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Using OID's

An OID is an “object identifier”. In computer networking the OID is used to identify an object that is stored in a Management Information Base (MIB). The MIB is a database that manages the devices used in a network setup. In this case, the OID’s are used to identify the objects, such as sensors, that are connected to your unit. Roughly speaking, each OID identifies a variable that can be read or set via an SNMP command.

All of the AKCP intelligent sensors are divided into three groups. All of the sensors in the same group have the same OID. The groups are as follows :-

1. The first group includes temperature sensors only;
sensorProbeTempDegree = 1.3.6.1.4.1.3854.1.2.2.1.16.1.3.X
sensorProbeTempStatus = 1.3.6.1.4.1.3854.1.2.2.1.16.1.4.X

2. The second group includes all analog sensors such as humidity, airflow, 4-20mA, and DC Voltage, excluding the temperature sensor.
sensorProbeHumidityPercent = 1.3.6.1.4.1.3854.1.2.2.1.17.1.3.X
sensorProbeHumidityStatus = 1.3.6.1.4.1.3854.1.2.2.1.17.1.4.X

3. The third group includes all switch-type sensors such as water sensor, dry contact, security, motion sensor, AC Voltage Detector, relay, and siren & strobe light.
sensorProbeSwitchStatus = 1.3.6.1.4.1.3854.1.2.2.1.18.1.3.X

Where: X is a port number starting from 0 to 7 for SP8, or 0 to 27 for SP8X20.

So for example an OID value that looks like this :-
.1.3.6.1.4.1.3854.1.2.2.1.16.1.3.0
Would be the value for a temperature sensor status connected to RJ45 port 1.

Note: *The dual temperature and humidity sensor consists of a temperature sensor (group1) and a humidity sensor (group2).*

Here is a list of OID's for the temperature sensor :-

Temperature OID's:

.1.3.6.1.4.1.3854.1.2.2.1.16.1.3.0 #this is the temperature 1
.1.3.6.1.4.1.3854.1.2.2.1.16.1.3.1 #this is the temperature 2
.1.3.6.1.4.1.3854.1.2.2.1.16.1.3.2 #this is the temperature 3
.1.3.6.1.4.1.3854.1.2.2.1.16.1.3.3 #this is the temperature 4
.1.3.6.1.4.1.3854.1.2.2.1.16.1.3.4 #this is the temperature 5
.1.3.6.1.4.1.3854.1.2.2.1.16.1.3.5 #this is the temperature 6
.1.3.6.1.4.1.3854.1.2.2.1.16.1.3.6 #this is the temperature 7
.1.3.6.1.4.1.3854.1.2.2.1.16.1.3.7 #this is the temperature 8

This shows the OID value for a temperature sensor connected to each port. As you can see the final digit changes from 0-7 showing the 8 ports of an SP8 unit.

Switch Type sensors (group 3):

OID's can be used to set a switch output to high. For example, if you wished to remotely activate a device then you could use an OID. The status of a switch (high/low) can be found using he following OID :-

.1.3.6.1.4.1.3854.1.2.2.1.18.1.3.x

Where "x" is the value (0-7 on 8 port unit) that the switch is connected.

If you wish to set the status of the switch to high then you can use the following OID :-

.1.3.6.1.4.1.3854.1.2.2.1.18.1.8.x

Again the "x" value is the port to which the switch is connected.

This can now be used for remote activation of a device. If a temperature sensor, for example, is connected on port 1 and a drycontact cable is connected on port 2, and the temperature exceeds the threshold, then the management software can send an SNMP Set to the drycontact on port 2 with the following command:

snmpset <ipaddress> <password> .1.3.6.1.4.1.3854.1.2.2.1.18.1.8.1 i 1

The **i** denotes an integer value

i can take 2 values: **1** = output high, **2** = output low

If set to high it will make the drycontact pins output +5V which can turn on a relay.

Note:
If you want to control an output of a Dry contact, DO NOT use online/offline to switch the dry contact on and off. Leave the Dry contact output online and use 'sensorProbeSwitchOutputLevel OID' instead.

snmpset -v1 -c <password> <ipaddress> .1.3.6.1.4.1.3854.1.2.2.1.18.1.8.0 i 0
This OID will tell port 1 to set to 0 Volts/Close

snmpset -v1 -c <password> <ipaddress> .1.3.6.1.4.1.3854.1.2.2.1.18.1.8.0 i 1
This OID will tell port 1 to set to +5 Volts/Open

Relay and Siren OIDs

We have special snmp OIDs for controlling relays and sirens. These are :-

sensorProbeSwitchManualRelayAction = .1.3.6.1.4.1.3854.1.2.2.1.18.1.25.x
Where: x is a port number from 0 to 7 for SensorProbe (SP2 , SP8 , SP8L and CP8)

The integer values of this OID are:
1 = Allow sensor to control
3 = Turn On
4 = Turn Off
7 = Cycle Off-On-Off
8 = Cycle On-Off-On

The SNMP OID for controlling relays is the following:

.1.3.6.1.4.1.3854.1.2.2.1.18.1.25.0

Integer Value :
1 = allow-sensor-control
3 = relay-turnon
4 = relay-turnoff
7 = cycle Off-On-Off
8 = cycle On-Off-On

Here is SNMP OID for reading the dry contact status:

.1.3.6.1.4.1.3854.1.2.2.1.18.1.3.(Port-1)

The return value can be:
noStatus(1),
normal(2),
highCritical(4),
lowCritical(6),
sensorError(7),

sensorProbeSwitchStatus = 1.3.6.1.4.1.3854.1.2.2.1.18.1.3.X

Where: X is a port number starting from 0 to 7 for SP8, or 0 to 27 for SP8X20.