Object = RECLOSER

Property	Description
(1) MonitoredObj	Full object name of the circuit element, typically a line, transformer, load, or generator, to which the Recloser's PT and/or CT are connected. This is the "monitored" element. There is no default; must be specified.
(2) MonitoredTerm	Number of the terminal of the circuit element to which the Recloser is connected. 1 or 2, typically. Default is 1.
(3) SwitchedObj	Name of circuit element switch that the Recloser controls. Specify the full object name.Defaults to the same as the Monitored element. This is the "controlled" element.
(4) SwitchedTerm	Number of the terminal of the controlled element in which the switch is controlled by the Recloser. 1 or 2, typically. Default is 1.
(5) NumFast	Number of Fast (fuse saving) operations. Default is 1. (See "Shots")
(6) PhaseFast	Name of the TCC Curve object that determines the Phase Fast trip. Must have been previously defined as a TCC_Curve object. Default is "A". Multiplying the current values in the curve by the "phasetrip" value gives the actual current.
(7) PhaseDelayed	Name of the TCC Curve object that determines the Phase Delayed trip. Must have been previously defined as a TCC_Curve object. Default is "D".Multiplying the current values in the curve by the "phasetrip" value gives the actual current.
(8) GroundFast	Name of the TCC Curve object that determines the Ground Fast trip. Must have been previously defined as a TCC_Curve object. Default is none (ignored). Multiplying the current values in the curve by the "groundtrip" value gives the actual current.
(9) GroundDelayed	Name of the TCC Curve object that determines the Ground Delayed trip. Must have been previously defined as a TCC_Curve object. Default is none (ignored).Multiplying the current values in the curve by the "groundtrip" value gives the actual current.
(10) PhaseTrip	Multiplier or actual phase amps for the phase TCC curve. Defaults to 1.0.
(11) GroundTrip	Multiplier or actual ground amps (3I0) for the ground TCC curve. Defaults to 1.0.
(12) PhaseInst	Actual amps for instantaneous phase trip which is assumed to happen in 0.01 sec + Delay Time. Default is 0.0, which signifies no inst trip.
(13) GroundInst	Actual amps for instantaneous ground trip which is assumed to happen in 0.01 sec + Delay Time.Default is 0.0, which signifies no inst trip.
(14) Reset	Reset time in sec for Recloser. Default is 15.
(15) Shots	Total Number of fast and delayed shots to lockout. Default is 4. This is one more than the number of reclose intervals.
(16) RecloseIntervals	Array of reclose intervals. Default for Recloser is (0.5, 2.0, 2.0) seconds. A locked out Recloser must be closed manually (action=close).
(17) Delay	Fixed delay time (sec) added to Recloser trip time. Default is 0.0. Used to represent breaker time or any other delay.
(18) Action	{Trip/Open	Close} Action that overrides the Recloser control. Simulates manual control on recloser "Trip" or "Open" causes the controlled

	element to open and lock out. "Close" causes the controlled element to close and the Recloser to reset to its first operation.
(19) TDPhFast	Time dial for Phase Fast trip curve. Multiplier on time axis of specified curve. Default=1.0.
(20) TDGrFast	Time dial for Ground Fast trip curve. Multiplier on time axis of specified curve. Default=1.0.
(21) TDPhDelayed	Time dial for Phase Delayed trip curve. Multiplier on time axis of specified curve. Default=1.0.
(22) TDGrDelayed	Time dial for Ground Delayed trip curve. Multiplier on time axis of specified curve. Default=1.0.
(23) basefreq	Base Frequency for ratings.
(24) enabled	{Yes|No or True|False} Indicates whether this element is enabled.
(25) like	

Object = RELAY

Property	Description
(1) MonitoredObj	Full object name of the circuit element, typically a line, transformer, load, or generator, to which the relay's PT and/or CT are connected. This is the "monitored" element. There is no default; must be specified.
(2) MonitoredTerm	Number of the terminal of the circuit element to which the Relay is connected. 1 or 2, typically. Default is 1.
(3) SwitchedObj	Name of circuit element switch that the Relay controls. Specify the full object name.Defaults to the same as the Monitored element. This is the "controlled" element.
(4) SwitchedTerm	Number of the terminal of the controlled element in which the switch is controlled by the Relay. 1 or 2, typically. Default is 1.
(5) type	One of a legal relay type: Current Voltage ReversePower 46 (neg seq current) 47 (neg seq voltage) Generic (generic over/under relay) Default is overcurrent relay (Current) Specify the curve and pickup settings appropriate for each type. Generic relays monitor PC Element Control variables and trip on out of over/under range in definite time
(6) Phasecurve	Name of the TCC Curve object that determines the phase trip. Must have been previously defined as a TCC_Curve object. Default is none (ignored). For overcurrent relay, multiplying the current values in the curve by the "phasetrip" value gives the actual current.
(7) Groundcurve	Name of the TCC Curve object that determines the ground trip. Must have been previously defined as a TCC_Curve object. Default is none (ignored).For overcurrent relay, multiplying the current values in the curve by the "groundtrip" valuw gives the actual current.
(8) PhaseTrip	Multiplier or actual phase amps for the phase TCC curve. Defaults to 1.0.
(9) GroundTrip	Multiplier or actual ground amps (3I0) for the ground TCC curve. Defaults to 1.0.
(10) TDPhase	Time dial for Phase trip curve. Multiplier on time axis of specified curve. Default=1.0.
(11) TDGround	Time dial for Ground trip curve. Multiplier on time axis of specified curve. Default=1.0.
(12) PhaseInst	Actual amps (Current relay) or kW (reverse power relay) for instantaneous phase trip which is assumed to happen in 0.01 sec + Delay Time. Default is 0.0, which signifies no inst trip. Use this value for specifying the Reverse Power threshold (kW) for reverse power relays.
(13) GroundInst	Actual amps for instantaneous ground trip which is assumed to happen in 0.01 sec + Delay Time.Default is 0.0, which signifies no inst trip.

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(14) Reset	Reset time in sec for relay. Default is 15. If
(15) Shots	Number of shots to lockout. Default is 4. This is one more than the number of reclose intervals.
(16) RecloseIntervals	Array of reclose intervals. If none, specify "NONE". Default for overcurrent relay is (0.5, 2.0, 2.0) seconds. Default for a voltage relay is (5.0). In a voltage relay, this is seconds after restoration of voltage that the reclose occurs. Reverse power relay is one shot to lockout, so this is ignored. A locked out relay must be closed manually (set action=close).
(17) Delay	Trip time delay (sec) for definite time relays. Default is 0.0 for current and voltage relays. If >0 then this value is used instead of curves. Used exclusively by RevPower, 46 and 47 relays at this release. Defaults to 0.1 s for these relays.
(18) Overvoltcurve	TCC Curve object to use for overvoltage relay. Curve is assumed to be defined with per unit voltage values. Voltage base should be defined for the relay. Default is none (ignored).
(19) Undervoltcurve	TCC Curve object to use for undervoltage relay. Curve is assumed to be defined with per unit voltage values. Voltage base should be defined for the relay. Default is none (ignored).
(20) kvbase	Voltage base (kV) for the relay. Specify line-line for 3 phase devices); line-neutral for 1-phase devices. Relay assumes the number of phases of the monitored element. Default is 0.0, which results in assuming the voltage values in the "TCC" curve are specified in actual line-to-neutral volts.
(21) 47%Pickup	Percent voltage pickup for 47 relay (Neg seq voltage). Default is 2. Specify also base voltage (kvbase) and delay time value.
(22) 46BaseAmps	Base current, Amps, for 46 relay (neg seq current). Used for establishing pickup and per unit I-squared-t.
(23) 46%Pickup	Percent pickup current for 46 relay (neg seq current). Default is 20.0. When current exceeds this value * BaseAmps, I-squared-t calc starts.
(24) 46isqt	Negative Sequence I-squared-t trip value for 46 relay (neg seq current). Default is 1 (trips in 1 sec for 1 per unit neg seq current). Should be 1 to 99.
(25) Variable	Name of variable in PC Elements being monitored. Only applies to Generic relay.
(26) overtrip	Trip setting (high value) for Generic relay variable. Relay trips in definite time if value of variable exceeds this value.
(27) undertrip	Trip setting (low value) for Generic relay variable. Relay trips in definite time if value of variable is less than this value.
(28) Breakertime	Fixed delay time (sec) added to relay time. Default is 0.0. Designed to represent breaker time or some other delay after a trip decision is made.Use Delay_Time property for setting a fixed trip time delay.Added to trip time of current and voltage relays. Could use in combination with inst trip value to obtain a definite time overcurrent relay.
(29) action	{Trip/Open	Close} Action that overrides the relay control. Simulates manual control on breaker. "Trip" or "Open" causes the controlled element to open and lock out. "Close" causes the controlled element to close and the relay to reset to its first operation.
(30) basefreq	Base Frequency for ratings.
(31) enabled	{Yes|No or True|False} Indicates whether this element is enabled.

Object = FUSE

Property	Description
(1) MonitoredObj	Full object name of the circuit element, typically a line, transformer, load, or generator, to which the Fuse is connected. This is the "monitored" element. There is no default; must be specified.
(2) MonitoredTerm	Number of the terminal of the circuit element to which the Fuse is connected. 1 or 2, typically. Default is 1.
(3) SwitchedObj	Name of circuit element switch that the Fuse controls. Specify the full object name.Defaults to the same as the Monitored element. This is the "controlled" element.
(4) SwitchedTerm	Number of the terminal of the controlled element in which the switch is controlled by the Fuse. 1 or 2, typically. Default is 1. Assumes all phases of the element have a fuse of this type.
(5) FuseCurve	Name of the TCC Curve object that determines the fuse blowing. Must have been previously defined as a TCC_Curve object. Default is "Tlink". Multiplying the current values in the curve by the "RatedCurrent" value gives the actual current.
(6) RatedCurrent	Multiplier or actual phase amps for the phase TCC curve. Defaults to 1.0.
(7) Delay	Fixed delay time (sec) added to Fuse blowing time determined from the TCC curve. Default is 0.0. Used to represent fuse clearing time or any other delay.
(8) Action	{Trip/Open | Close} Action that overrides the Fuse control. Simulates manual control on Fuse "Trip" or "Open" causes the controlled element to open and lock out. "Close" causes the controlled element to close and the Fuse to reset.
(9) basefreq	Base Frequency for ratings.
(10) enabled	{Yes|No or True|False} Indicates whether this element is enabled.