn)
B	Line B	light blue (sm)
-	not used	black1 (c1)
-	not used	black2 (c2)
ST	shield	shield (st)

#### Notes:

Distribution box type RK 002/6 is approved Ex II 2G EEx e II T6 with certificate FTZÚ 02 ATEX 0021. Inside box should be used only clamps WAGO type 262-130 and 262-230, that are approved EEx e II. Maximum load of the one clamp is 10A/400V. Allowed wire cross-sections are in range from 0.5 to 2.5 mm<sup>2</sup>. Length of unisolated part of wire is min. 9 mm and max.. 10 mm.

### G.6. Data line distribution box scheme - XT13a



#### Input

1	Shielded Data Line Cable Type: CMFM 4D x 1.0 (recommended) Connection: kiosk/dispenser <--> XT13a	
D(-)	signal DATA(-)	brown (hn)
D(+)	signal DATA(+)	light blue (sm)
0V	signal ground	black1 (c1)
-	not used	black2 (c2)
ST	shield	shield (st)

#### Output

2	Shielded Data Line Cable Type: CMFM 4D x 1.0 (recommended) Connection: XT13a <--> next dispenser	
D(-)	signal DATA(-)	brown (hn)
D(+)	signal DATA(+)	light blue (sm)
0V	signal ground	black1 (c1)
-	not used	black2 (c2)
ST	shield	shield (st)

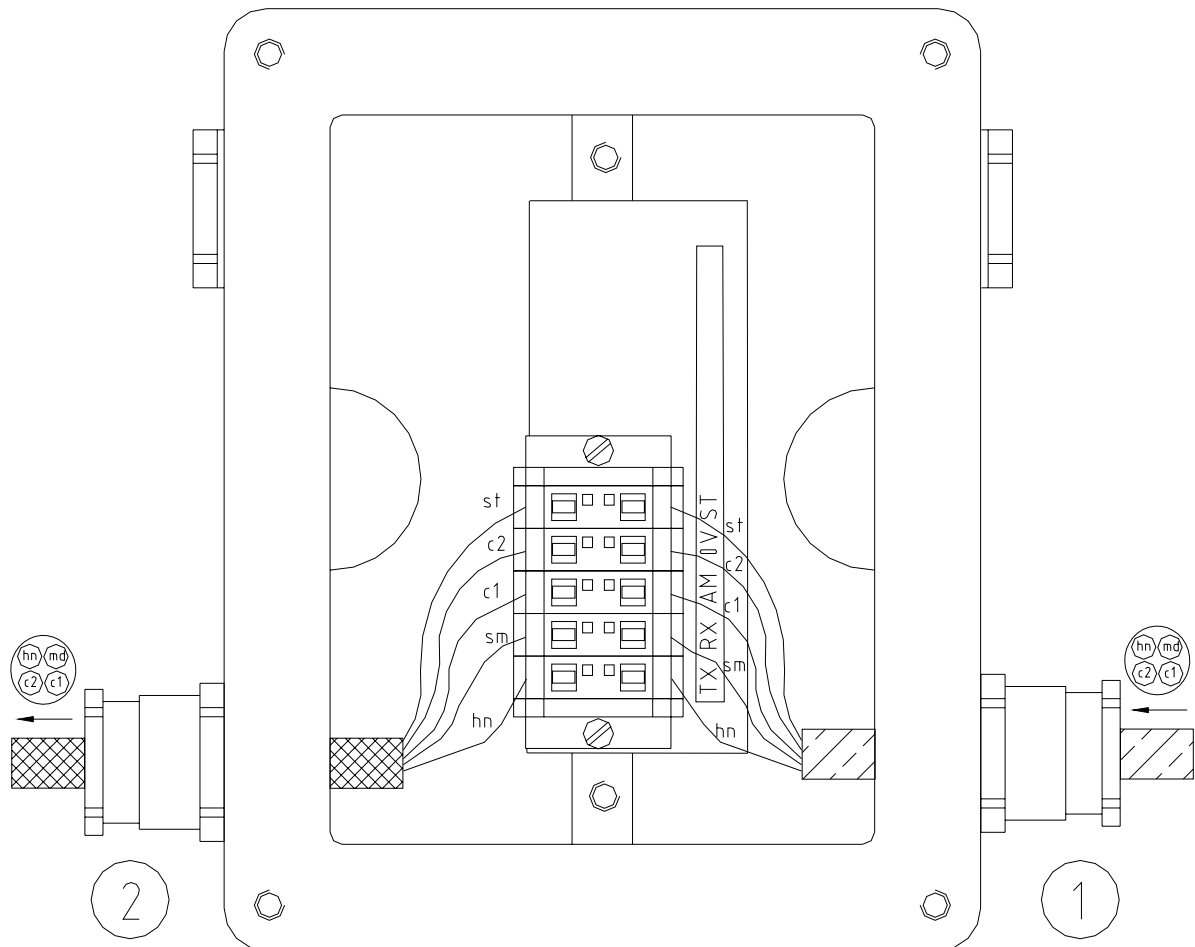
3	Shielded Data Line Cable Type: CMFM 4D x 0.5 Connection: XT13a <--> dispenser's counter	
D(-)	signal DATA(-)	brown (hn)
D(+)	signal DATA(+)	light blue (sm)
0V	signal ground	black1 (c1)
-	not used	black2 (c2)
ST	shield	shield (st)

#### Notes:

Distribution box type RK 002/6 is approved Ex II 2G EEx e II T6 with certificate FTZÚ 02 ATEX 0021. Inside box should be used only clamps WAGO type 262-130 and 262-230, that are approved EEx e II. Maximum load of the one clamp is 10A/400V. Allowed wire cross-sections are in range from 0.5 to 2.5 mm<sup>2</sup>. Length of unisolated part of wire is min. 9 mm and max.. 10 mm.



## G.7. Data line distribution box scheme - XT15



### Input

Shielded Data Line Cable		
1	Type:	CMFM 4D x 1.0 (recommended)
Connection: kiosk <--> XT15		
<b>TX</b>	signal Tx	brown (hn)
<b>RX</b>	signal Rx	light blue (sm)
<b>AM</b>	signal Automat / Manual	black1 (c1)
<b>0V</b>	signal ground	black2 (c2)
<b>ST</b>	shield	shield (st)

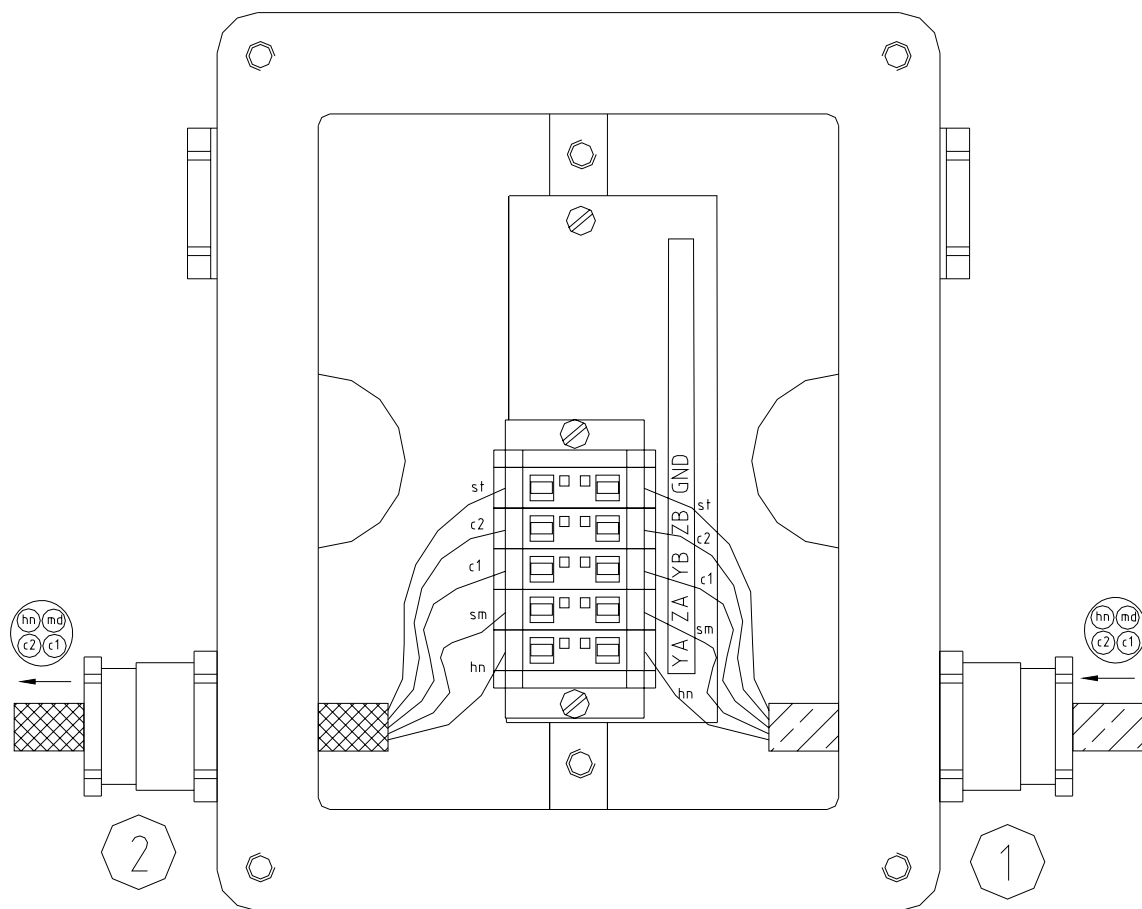
### Output

Shielded Data Line Cable		
2	Type:	CMFM 4D x 0.5
Connection: XT15 <--> dispenser's counter		
<b>TX</b>	signal Tx	brown (hn)
<b>RX</b>	signal Rx	light blue (sm)
<b>AM</b>	signal Automat / Manual	black1 (c1)
<b>0V</b>	signal ground	black2 (c2)
<b>ST</b>	shield	shield (st)

#### Notes:

Distribution box type RK 002/6 is approved Ex II 2G EEx e II T6 with certificate FTZÚ 02 ATEX 0021. Inside box should be used only clamps WAGO type 262-130 and 262-230, that are approved EEx e II. Maximum load of the one clamp is 10A/400V. Allowed wire cross-sections are in range from 0.5 to 2.5 mm<sup>2</sup>. Length of unisolated part of wire is min. 9 mm and max.. 10 mm.

## G.8. Data line distribution box scheme - XT16



### Input

1	Shielded Data Line Cable	
	Type:	CMFM 4D x 1.0 (recommended)
	Connection:	kiosk <--> XT16
YA	data current loop for side A	brown (hn)
ZA	data current loop for side A	light blue (sm)
YB	data current loop for side B	black1 (c1)
ZB	data current loop for side B	black2 (c2)
ST	shield	shield (st)

### Output

2	Shielded Data Line Cable	
	Type:	CMFM 4D x 0.5
	Connection:	XT16 <--> dispenser's counter
YA	data current loop for side A	brown (hn)
ZA	data current loop for side A	light blue (sm)
YB	data current loop for side B	black1 (c1)
ZB	data current loop for side B	black2 (c2)
ST	shield	shield (st)

#### Notes:

Distribution box type RK 002/6 is approved Ex II 2G EEx e II T6 with certificate FTZÚ 02 ATEX 0021. Inside box should be used only clamps WAGO type 262-130 and 262-230, that are approved EEx e II. Maximum load of the one clamp is 10A/400V. Allowed wire cross-sections are in range from 0.5 to 2.5 mm<sup>2</sup>. Length of unisolated part of wire is min. 9 mm and max.. 10 mm.

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