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| Vendor: | ABB |
| Device: | TZIDC / TZIDC-200 |
| Protocol: | HART |

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| Type: | Digital Positioner |
| Application: | Electro-Pneumatic Valve Positioner |

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| | System 800xA | Asset Vision |
| Supported System versions: | SV4.1 (RU-Jun06) SV5.0 | v5.0 |

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| Device Object Type | ABB TZIDC-200 V2.2-HART |
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For detail information about supported system versions refer to HART Device Object Type ABB TZIDC-200 Version 2.x Release Notes (2PAA100306)



TZIDC/ TZIDC-200
Digital Valve Positioner
HART

Conditions monitored:

| Condition ID | SubCond | Description | Possible Cause | Suggested Action | Severity |
|------------------------------|---------|---|--|--|----------|
| DEVICE MALFUNCTION | | | | | |
| | Yes | Device self diagnostic has detected a problem with the device operation. | The device has detected a hardware error or failure | Read Additional Device Status provided by its DTM. | 1000 |
| CONFIGURATION CHANGED | | | | | |
| | Yes | Data belonging to the device's non-volatile data is altered and will get lost without running the device's non-volatile change procedure. | Either A write or set command has been executed or stroke / travel counters have increased | None | 1 |
| COLD START | | | | | |
| | Yes | Either device restart, self test or master reset has occurred. | Power has been removed and reapplied resulting in the re-initialization of the device. | If the problem persists, check power wiring. | 1000 |

| Condition ID | SubCond | Description | Possible Cause | Suggested Action | Severity |
|---|----------|--|--|--|----------|
| MORE STATUS AVAILABLE | | | | | |
| | Yes | Additional device status is available by using the DTM. | More status information is available than can be returned in the Field Device Status. | Read Additional Device Status provided by its DTM. | 1000 |
| ANALOG INPUT FIXED | | | | | |
| | Yes | Device ignores analog input signal, so the device does not respond to any setpoint changes. | The device's HART-address is <>0, | Use a HART configurator (DTM - Hand held) to set device's HART address to 0 | 1000 |
| ANALOG INPUT SATURATED | | | | | |
| | Yes | The analog input is beyond its limits. The device can't fulfill the requested positioning. | | Read Additional Device Status provided by its DTM. | 1 |
| NON-PRIMARY VARIABLE OUT OF LIMITS | | | | | |
| | Yes | One or more non-primary variables are out of limits | The process applied to a sensor, other than that of the Primary Variable, is beyond the operating limits of the device. | Read Additional Device Status provided by its DTM. | 1 |
| PRIMARY VARIABLE OUT OF LIMIT | | | | | |
| | Yes | The input value applied for the Primary Variable is beyond the device's operating limits | The input value applied for the Primary Variable is beyond the device's operating limits. | Check the device's mounting and configuration. | 1 |
| ANALOG INPUT VALIDATED | | | | | |
| | No | The analog input value for the primary variable is disturbed. | Problem with the devices current source - the system's Analog Output signal | Check the system-configuration | 1000 |
| POSITION SENSOR MALFUNCTION | | | | | |
| | Yes | Device Functionality related. Malfunction in position measurement | The device internal position sensor has a fault, or the cable linking sensor and PCB is broken | Replace device for repair | 1000 |
| POSITIONING TIME | | | | | |
| | Exceeded | Installation and Process related. The configured time-frame when the valve shall have reached the requested position is exceeded | Valve operates too slow or is immobile due to blockades, high friction or break down of supply pressure | Check valve, positioner, pneumatic connections and air supply | 1000 |
| POSITIONING CONTROLLER | | | | | |
| | Inactive | Installation and Process related. Position controller is deactivated | 1) Operation-Mode is set to MANUAL on MANUAL_SENS 2) The device's factory reset was performed 3) The device's control and working range parameters are invalid | 1) Check device's operation mode and change it to Mode CTRL_ADP or CTRL_FIX 2) & 3) Run the autoadjust procedure or configure the device's control-and range parameters | 750 |

| Condition ID | SubCond | Description | Possible Cause | Suggested Action | Severity |
|---------------------------------|-----------------------|---|---|--|----------|
| TOTAL VALVE STROKE | | | | | |
| | Exceeded | Configuration and process-load related. The configured limit for the applicable valve load regarding strokes has exceeded. | The configured limit for the applicable valve load regarding strokes has exceeded. | Check the valve within a close time-schedule | 500 |
| | Significantly changed | Configuration and process-load related. The number of valve strokes / time has significantly changed. | The process or valve conditions are supposed to have changed, which causes the valve to perform more frequent stroking. | Analyse the process data trended for all TAGs trended which are located around the valve. Check valve and installation. | 750 |
| TOTAL VALVE TRAVEL | | | | | |
| | Exceeded | Configuration and process-load related. The configured limit for the applicable valve load regarding total travel has exceeded. | The configured limit for the applicable valve load regarding total travel has exceeded. | Check the valve within a close time-schedule | 500 |
| VALVE LOAD | | | | | |
| | Will exceed | Configuration and process-load related. The configured limit for the applicable valve load regarding total travel and total strokes will exceeded within a AssetMonitor configurable time-frame | The configured limit for the applicable valve load regarding total travel and total strokes will exceeded within a AssetMonitor configurable time-frame | Schedule preventively a valve maintenance task for the next planned shutdown period | 500 |
| POSITIONING SENSOR RANGE | | | | | |
| | Out of Range | Installation and Process related. Working range not adjusted | If factory data were loaded (after factory reset) the working range settings would have been deleted | Adjust working range | 500 |
| | Out of Range | Installation and Process related. Value Limit Switch SW1 exceeded | Digital valve position / behaviour | to be described by application | 500 |
| | Out of Range | Installation and Process related. Value Limit Switch SW2 exceeded | Digital valve position / behaviour | to be described by application | 500 |
| SETPOINT | | | | | |
| | Out of Range | Installation and Process related. Analog Setpoint >20 mA or <4 mA | Error in system output or in wiring | Check system output or wiring | 500 |



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