



AUTOMATIC TRANSFER SWITCH CONTROL MODULE

Model No: **ATS107DMS**

PREFACE

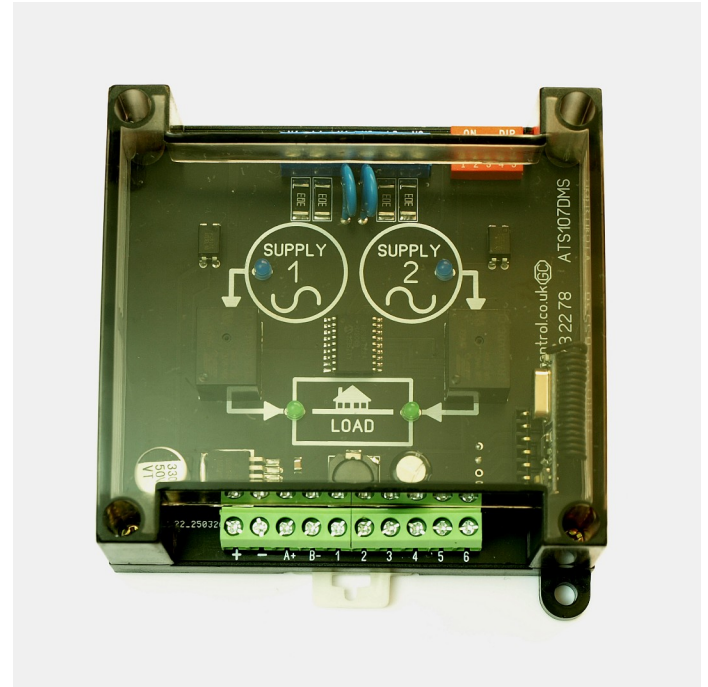
The configurable ATS controller model ATS107DMS allows for many of the demanding applications in the modern power supply network to be achieved. The ATS107DMS is designed as an end of line transfer controller between two power supplies of typically similar security and availability. It includes single phase sensing and timing functions to take account of PREFERRED SUPPLY FAILED delay and RETURN TO PREFERRED SUPPLY delay as well as the delay between control outputs to take consideration of contactor operating times. Inputs are provided for the remote selection of the PREFERRED SUPPLY and RETURN INHIBIT.

HOW IT WORKS

Under normal conditions with the default preferred supply as SUPPLY 1 and that supply is being available, the SUPPLY 1 output relay would be energized closing the SUPPLY 1 contactor 1 and connecting SUPPLY 1 to the load. When SUPPLY 1 becomes unavailable, the preferred supply failed delay timer is initiated and should it time out, the SUPPLY 1 output relay would be de-energized opening the SUPPLY 1 contactor 1 and disconnecting SUPPLY 1 from the load. After the internal switching delay and considering SUPPLY 2 is available, the SUPPLY 2 output relay would be energized closing the SUPPLY 2 contactor 2 and connecting SUPPLY 2 to the load. On return of SUPPLY 1 to a healthy state the return to preferred supply delay timer is initiated and should it time out successfully without disturbance, the SUPPLY 2 output relay would be de-energized opening the SUPPLY 2 contactor 2 and disconnecting SUPPLY 2 from the load. After the internal switching delay and considering SUPPLY 1 is within range, the SUPPLY 1 output relay would be energized closing the SUPPLY 1 contactor 1 and re-connecting SUPPLY 1 to the load. If the return inhibit was applied whilst ALTERNATIVE SUPPLY is on load, on return of PREFERRED SUPPLY to a healthy state the controller would however remain on ALTERNATIVE SUPPLY until RI push button is pressed again making return inhibit function inactive.

Time delays are set via 5 pole DIP switch fitted on the right top corner of the controller and selection possible as per TABLE "A" and "B", typically the return to preferred supply delay is TWICE the preferred supply failed delay.

ATS105DMS

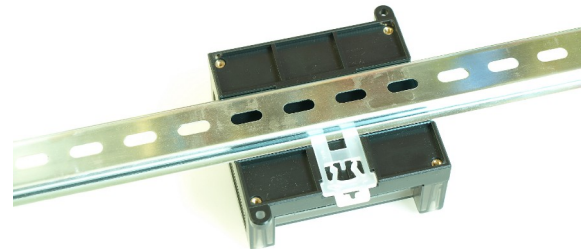


CONNOTATION

Terminal

ATS107DMS (BACK PLATE)

Battery power supply (+)	+
Battery power supply (-)	- (4,6)
Supply 1 AC power relay output	1
Supply 1 AC power relay input	L1
Supply 2 relay output	2
Supply 2 relay input	L2
Auxiliary charger connection input positive	A+
Auxiliary charger connection input negative	B-
Supply 1 AC power supply input (neutral)	N1
Supply 1 AC power supply auxiliary input/output (neutral)	N1
Supply 2 AC power supply input (neutral)	N2
Supply 1 AC power supply auxiliary input/output (neutral)	N2
Preferred Supply external selector switch input (PI)	3
Return Inhibit external selector switch input (RI)	5



ATS107DMS specification

DC Supply: 12Vdc or 24Vdc (8...40Vdc)
 Min. standby current: 0.07mA @12Vdc (0.05mA @24Vdc)
 AC voltage input (SUPPLY 1): 100...300Vac
 AC voltage input (SUPPLY 2): 100...300Vac
 Frequencies supported: 50Hz / 60Hz
 Dimensions: 95x90x40mm
 Operating temperature range: -30 to +70°C
 Humidity Range Operating: 20-80%



Key fob operation (optional):

When both power supplies available and healthy, press button "B" to select the preferred power supply. Button "B" is acting as "PS" remote switch. Each following press of button "B" will switch the power supply from Supply1 to Supply2 and back. When preferred power supply is not available and the controller currently stays on alternative power supply: press button "A" to "freeze" the alternative power supply and continue to stay on alternative power supply even after the preferred power supply returned. The green "load" LED will blink once per 3 sec. The button "A" is acting as "RI" remote switch. Press button "A" again to "unfreeze" the alternative power supply. The controller will automatically select the main power supply. All external wired switches "PS" and "RI" should remain in off position.



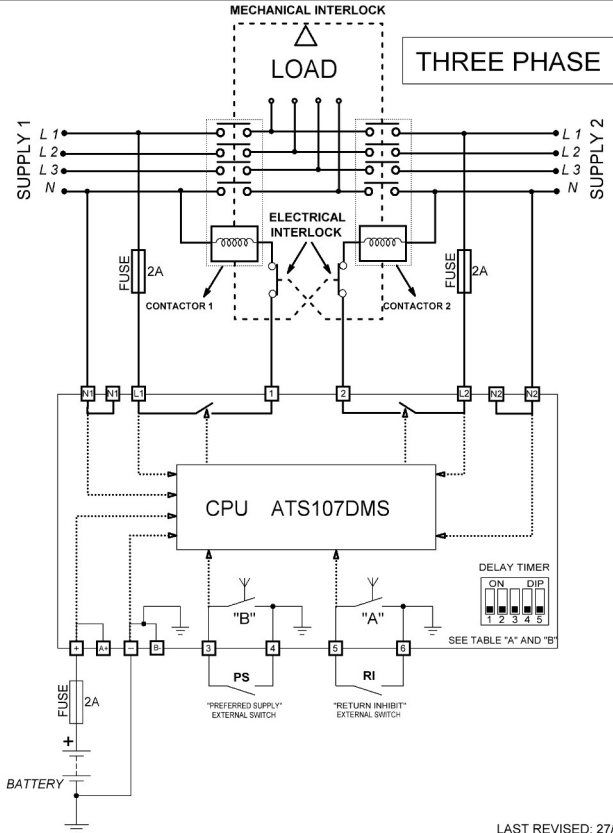
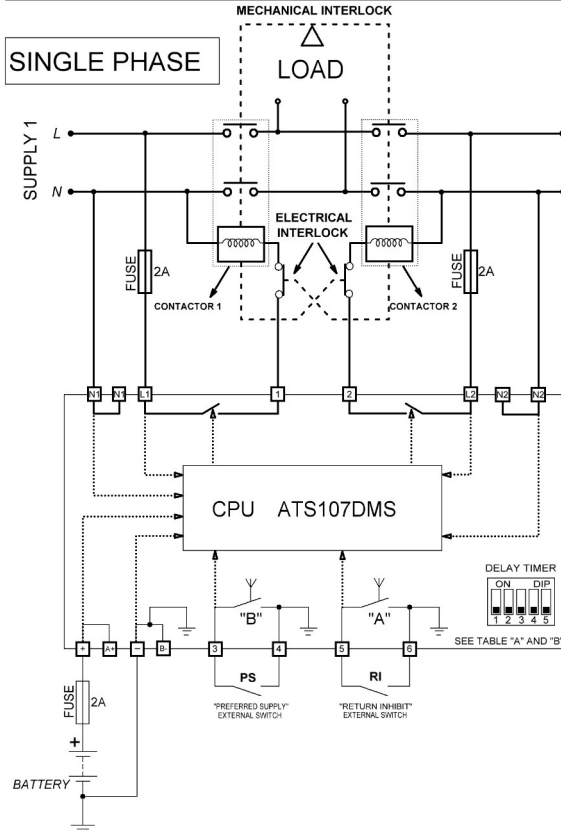
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WIRING DIAGRAM

PS	PREFERRED SUPPLY SELECTOR BUTTON		PREFERRED SUPPLY 2
			PREFERRED SUPPLY 1
RI*	RETURN INHIBIT SELECTOR BUTTON		RETURN INHIBIT APPLIED
			RETURN INHIBIT INACTIVE

IMPORTANT NOTE:
EXTERNAL SWITCHES "PS" AND "RI" MUST BE LEFT OPEN IF KEYFOB OPERATION MODE IS SELECTED AS THE MAIN OPERATING SWITCH.

* "RI" ALLOWS TO STAY ON ALTERNATIVE SUPPLY WHEN PREFERRED SUPPLY RETURNS



LAST REVISED: 27/11/2016

TABLE "A" DIP SWITCH COMBINATIONS							
PREFERRED SUPPLY FAILED, DELAY SEC.				RETURN TO PREFERRED SUPPLY, DELAY SEC.			
2 / 4	4 / 8	8 / 16	12 / 24	16 / 32	20 / 40	24 / 48	28 / 56
32 / 64	36 / 72	40 / 80	44 / 88	48 / 96	52 / 104	56 / 112	60 / 120

TABLE "B" DIP SWITCH COMBINATIONS	
CHANGE-OVER TIME DELAY, SEC	
0,2	5