Terminology

Term		Description
Input side	Control voltage	Input voltage necessary for normal SSR operation under the specified temperature conditions.
	Activation voltage	Threshold at which the output turns on as the control voltage is gradually increased with the specified voltage applied to the loaded output.
	Recovery voltage	Threshold at which the output turns off as the control voltage is gradually decreased with the specified voltage applied to the loaded output.
	Input impedance	Resistance of the current limiting resistor used in the SSR input side.
	Input line voltage	Input voltage at which an input module SSR operates normally.
	Input current	Input current at which an input module SSR operates normally.
Load side	Max. load current	Maximum continuous current allowable across the SSR output terminals under the specified heat dissipation and ambient temperature conditions. AC current is specified in RMS units.
	Load voltage	Output supply voltage range in which the SSR operates normally. AC voltage is specified in RMS units.
	Logic supply voltage/current	Supply voltage/current range in which an input module SSR operates normally.
	Non-repetitive surge current	Maximum non-repetitive load current allowable under the specified heat dissipation and ambient temperature conditions. In general, it is given by the peak value of a single cycle of sinusoidal commercial AC current.
	"OFF-state" leakage current	Current that flows in the SSR output circuit when the specified supply voltage is applied to the output with no control voltage applied to the input.
	"ON-state" voltage drop	Output voltage drop caused by a specified load current supplied to the SSR output which is turned on by a specified input control voltage. AC voltage is specified in RMS units.
	Min. load current	Minimum load current at and above which the SSR operates normally under the specified temperature conditions. AC load current is specified in RMS units.
	Output stage breakdown voltage	Maximum voltage that can be applied across the output and ground of an input module SSR.
	Max. load current	Maximum current allowable for the output circuit of an input module SSR.
	Repetitive peak voltage, max.	Maximum repetitive voltage which can be continuously applied across the SSR output terminals. In general, a voltage of more than 400 V AC is used for 100 V AC applications, and more than 500 V AC for 200-250 V AC applications, to absorb supply voltage variations or on/off surges.
	Critical turn-off voltage rise ratio	SSRs may turn on if a turn-off voltage with a steep rising edge is applied. This phenomenon is called "dv/dt turn on." Critical turn-off voltage rise ratio refers to the maximum turn-off voltage rise ratio at and below which the SSR remains turned off.
Electrical Characteristics	Operate time, max.	Time until the SSR output turns on after the specified control voltage is applied to the input.
	Release time, max.	Time until the SSR output turns off after the specified control voltage is removed from the input.
	Insulation resistance	Resistance measured with a specified voltage applied across the input and output, or across the input or output and frame ground.
	Breakdown voltage	Maximum voltage below which no dielectric breakdown occurs when applied for 1 minute across the same test points as those used for insulation resistance testing.
	Vibration resistance	Functional: The device sustains no damage and meets the specifications if it is exposed to vibration with its magnitude not exceeding this threshold during transit or installation. Destructive: Closed contacts of a relay remain closed for the specified time period if it is exposed to vibration with its magnitude not exceeding this threshold during operation.
	Shock resistance	Functional: The device sustains no damage and meets the specifications if it is exposed to physical impact with its magnitude not exceeding this threshold during transit or installation. Destructive: Closed contacts of a relay remain closed for the specified time period if it is exposed to physical impact with its magnitude not exceeding this threshold during operation.
	Ambient temperature	Ambient temperature range over which the SSR operates normally under the specified heat dissipation and load current conditions.
	Storage temperature	Ambient temperature range over which an SSR can be safely stored for extended periods without sustaining damage or performance degradation.

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