



GenControl

Development and manufacture of engine control modules

DESIGNING TO LAST

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AUTOMATIC TRANSFER SWITCH CONTROL MODULE

Model No: **ATS105DMS**

PREFACE

The configurable ATS controller model ATS105DMS allows for many of the demanding applications in the modern power supply network to be achieved.

The ATS105DMS 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.

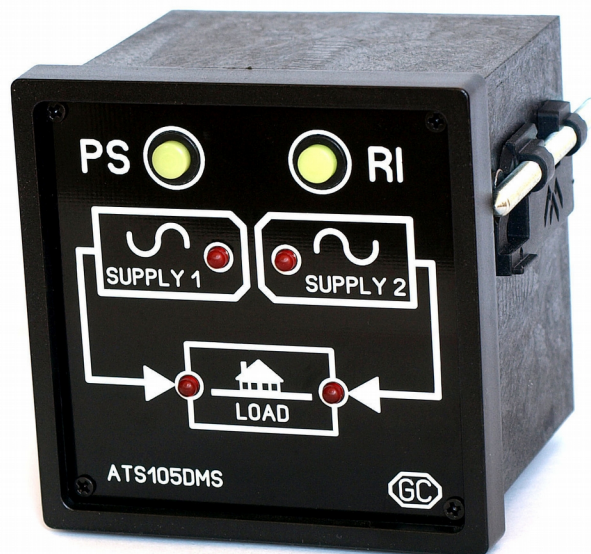
Inputs are provided for the remote selection of the PREFERRED SUPPLY and RETURN INHIBIT.

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 back 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

ATS105DMS (BACK PLATE)

Battery power supply (+)	1
Battery negative power supply (-)	2
Supply 1 relay output	13
Supply 1 relay input	14
Supply 2 relay output	15
Supply 2 relay input	16
Preferred supply external switch input	17
Return inhibit external switch input	18
Supply 2 AC power supply input (N)	19
Supply 2 AC power supply input (L)	20
Supply 2 AC power supply (LINK to 16)	21
Supply 1 AC power supply (LINK to 14)	22
Supply 1 AC power supply input (L)	23
Supply 1 AC power supply input (N)	24



ATS105DMS specification

DC Supply: 12Vdc or 24Vdc (8...40Vdc)

Max. standby current: 10mA @12Vdc

AC voltage input max (SUPPLY 1): 300Vac

AC voltage input max (SUPPLY 2): 300Vac

Dimensions: 72x72x60mm

Panel cut out: 68x68mm

Operating temperature range: -30 to +70°C

Humidity Range Operating: 20-80%



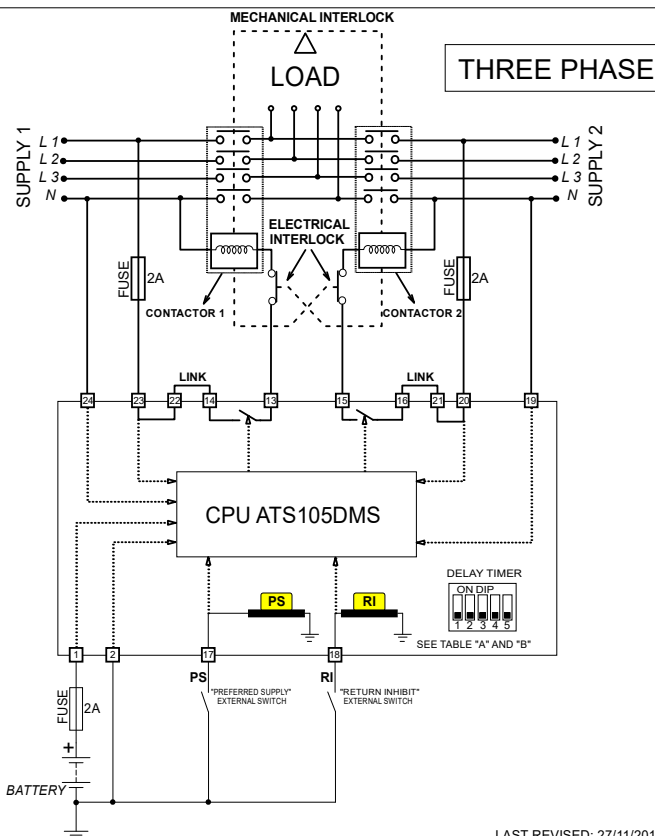
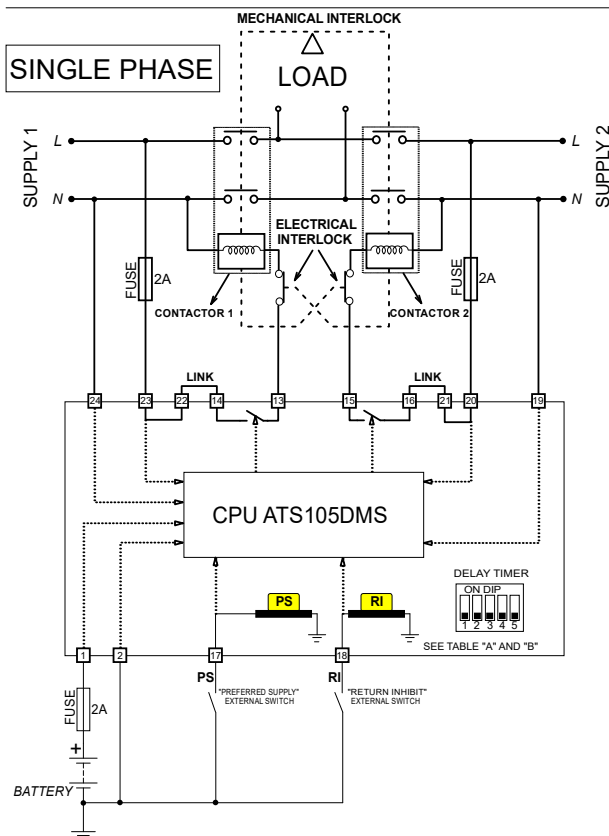
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WIRING DIAGRAM

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

IMPORTANT NOTE:
"PS" AND "RI" EXTERNAL SWITCHES CANNOT BE USED IN CONJUNCTION WITH "PS" AND "RI" FRONT PLATE MOUNTED YELLOW PUSH BUTTONS. IF OPERATION OF EXTERNAL SWITCHES IS REQUIRED "PS" PUSH BUTTON SHOULD BE IN "PREFERRED SUPPLY 1" STATE, AND "RI" PUSH BUTTON IS IN "RETURN INHIBIT INACTIVE" STATE.

* "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.			
 1 2 3 4 5 2 / 4	 1 2 3 4 5 4 / 8	 1 2 3 4 5 8 / 16	 1 2 3 4 5 12 / 24	 1 2 3 4 5 16 / 32	 1 2 3 4 5 20 / 40	 1 2 3 4 5 24 / 48	 1 2 3 4 5 28 / 56
 1 2 3 4 5 32 / 64	 1 2 3 4 5 36 / 72	 1 2 3 4 5 40 / 80	 1 2 3 4 5 44 / 88	 1 2 3 4 5 48 / 96	 1 2 3 4 5 52 / 104	 1 2 3 4 5 56 / 112	 1 2 3 4 5 60 / 120

TABLE "B" DIP SWITCH COMBINATIONS	
CHANGE-OVER TIME DELAY, SEC	
 1 2 3 4 5 0,2	 1 2 3 4 5 5