Power supplies

Description, characteristics

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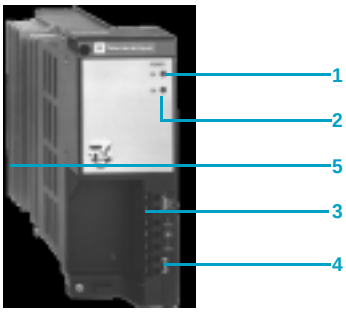
Description

TSX SUP modules are designed to power PLC bases and the local or remote I/O extensions from an AC supply ∿ 110 or 240 V 50/60 Hz (TSX SUP 40 or TSX SUP 702) or a DC supply ⎓ 24 V (TSX SUP 41 or TSX SUP 61), ⎓ 48 V DC (TSX SUP 42 or TSX SUP 62).



The front panel comprises :

1 A green OK lamp, internal voltages established and correct

2 An orange ON lamp, supply present

3 A supply connection block

4 An alarm relay contact to control external supplies (eg : supplies to power outputs)

5 Switch for power supply fault detection device (device enabling rapid detection of the absence of the supply voltage, which causes the program to stop with the context saved before the status of the inputs is modified).

Characteristics

Type of power supply			**TSX SUP 40**		**TSX SUP 702**	
Nominal voltage		**V**	∿ 110 ...127	∿ 220...240	∿ 110...127	∿ 220...240
Limit values		**V**	∿ 90 ...140	∿ 180...264	∿ 90...140	∿ 180...264
Frequency limits		**Hz**	47...63	47...63	47...63	47...63
Immunity to microbreaks (1)	duration	**ms**	10	10	10	10
	repetition	**Hz**	1	1	1	1
Total harmonic distortion			10 %	10 %	10 %	10 %
Maximum apparent power (2)		**VA**	105		180 (250)	
Power consumption (2)		**W**	66		100 (130)	
Inrush current at power-up (3)	value	**A**	100		100	
	duration	**ms**	10		10	
Useful power (2)		**W**	–		65 (85)	
Max current at ⎓ 5 V output (2) (4)		**A**	1.5		9 (11)	
Max current at ⎓ + 12 V output (2) (4) (12 VL and 12 VP) (5)		**A**	3.3		5 (6)	
Max current at ⎓ - 12 V output (4)		**A**	–		0.1	
Primary/secondary isolation voltage			1500 V rms 50/60 Hz		1500 V rms 50/60 Hz	
Cooling			By natural convection for TSX 47-40/67-40 PLC base, I/O extension rack By ∿ 110/240 V fan for TSX 87-40/107-40 PLC base			

(1) Power supply fault detection switch at 'Stop" position.
(2) The value in brackets is given for a power supply mounted in a fan-cooled rack.
(3) Values given for power breaks recurring with a period of 1s, at 55 °C ambient temperature, whatever the energizing phase and voltage range ∿ 110 V or ∿ 220 V.
(4) The outputs cannot all supply their maximum current simultaneously, taking into account the permitted useful power.
(5) 12 VL = 12 V logic, 12 VP = 12 V power.
Note : For every application it is necessary to estimate the total consumption. To do this, see the installation manual for TSX/PMX model 40 PLCs : TSX DM PR 40E.

Power supplies

Characteristics, references

Characteristics

Type of power supply			TSX SUP 41	TSX SUP 42	TSX SUP 61	TSX SUP 62
Nominal voltage		**V**	⎓ 24	⎓ 48	⎓ 24	⎓ 48
Limit values (ripple included)		**V**	19.5…30	38.4…60	19.2…30	38.4…60
Peak/peak ripple			< 10 % of Un (F = 100 or 150 Hz)			
Immunity to microbreaks (1)	duration	**ms**	10	10	10	10
	repetition	**Hz**	1	1	1	1
Maximum absorbed current with minimum supply and maximum load		**A**	3.3	1.6	4.8	2.4
Inrush current at power-up (2)	value (3)	**A**	25	25	25	25
	value (4)	**A**	5.5	3.6	12	8
Useful power		**W**	40	40	65	65
Maximum current at ⎓ 5 V output (5)		**A**	1.5	1.5	7	7
Maximum current at ⎓ + 12 V output (6) (12 VL et 12 VP)		**A**	3.3	3.3	4	4
Maximum current at ⎓ - 12 V output (5)		**A**	–	–	0.1	0.1
Primary/secondary isolation voltage			1500 V rms 50/60 Hz			
Cooling			By natural convection for TSX 47-40/67-40 PLC base, I/O extension rack By ∿ 110/240 V fan for TSX 87-40/107-40 PLC base			

(1) Power supply fault detection switch at "Stop" position.
(2) Values given for power breaks recurring with a period of 1 s, at 55 °C ambient temperature.
(3) Values for a duration of 0…0.5 ms.
(4) Values for a duration of 0.5…500 ms.
(5) The outputs cannot all supply their maximum current simultaneously, taking into account the permitted useful power.
(6) 12 VL : 12 V logic, 12 VP : 12 V power.

References

TSX SUP●●

Power supplies for PLC base and local and remote I/O extensions

Supply voltage	Use with processor	Extension	Reference	Weight kg
∿ 110 or ∿ 220 V 50/60 Hz	TSX P47 40● TSX P47 41●	Local or remote without intelligent module	**TSX SUP 40**	2.450
	TSX P47 42● TSX P67/87/107 TPMX P47/67/87/107	Local or remote with intelligent modules	**TSX SUP 702**	2.900
⎓ 24 V	TSX P47 40● TSX P47 41●	Local or remote without intelligent module	**TSX SUP 41**	2.250
	TSX P47 42● TSX P67/87/107 TPMX P47/67/87/107	Local or remote with intelligent modules	**TSX SUP 61**	2.450
⎓ 48 V	TSX P47 40● TSX P47 41●	Local or remote without intelligent module	**TSX SUP 42**	2.250
	TSX P47 42● TSX P67/87/107 TPMX P47/67/87/107	Local or remote with intelligent modules	**TSX SUP 62**	2.450