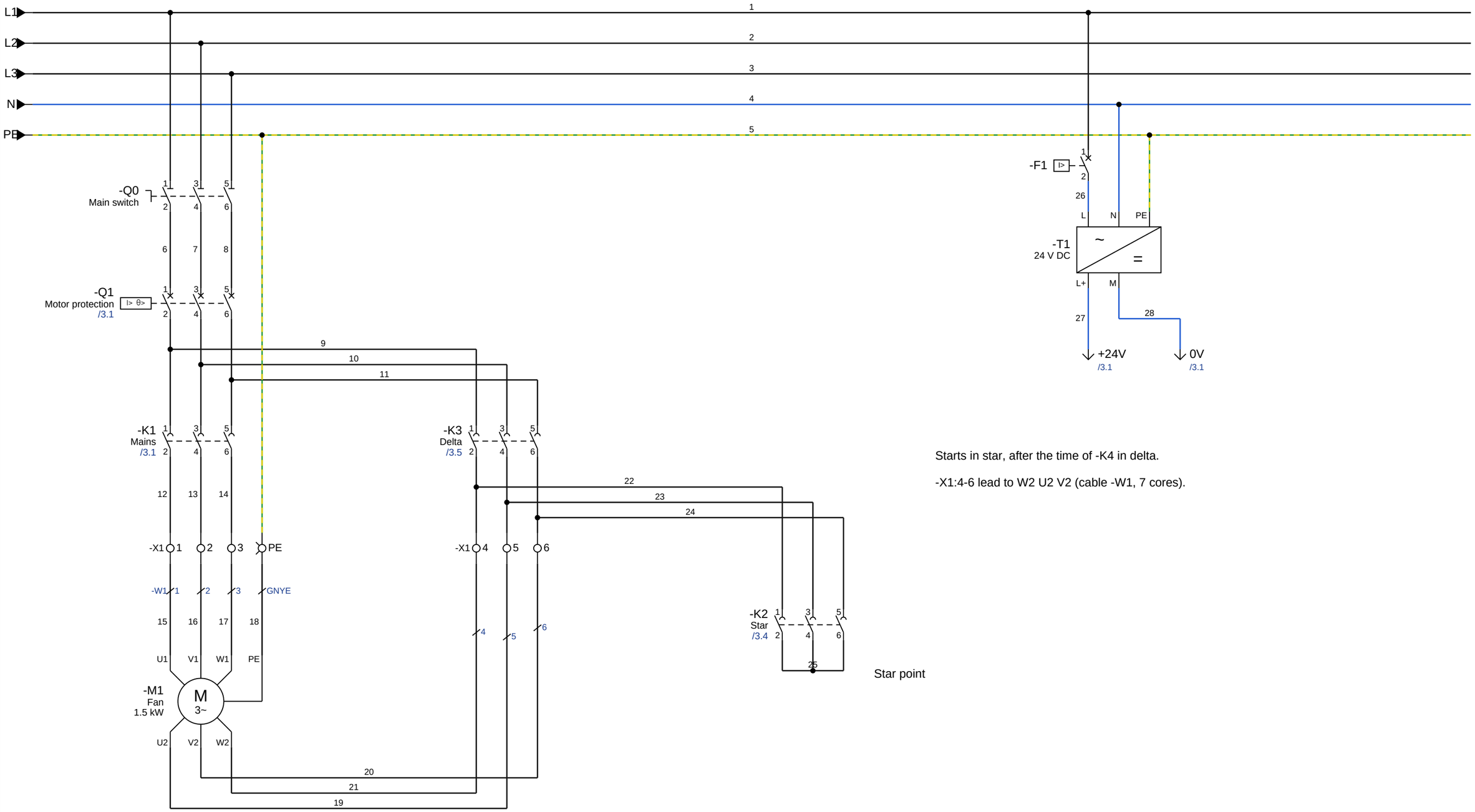
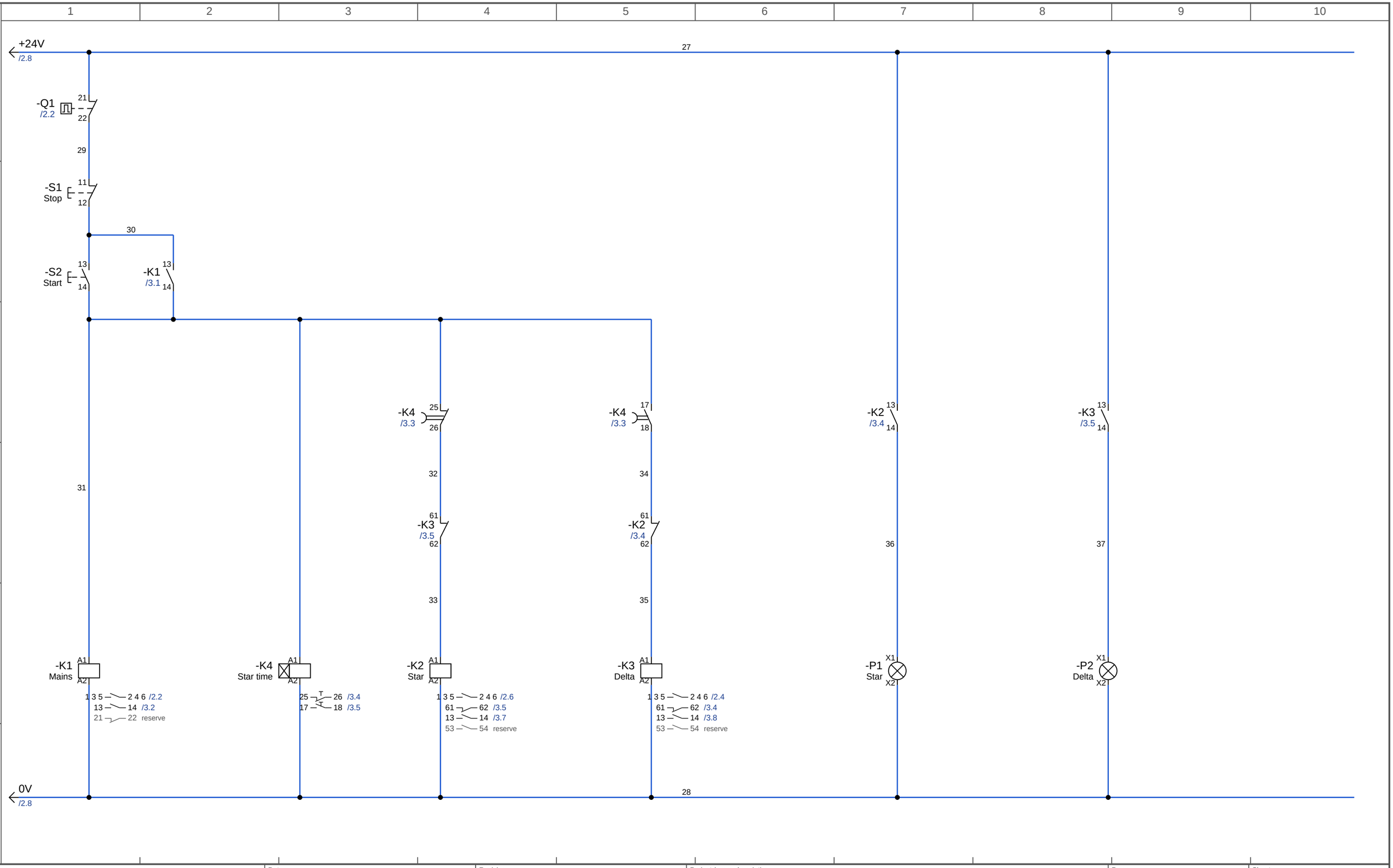
Star-delta starter

Fan motor 1.5 kW
star-delta start

Company	OpenECraft
Created by	OpenECraft
Date	2026-10-27
Revision	A
Number of pages	8



Company	Date	Revision	Project / page description	Page	Sheet
OpenECraft	2026-10-27	A	Star-delta starter	2	2 / 8
	Creator: OpenECraft	Software: OpenECraft	Power circuit fan motor	Type: Schematic	Project: Star-delta starter



Company	Date	Revision	Project / page description	Page	Sheet
OpenECraft	2026-10-27	A	Star-delta starter	3	3 / 8
	Creator	Software	Control circuit fan motor	Type	Project
	OpenECraft	OpenECraft		Schematic	Star-delta starter

Terminal diagram

Strip	Terminal	Level	Jumper	External (top)	Internal (bottom)	Potential	Location	Function text
-X1	End bracket			GEN.EB-35				
-X1	1			-K1:2	-M1:U1	N7	/2.2	
-X1	2			-K1:4	-M1:V1	N8	/2.2	
-X1	3			-K1:6	-M1:W1	N9	/2.2	
-X1	4			-K2:1, -K3:2	-M1:W2	N10	/2.4	
-X1	5			-K2:3, -K3:4	-M1:U2	N11	/2.4	
-X1	6			-K2:5, -K3:6	-M1:V2	N12	/2.4	
-X1	End plate			GEN.TB-END				
-X1	PE			-T1:PE, =PE	-M1:PE	PE	/2.2	
-X1	End plate			GEN.TB-END				
-X1	End bracket			GEN.EB-35				

Cable overview

Cable	Type	Cores used	Cross-section	Length (m)	From	To	Part number	Description
-W1	CBL-7G1.0	7/7	1 mm²	12	-X1	-M1	GEN.CBL-7G1.0	Fan motor

Cable diagram

Cable	Core	From	To	Potential	Wire no.	Cross-section
-W1	1	-X1:1	-M1:U1	N7	15	1.5 mm²
-W1	2	-X1:2	-M1:V1	N8	16	1.5 mm²
-W1	3	-X1:3	-M1:W1	N9	17	1.5 mm²
-W1	4	-X1:4	-M1:W2	N10	21	1.5 mm²
-W1	5	-X1:5	-M1:U2	N11	19	1.5 mm²
-W1	6	-X1:6	-M1:V2	N12	20	1.5 mm²
-W1	GNYE	-X1:PE	-M1:PE	PE	18	1 mm²

Device list

Device tag	Main function	Function text	Location	Aux. functions	Part number	Description
-F1	Circuit breaker 1-pole		/2.8	0	GEN.MCB-1P-C6	Miniature circuit breaker 1P C6
-K1	Relay / contactor coil	Mains	/3.1	2	GEN.CT-18A-24DC	Contactor 3P 18 A, coil 24 V DC, 1 NO + 1 NC aux
-K2	Relay / contactor coil	Star	/3.4	3	GEN.CT-9A-24DC, GEN.AUX-1NO1NC	Contactor 3P 9 A, coil 24 V DC, 1 NO aux
-K3	Relay / contactor coil	Delta	/3.5	3	GEN.CT-9A-24DC, GEN.AUX-1NO1NC	Contactor 3P 9 A, coil 24 V DC, 1 NO aux
-K4	Timer coil, on-delay	Star time	/3.3	2	GEN.TMR-24DC-OND-2	Timer relay on-delay 24 V DC, 1 NO + 1 NC delayed
-M1	Motor 3-phase, 6 terminals	Fan 1.5 kW	/2.2	0	GEN.MOT-1.5KW-PTC	Three-phase motor 1.5 kW 400 V, 1420 rpm, PTC thermistors
-P1	Indicator lamp	Star	/3.7	0	GEN.LMP-GN-24	Indicator lamp green, LED 24 V
-P2	Indicator lamp	Delta	/3.8	0	GEN.LMP-GN-24	Indicator lamp green, LED 24 V
-Q0	Main switch 3-pole	Main switch	/2.2	0	GEN.MS-3P-40A	Main switch 3P 40 A, red / yellow handle, lockable
-Q1	Motor protection switch	Motor protection	/2.2	1	GEN.MPS-4-6.3A, GEN.MPS-AUX-1NO1NC	Motor protection switch 4 - 6.3 A
-S1	Push button NC	Stop	/3.1	0	GEN.PB-RD-1NC	Pushbutton red, 1 NC
-S2	Push button NO	Start	/3.1	0	GEN.PB-GN-1NO	Pushbutton green, 1 NO
-T1	Power supply AC/DC	24 V DC	/2.8	0	GEN.PS-24DC-5A	Power supply 230 V AC / 24 V DC 5 A
-X1	Terminal ×7		/2.2	0	GEN.TB-2.5, GEN.TB-PE-2.5	Feed-through terminal 2.5 mm², grey

Bill of materials

Pos	Qty	Unit	Part number	Type number	Manufacturer	Description	Devices	Unit price	Total
1	2	pcs	GEN.AUX-1NO1NC	AUX-1NO1NC	Generic	Auxiliary contact block 1 NO + 1 NC	-K2, -K3	9.80 EUR	19.60
2	12	m	GEN.CBL-7G1.0	CBL-7G1.0	Generic	Control cable 7G1.0, numbered cores	-W1	2.90 EUR	34.80
3	1	pcs	GEN.CT-18A-24DC	CT-18A-24DC	Generic	Contactor 3P 18 A, coil 24 V DC, 1 NO + 1 NC aux	-K1	52.00 EUR	52.00
4	2	pcs	GEN.CT-9A-24DC	CT-9A-24DC	Generic	Contactor 3P 9 A, coil 24 V DC, 1 NO aux	-K2, -K3	38.50 EUR	77.00
5	2	pcs	GEN.EB-35	EB-35	Generic	End bracket for TS 35 mounting rail	-X1	1.10 EUR	2.20
6	2	pcs	GEN.LMP-GN-24	LMP-GN-24	Generic	Indicator lamp green, LED 24 V	-P1, -P2	9.10 EUR	18.20
7	2	pcs	GEN.MARK-CABLE	MARK-CABLE	Generic	Cable marker for cable Ø 4 – 10 mm, white, printable	marking	0.12 EUR	0.24
8	13	pcs	GEN.MARK-DEV	MARK-DEV	Generic	Device marker 15 x 5 mm, white, printable	marking	0.08 EUR	1.04
9	8	pcs	GEN.MARK-TB-5	MARK-TB-5	Generic	Terminal marker 5.2 mm, white, printable	marking	0.02 EUR	0.16
10	92	pcs	GEN.MARK-WIRE	MARK-WIRE	Generic	Wire marker sleeve for 0.5 – 2.5 mm², white, printable	marking	0.03 EUR	2.76
11	1	pcs	GEN.MCB-1P-C6	MCB-1P-C6	Generic	Miniature circuit breaker 1P C6	-F1	8.70 EUR	8.70
12	1	pcs	GEN.MOT-1.5KW-PTC	MOT-1.5KW-PTC	Generic	Three-phase motor 1.5 kW 400 V, 1420 rpm, PTC thermistors	-M1	260.00 EUR	260.00
13	1	pcs	GEN.MPS-4-6.3A	MPS-4-6.3A	Generic	Motor protection switch 4 - 6.3 A	-Q1	63.00 EUR	63.00
14	1	pcs	GEN.MPS-AUX-1NO1NC	MPS-AUX-1NO1NC	Generic	Auxiliary switch for motor protection switch, 1 NO + 1 NC, lateral mou…	-Q1	12.90 EUR	12.90
15	1	pcs	GEN.MS-3P-40A	MS-3P-40A	Generic	Main switch 3P 40 A, red / yellow handle, lockable	-Q0	56.00 EUR	56.00
16	1	pcs	GEN.PB-GN-1NO	PB-GN-1NO	Generic	Pushbutton green, 1 NO	-S2	11.20 EUR	11.20
17	1	pcs	GEN.PB-RD-1NC	PB-RD-1NC	Generic	Pushbutton red, 1 NC	-S1	11.20 EUR	11.20
18	1	pcs	GEN.PS-24DC-5A	PS-24DC-5A	Generic	Power supply 230 V AC / 24 V DC 5 A	-T1	89.00 EUR	89.00
19	6	pcs	GEN.TB-2.5	TB-2.5	Generic	Feed-through terminal 2.5 mm², grey	-X1	0.95 EUR	5.70
20	2	pcs	GEN.TB-END	TB-END	Generic	End plate for terminal 2.5 mm²	-X1	0.30 EUR	0.60
21	1	pcs	GEN.TB-PE-2.5	TB-PE-2.5	Generic	Protective earth terminal 2.5 mm², green-yellow	-X1	1.80 EUR	1.80
22	1	pcs	GEN.TMR-24DC-OND-2	TMR-24DC-OND-2	Generic	Timer relay on-delay 24 V DC, 1 NO + 1 NC delayed	-K4	39.50 EUR	39.50
						Sum			767.60