

1.1.1.1 Channel trip sealed-in

Determines whether or not a channel trip was held continuously for the seal-in duration and also whether or not the sealed-in trip is cleared by a valid manual reset.

This function is an FSM version of TCDR Channel trip sealed-in.

1.1.1.1.1 Inputs/Natural Language Expressions

Input	NL Expression	Reference
c_HLRparamtrip, c_HTHPparamtrip, c_HTLFparamtrip, c_HTLPParmtrip, c_HTRRDParmtrip, c_LogNparamtrip, c_MHLparamtrip, c_MLLparamtrip, c_NOPparamtrip, c_PLLparamtrip, c_SGFLPParmtrip, c_SGLLparamtrip	Any parameter tripped	Error: Reference source not found
c_Chantrip	-	Error: Reference source not found
m_ChantripReset, k_KeyStuck, k_ResetTime	Manual reset request	Error: Reference source not found

1.1.1.1.2 Initial Value

Name	Initial Value	Reference
PRIOR (Channel trip sealed-in)	True	TCDR

1.1.1.1.3 Output Units/Type

NL Expression	Type
Channel trip sealed-in	boolean

1.1.1.1.4 Definition

		<i>Result</i>
<i>Condition</i>		Channel trip sealed-in
Any parameter tripped	(c_ChainTrip = e_Trip) Held for (k_Sealindelay)	True
	NOT [(c_ChainTrip = e_Trip) Held for (k_Sealindelay)]	NC
NOT [Any parameter tripped]	Manual reset request	False
	NOT [Manual reset request]	NC

- Notes:
1. The value of Channel trip sealed-in shall also be stored in a redundant software variable (called sw_SealinWord) for the sole purpose of determining that the sealin value is not corrupted in any way, i.e. so that the value of Channel trip sealed-in can be compared against the value in sw_SealinWord.
 2. im_SealinDelay is used to evaluate "Held for (k_Sealindelay)"
 3. **If the channel trip can be cleared (following the clearing of a channel trip condition) at a time that is guaranteed not to exceed the seal-in delay limit, then the seal-in shall not be applied (i.e. to allow recovery from a transient noise spike). For example, a single noise spike on an analog input signal, such that the trip condition clears within 125 ms of the D/O opening, should not cause a channel trip seal-in. Note that a series of overlapping noise spikes shall cause a channel trip seal-in if the total duration of the channel trip D/O being open is more than 200 ms.**

1.1.1.1.5 Black-Box Predecessor

TCDR