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Category	■FAQ □SOP	Related OS	N/A
Abstract	WISE-4210 Node Status Indication		
Keyword	WISE-4210, Modbus		
Related Product	WISE-4210-AP, WISE-4210-S2XX		

■ **Problem Description:**

WISE-4210 AP adds Modbus address that indicating connection status of WISE-4210 node.

This document will show you each status's meaning and mechanism.

■ **Answer:**

➢ **Requirement:**
WISE-4210 AP FW: vA104B00_AP_vA104B01 or later

➢ **Modbus Address:**
The Modbus address of node status is **45306.** There are 4 different statuses and their definition:

Modbus value	Status	Definition
0	Connected	AP and node are successfully connected, the data transmission is normal. (Push/Downlink Mode)
1	Link Failure	AP fails to receive the data from node over Node Idle Time (Push Mode) AP fails to query the data from node for the first time (Downlink Mode)
2	Disconnected	AP fails to receive the data from node over three times Node Idle Time (Push Mode) AP fails to query the data from node for the third time (Downlink Mode)
3	Connecting	Node is added into the list of AP and waiting to be queried by AP. (Push/Downlink Mode)

➢ **Example:**

1. Push Mode

PC		AP			End node	Stituation
			Internal Status			
			1. Connected	<–	Reply A	A = Read value
			1. Connected	<–	Reply B	B = Read value
Read Status	–>					
	<–	Reply 1 (Connected)				
Read Value	–>					
	<–	Reply B				
			1. Connected		(No upload)	* Fail 1st time, Not yet Time out
Read Status	–>					
	<–	Reply 1 (Connected)				
Read Value	–>					
	<–	Reply B				
			1. Connected		(No upload)	Not yet Time out
			2. Link Failure		(No upload)	Time out happened
Read Status	–>					
	<–	2. Link Failure				
Read Value	–>					
	<–	Reply B				
			3. Disconnected		(No upload)	Over Timeout x 3 period
Read Status	–>					
	<–	Reply 3 (Disconnected)				
			1. Connected	<–	Reply C	* Recover Connection
						C = Read Value
Read Status	–>					
	<–	Reply 1 (Connected)				
Read Value	–>					
	<–	Reply C				

2. Downlink Mode

PC		AP				End node	Situation
			Internal Status				
			4. Connecting				The user has added node into list. The AP has not query node.
				Inquiry	->		
			1. Connected		<-	Reply A	A = Read value
				Inquiry	->		
			1. Connected		<-	Reply B	B = Read value
Read Status	->						
	<-	Reply 1 (Connected)					
Read Value	->						
	<-	Reply B					
				Inquiry	->		
			2. Link Fail			(No reply)	＊Fail 1st time (Based on polling interval)
Read Status	->						
	<-	Reply 2 (Link Fail)					
Read Value	->						
	<-	Reply B					
				Inquiry	->		
			2. Link Fail			(No reply)	＊Fail 2nd time
				Inquiry	->		
			3. Disconnected			(No reply)	＊Fail 3rd time
				Inquiry	->		
			3. Disconnected			(No reply)	＊Fail n time
Read Status	->						
	<-	Reply 3 (Disconnected)					
Read Value	->						
	<-	Reply B					
				Inquiry	->		
			1. Connected		<-	Reply C	＊Recover Connection
							C = Read Value
Read Status	->						
	<-	Reply 1 (Connected)					
Read Value	->						
	<-	Reply C					