



ETICONTROL

ATS Controllers

ATS Controllers **220**

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ATS controller (ATC-E, ATC-B)

Applications - Intelligent Power Switch controller ATC is monitoring and controlling device for automatic changeover system ATS (ATS system involves restoration of power consumers by automatically switching to alternative power supply when disconnecting from primary power supply in case of failure and switch back to the primary when stable) for voltages up to 400V. The device is intended for use in all types of industry and controls switching devices such as disconnectors with motor-driven circuit breakers or contactors.

Features:

- // LED display with three characters;
- // Voltage measured at three phases on;
- // network and generator;
- // Relay outputs for controlling the switching devices;
- // The front panel 96 × 96;
- // LED indication - 15 functions;
- // Manual or automatic;
- // Remote start of the generator;
- // Power supply 8-30 V DC

LED indication:


- // Alarm;
- // In function;
- // Start generator;
- // Manual mode;
- // Automatic mode;
- // Voltage measured at generator;
- // Generator switching device ON;
- // Power through generator;
- // Voltage measured at grid;
- // Grid switching device ON;
- // Power through grid;
- // L1(R) indication
- // L2(S) indication
- // L3 (T) indication
- // Running

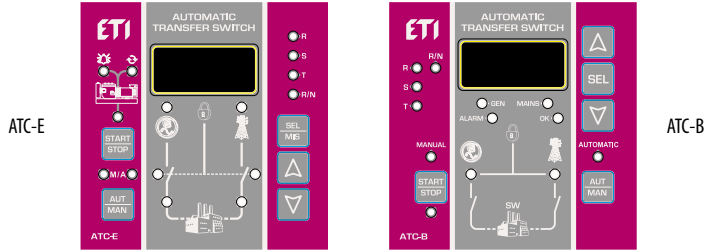
Technical data

Specifications:		ATC-E	ATC-B
Supply voltage DC	V DC	8 - 30 V DC	
Power consumption (max. AC)	VA	4 VA	
Controlled voltage	V AC	230 V(1F) / 400 V(3F) / 440 V(3F)	
Switch control signal	-	✓	✓
Display Type	-	3 digit, 7 segment	
Measurement type	-	RMS	
Measurement range Voltage	V AC	0 - 500 V AC	
Measurement range of frequency	Hz	45 - 65 Hz	
Accuracy	%	±2 %	
Operating temperature	°C	-10 / +50 °C	
Storage temperature	°C	-30 / +70 °C	
Degree of protection	IP	IP 20	
Max. cable size	mm ²	2,5 mm ² (screw clips)	
Relative humidity	%	95 %	
Housing material	-	UL94 V0 (plastic)	
Type of housing	-	Standard dimensions - 96x96	
Dimensions H × W × D	mm	96 x 96 x 112	
Weight	g	230 g	200 g



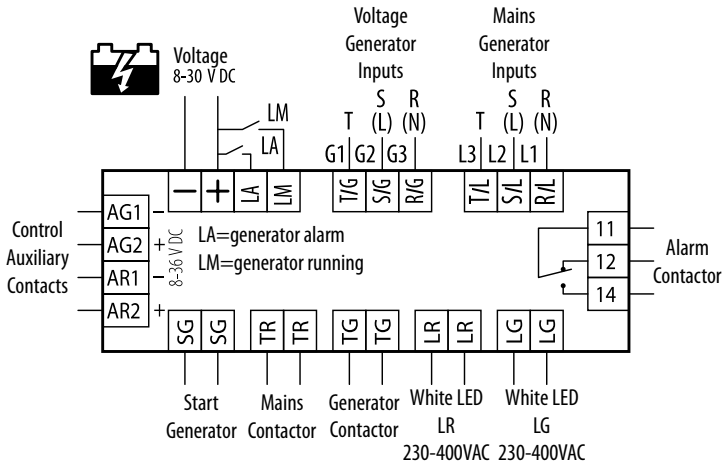
ATS controller

Type	U _n (V)	Description	Code	
ATC-E	DC 8-30V	ATS controller ATC-E with alarm contact block	004656574	230
ATC-B	DC 8-30V	ATS controller ATC-B	004656573	200

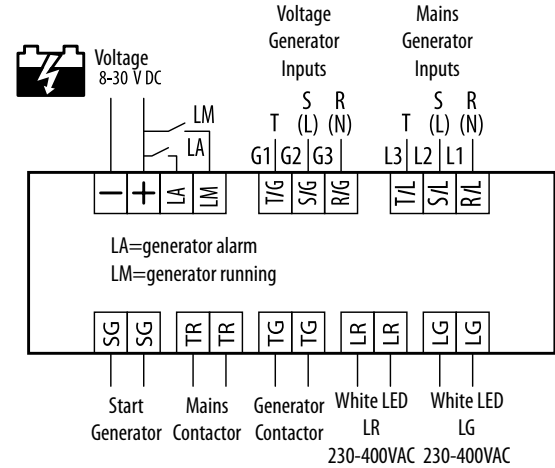


Wiring Diagrams

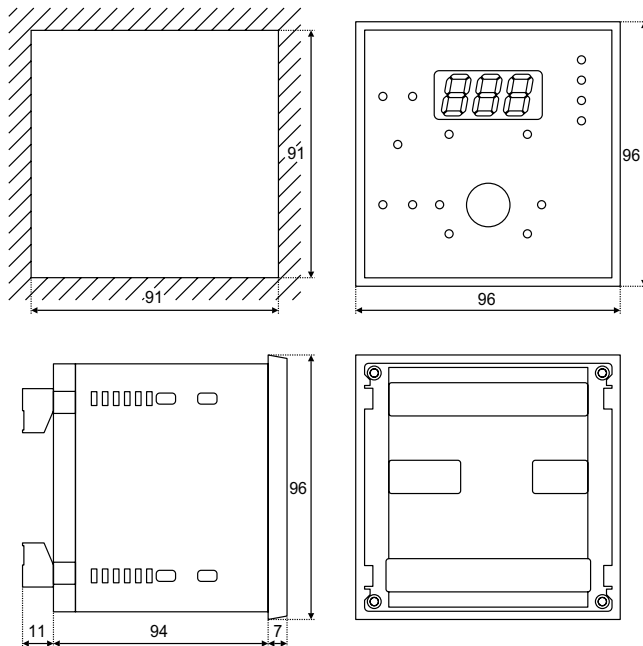
Wiring Diagram ATC-E



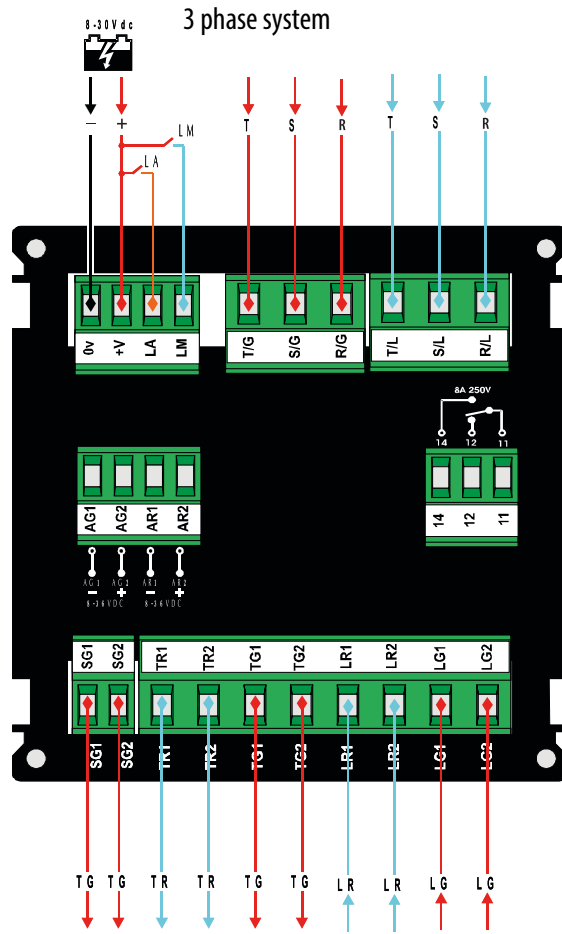
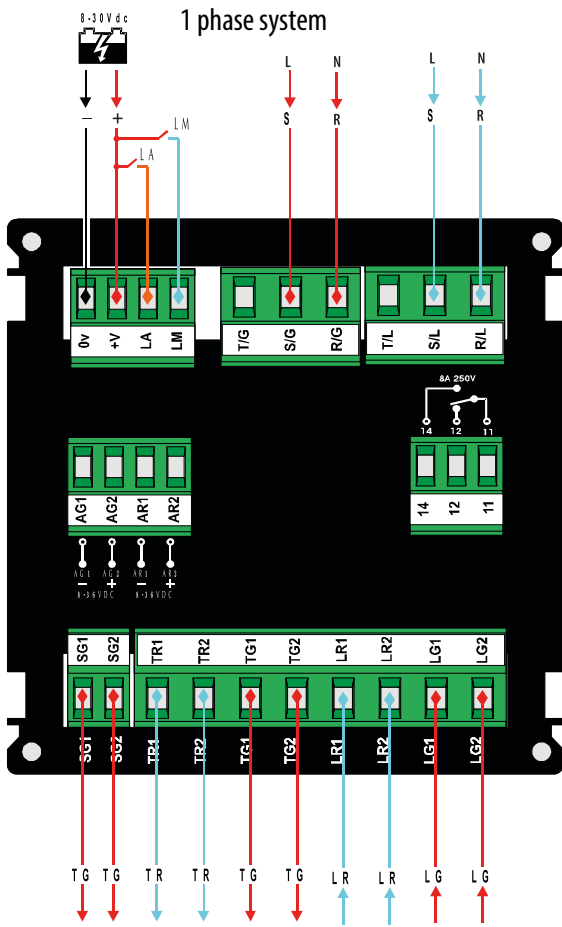
Wiring Diagram ATC-B



Dimensions

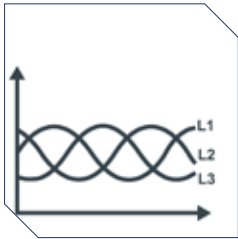


Connecting examples



ATS controller (ATSC25)

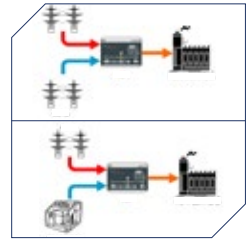
Voltage sensing on all phases and phase rotation checking



Miniature DIP switches make it quick and easy to program the controller as well as identify the current state of the controller settings



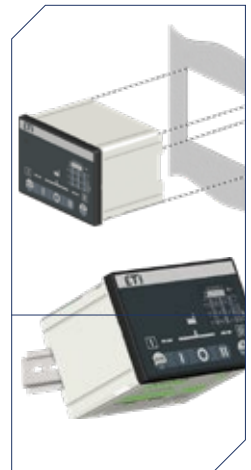
Ability to work in Main/Main or Main/Genset networks



Door or DIN rail mounting



Built-in double power supply to ensure uninterrupted operation of the motorised change over load break switch



Indication of controller status, RS communication, faults and emergency situations



Fire alarm puts controller in neutral



24 VDC aux power supply (for optional use)



Description

ATSC25 “ATS Controller” in association with an RTSE (Remote transfer switching equipment) forms an ATSE (Automatic transfer switching equipment), the ATSE formed by the association is designed for use in power systems for the safe transfer of a load supply between a normal and alternate source. As a standalone product the ATSC25 is compliant with IEC 61010-2-201.

Functions:

- // Monitoring of the availability of a Normal and Alternate source
- // Supply to the controller and switch from the Normal or Alternate source
- // Transfer orders to the RTSE and position reception from the RTSE
- // Intuitive HMI for emergency/local operation
- // Clearly visible and indicated HMI
- // Suitable for door mounting on the enclosure or DIN Rail mounting inside the enclosure
- // Inherent electrical interlock between position orders
- // Monitoring of the RTSE stable positions (I – 0 – II)
- // Strait forward installation with effective ergonomics
- // Power supply continuity for most Utility / Generator or Utility / Utility network applications when linked to an RTSE (Remotely operated transfer switches).

* Programmable with DIP switch settings



Features:

- // integrated power supply for MLBS(motorised changeover load break switch) control;
- // voltage measurement in three phases @ two networks;
- // possibility of power supply 24 V DC;
- // Mounting the front panel / TH35 DIN rail;
- // operating modes network / network or network / generator;
- // input for emergency blocking of the controller (fire input);
- // manual or automatic operation;
- // visual indication of the connected network;
- // self-testing function;
- // supply voltage 184-300 V AC;
- // Adjustable hysteresis for voltage and frequency.

Technical data

Specifications:	ATSC25	
Supplied from measurement circuit	184 - 300 VAC	
Power consumption	10 W	
Measurement range	linear	90 - 520 VAC
	phase	50 - 300 VAC
Frequency	45 - 65 Hz	
Emergency input (fire) voltage, V DC	12 - 24 VDC	
Communication interface	RS485	
Conductor cross section		
Mounting	DIN rail / door	
IP rating	IP 20 (IP40 for front mounting)	
Operation temperature	-25 °C ... +60 °C	
Operation humidity	80 % / 50 °C	
	95 % / 40 °C	
Dimensions (H x W x D)	96 x 144 x 106	
Measurement category	III	
Standards	IEC 61010-2-201, IEC 60947-6-1, IEC 60947-1	

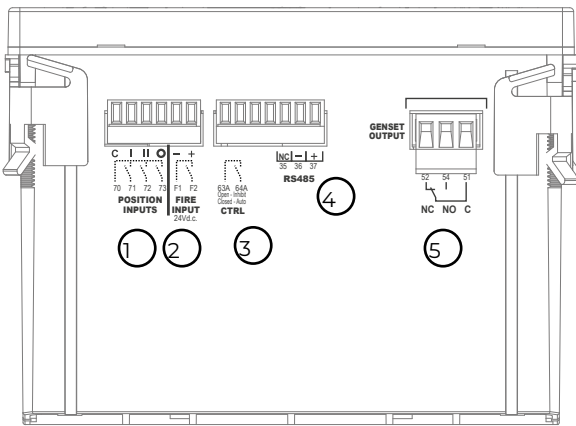
ATS controller

Type	Description	Code		
ATSC25	Automatic transfer switch controller	004661922	1000	1/18



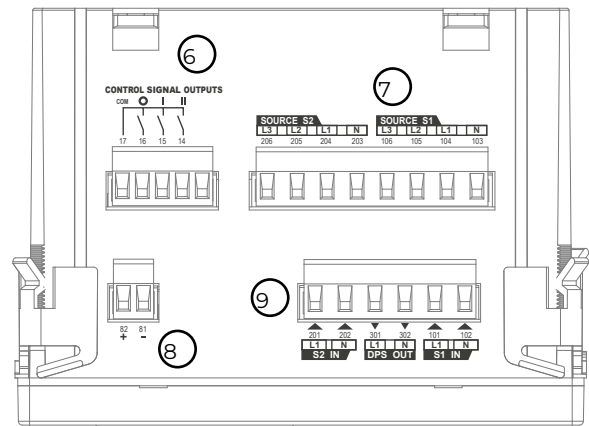
Description

Connectors top view



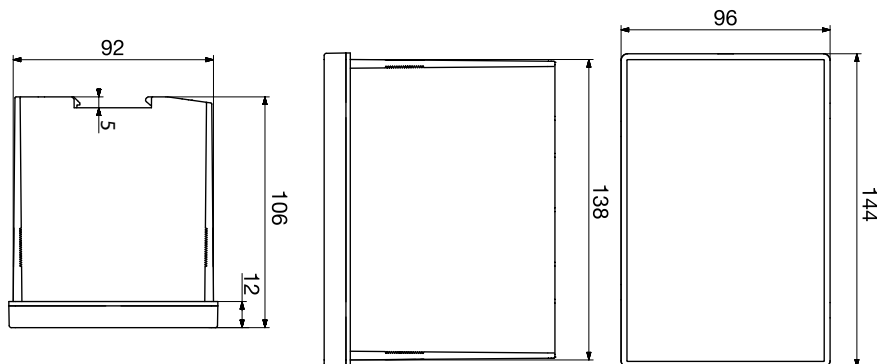
1. RTSE position feedback input
2. 24 V.d.c fire input
3. Enable control when closed / disable control when open
4. RS485 connections
5. Genset Start relay

Connectors bottom view



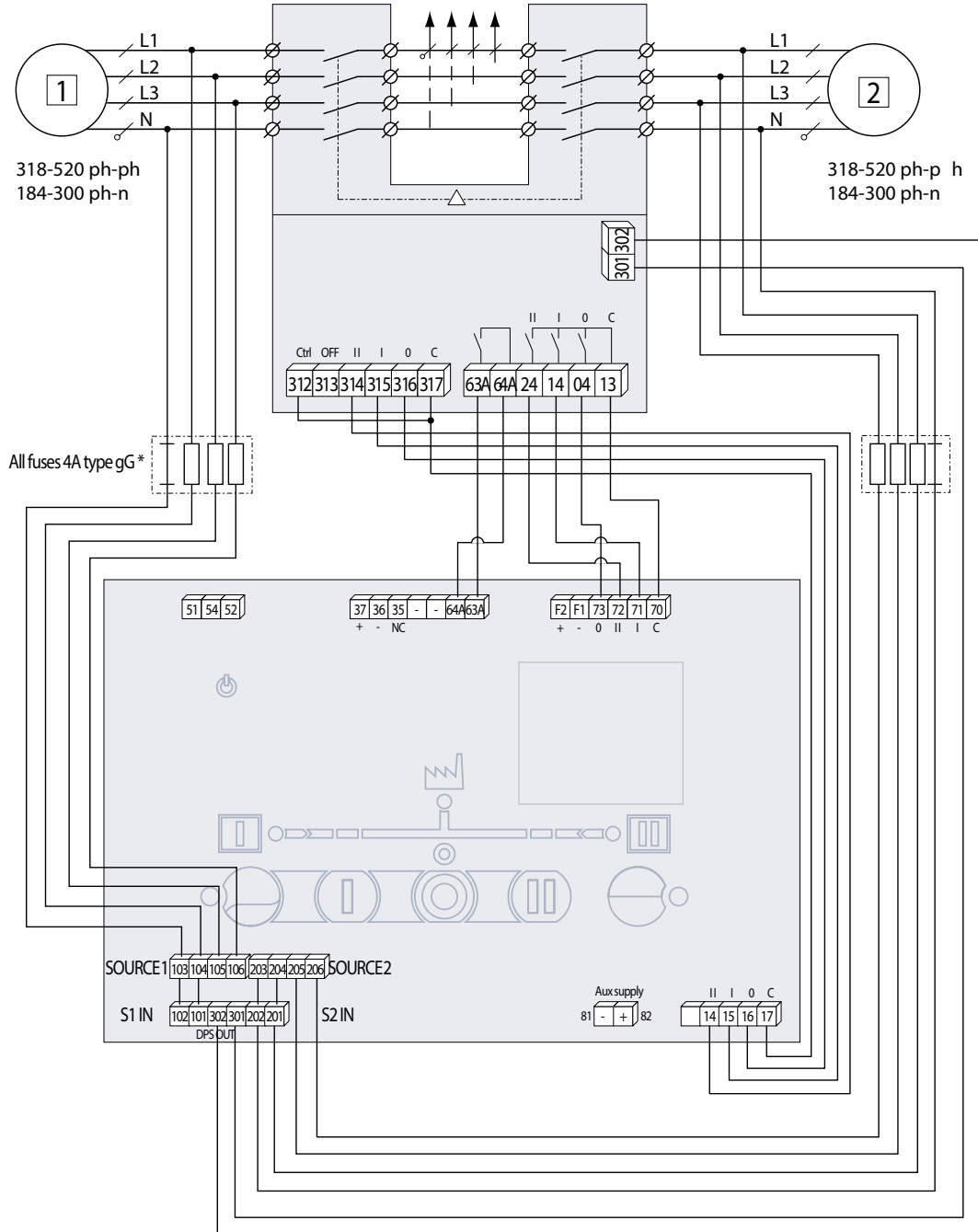
6. RTSE position control outputs
7. Source 1 and 2 voltage inputs
8. 24 V.d.c Aux supply
9. External DPS – Input / output

Dimensions

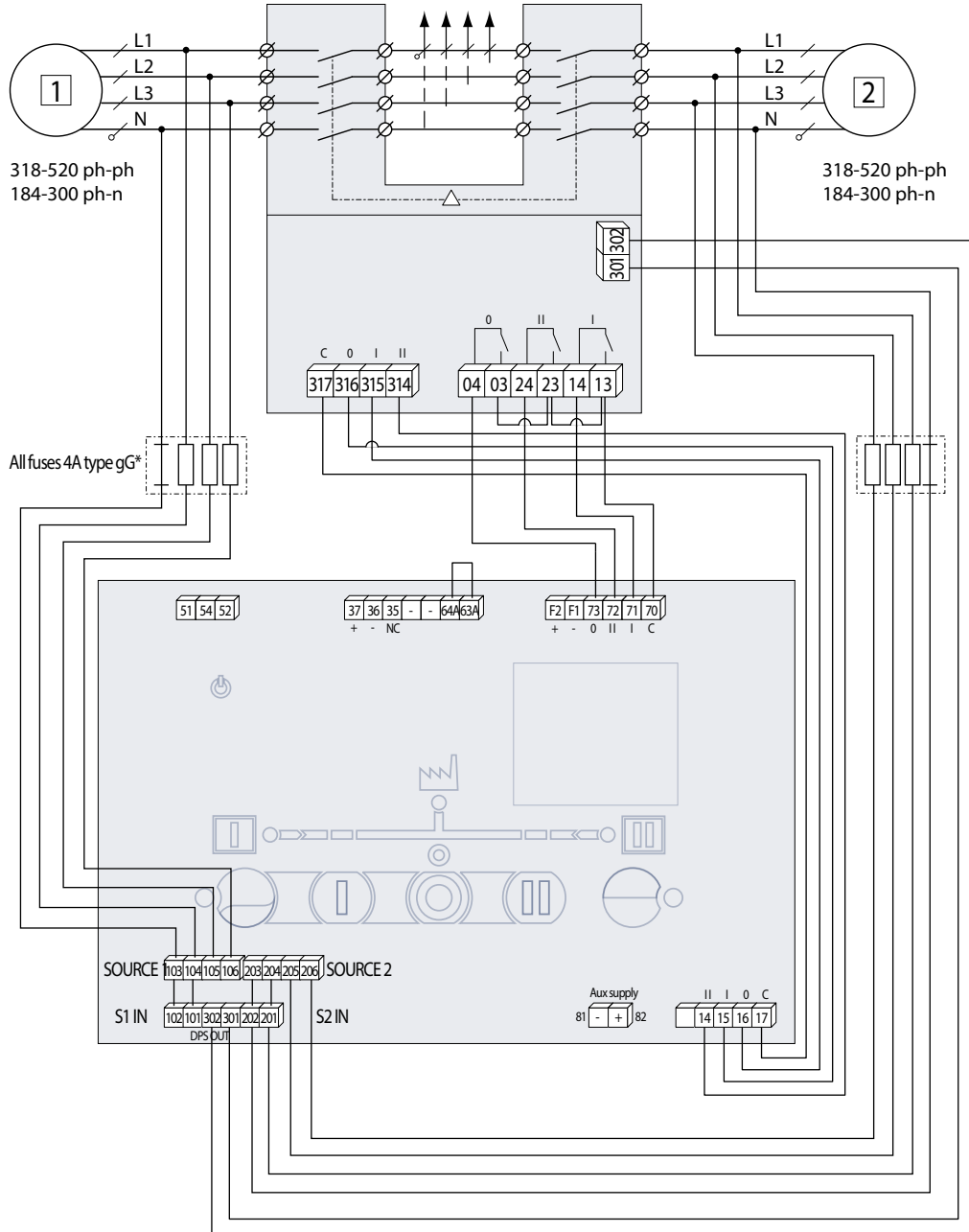


Wiring Diagrams

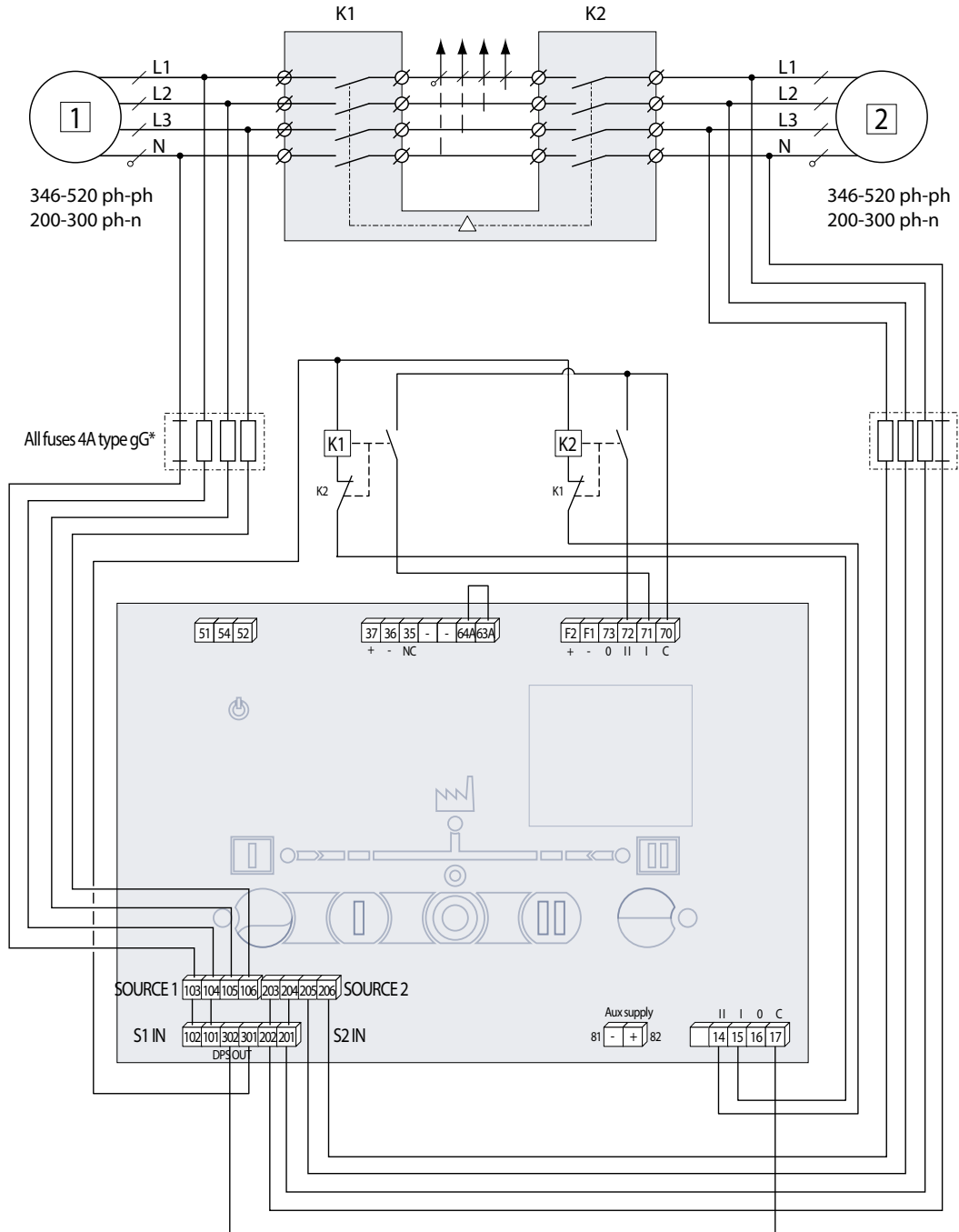
Connection diagrams with MLBS 3P/4P 250...630A



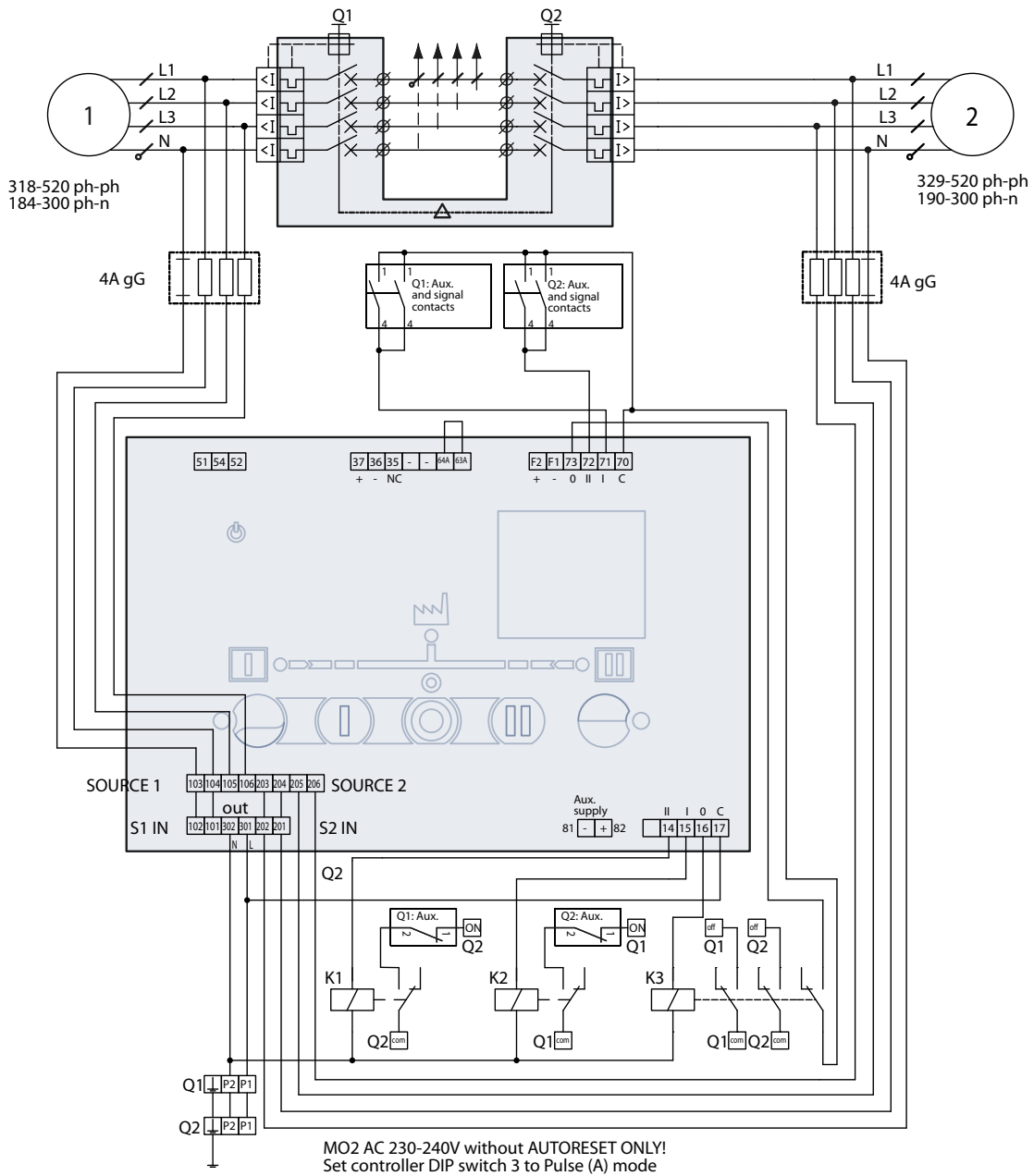
Connection diagrams with MLBS 3P/4P 63...125A



Connection diagrams with standard contactors (CEM or CES) with mechanical interlock (DIP switch 3 on position B)

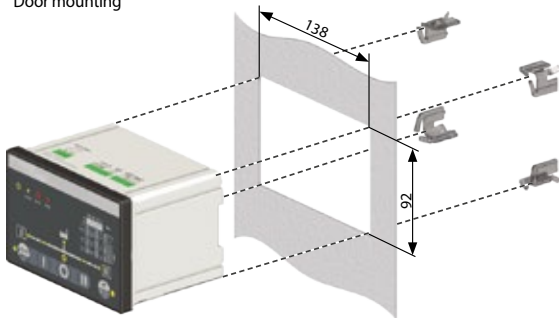


Connections with MCCBs EB2 and MO2



Mounting

Door mounting



Door cut-out of 93(+0.8) x 138(+1) mm, door thickness 1.5- 3mm.
Remove all connectors and clip before inserting the controller in the cut-out then fix the controller in place using all 4 fixations clips

DIN rail mounting

1. Mounting



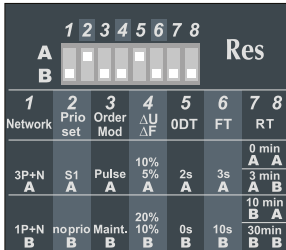
When mounting make sure both clips are pushed up, then clip on the DIN Rail.

2. Unmounting



To remove from the DIN Rail, drag the two mounting clips down before removing the product.

Settings



After changing DIP switch settings press RES button shortly (<3s) to validate.

To reset settings configured through communication long press on RES button > 10s.

DIP Switch		
DIP 1 A/B	A	Three phase network
	B	Single phase network
DIP 2 A/B	A	Priority source 1
	B	No priority
DIP3 A/B	A	Control mode impulse logic
	B	Control mode contactor logic
DIP 4 A/B	A	Overvoltage setting at 10% of nom voltage / overfrequency setting 5% of nominal frequency (hysteresis value is 20% of ΔU/ΔF)
	B	Overvoltage setting at 20% of nom voltage / overfrequency setting 10% of nominal frequency (hysteresis value is 20% of ΔU/ΔF)
DIP5 A/B	A	Load supply down time of 2 second (ODT = 02 sec)
	B	Load supply down time of 0 second (ODT = 0 sec)
DIP6 A/B	A	Wait time of 3s before source is lost (Fail timer = 3s)
	B	Wait time of 10s before source is lost (Fail timer = 10s)
DIP 7 & 8 A/B & A/B	AA	Wait time of 0min before source returns (retrun timer = 0min)
	AB	Wait time of 3min before source returns (retrun timer = 3min)
	BA	Wait time of 10min before source returns (retrun timer = 10min)
	BB	Wait time of 30min before source is lost returns (retrun timer = 30min)

Denomination	Terminal	Description	Characteristics
Control signal outputs (orders to RTSE)	14	Position II order	AC1 – General use – Ie :5A , Ue : 250V DC – General use – Ie 5A, Ue: 30V
	15	Position I order	
	16	Position 0 order	
	17	Common point for position output	
RS485	35	NC – Not connected	RS485 Isolated bus
	36	Negative electrode	
	37	Positive electrode	
Genset output	51	Common point	AC1 – General use – Ie :3A, Ue : 250V DC – General use – Ie 3A, Ue: 30V
	52	Normally closed contact	
	54	Normally open contact	
Controller inhibit input	63A	Controller is inhibited when this contact is open	Do not use external voltage - Power from common point
	64A		
Position inputs (return of information from RTSE)	70	Common point for position inputs	Do not use external voltage - Power from common point
	71	Position I RTSE	
	72	Position II RTSE	
Fire input	73	Position 0 RTSE	11-25 Vd.c
	F1	Negative electrode of the 24 Vd.c	
	F2	Positive electrode of the 24 Vd.c	
Optional Aux supply 24V.d.c	81	Negative electrode of the 24 Vd.c	19-30 Vd.c
	82	Positive electrode of the 24 Vd.c	
Source 1 and 2 voltage inputs	103	Source 1 N	Sensing range : 90-520 VAC (ph-n) 50-300 VAC L-N Supply range : 161-300 VAC (ph-n) Max consumption 10 W
	104	Source 1 L1	
	105	Source 1 L2	
	106	Source 1 L3	
	203	Source 2 N	
	204	Source 2 L1	
	205	Source 2 L2	
206	Source 2 L3		
DPS output (RTSE power supply)	301	Phase output	AC1 – General use – Ie :8A, Ue : 250V DC – General use – Ie 5A, Ue: 30V 150W
	302	Neutral output	