DEPLOYMENT GUIDE

Somfy Digital Network RS485

SOMFY CONNECT™
BMS INTERFACE V2
for SDN and animeo® IP

somfy®

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SOMFY CONNECT™ BMS INTERFACE V2

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I. INTRODUCTION

The Somfy Organization's strength has been demonstrated with 50 years of experience in motorization. As leaders in the shading industry with innovation and modernization solutions for homes and commercial buildings, Somfy offers the widest range of strong, quiet motors and controls for all types of applications and technologies.

Who is this Guide for?

This guide is aimed at providing support and guidance to system integrators for deploying building management systems with Somfy Digital Network™ (SDN) motorized shading systems to create integrated projects operated using the Somfy Connect™ BMS Interface V2 for SDN and animeo® IP and industry standard BMS integration methods.

What does this Guide contain?

The sections of this guide contain detailed device object information needed for programming BMS controllers to communicate with the Somfy Connect™ BMS Interface V2 by sending and receiving signals via IP or serial connections.

This guide discusses the deployment details to communicate between BMS controls and SDN or animeo IP systems.

For questions or assistance please contact technical support:
(800) 22-SOMFY (76639)
technicalsupport_us@somfy.com

How should this Guide be used?

This guide is intended to be used as a reference manual.

Prior system preparation is detailed in the Somfy Connect BMS Interface V2 Programming Guide and should be followed prior to using this guide to complete system integration.

Product Overview

The Somfy Connect BMS Interface V2 provides control and feedback from a Somfy Stand-alone SDN or animeo IP system. The Somfy Connect BMS Interface is configurable to be part of BACnet/IP, BACnet MS/TP, Modbus, or Metasys N2 networks. It operates as a conduit into the Somfy Digital Network (SDN), capable of performing logic actions. The Somfy Connect BMS Interface V2 can support up to 4500 mapped device objects; the number of devices each unit can support will depend on the type of devices configured.

DEVICE OBJECT VALUES	
DEVICE	OBJECT VALUE PER DEVICE
Motor - SDN	3
Group - SDN	3
Sensor - animeo IP	1.7
Remote - animeo IP	18.2
Group - animeo IP	3.5
Actuator - animeo IP	19.2

Refer to the Somfy Connect BMS Interface V2 product page for supporting documentation.

II. SYSTEMS

STANDALONE SDN

NOTE: Only a single Somfy Connect BMS Interface can be connected to a Standalone SDN system.
All Modbus TCP/IP registers are the same as the Modbus RTU registers for the serial device.
The Modbus TCP/IP node address of the device is also the same as the Modbus RTU node address.

DEVICE OBJECTS:

GROUP DEVICE						*Read not available for Group devices*
DEVICE OBJECT PROPERTY	DESCRIPTION	BACNET OBJECT:		MODBUS REGISTER	METASYS N2:	
		TYPE	ID		TYPE	ID
Position (Percent)	Write to move group to specific percent position 0-100% scale: 0 = Fully Open, 100 = Fully Closed	AO	1	40001	AO	1
Position (Absolute)	Write to move group to specific pulse count position Upper to lower limit in pulse scale 0 = Fully Open, Lower Limit = Fully Closed	AO	2	40002	AO	2
Intermediate Position	Write to move group to intermediate position Recallable stop locations within the motor limits 16 locations can be set up within the motor (Positions 1-16)	AO	3	40003	AO	3
Go to Down Limit	Write active to move group to lower limit	BO	1	00001	DO	1
Go to Up Limit	Write active to move group to upper limit	BO	2	00002	DO	2
Stop	Write active to stop group during movement	BO	3	00003	DO	3

MOTOR (ACTUATOR) DEVICE						
DEVICE OBJECT PROPERTY	DESCRIPTION	BACNET OBJECT:		MODBUS REGISTER	METASYS N2:	
		TYPE	ID		TYPE	ID
Position (Percent)	Read current percent position of motor Write to move motor to specific percent position 0-100% scale: 0 = Fully Open, 100 = Fully Closed	AV	1	40001	AO	1
Position (Absolute)	Read current pulse count position of motor Write to move motor to pulse count position Upper to lower limit in pulse scale 0 = Fully Open, Lower Limit = Fully Closed	AV	2	40002	AO	2
Intermediate Position	Write to move motor to intermediate position Recallable stop locations within the motor limits 16 locations can be set up within the motor (Positions 1-16)	AO	1	40003	AO	3
Go to Down Limit	Write active to move motor to lower limit	BO	1	00001	DO	1
Go to Up Limit	Write active to move motor to upper limit	BO	2	00002	DO	2
Stop	Write active to stop motor during movement	BO	3	00003	DO	3

ANIMEO IP

NOTE: Any number of Somfy Connect BMS Interfaces can connect to an animeo IP system.

DEVICE OBJECTS:

SENSOR DEVICE				
DEVICE OBJECT PROPERTY	DESCRIPTION	BACNET OBJECT:		MODBUS REGISTER
		TYPE	ID	
Value	**Read current sensor value:** *(1 of 5 below)* Light – Lux = 0-65000 Wind Speed – meters per second Wind Direction – 0-360 degrees Precipitation – 1 = True, 0 = False Temperature – degrees Celsius	AI	1	30001
Value Temp Deg F	**Read Temperature** – degrees Fahrenheit	AI	2	30002
Value Windspeed mph	**Read Wind Speed** – miles per hour	AI	3	30003
Value Windspeed kn	**Read Wind Speed** – knots	AI	4	30004
Value Windspeed kmh	**Read Wind Speed** – kilometers per hour	AI	5	30005

VIRTUAL KEYPAD (REMOTE) DEVICE				
DEVICE OBJECT PROPERTY	DESCRIPTION	BACNET OBJECT:		MODBUS REGISTER
		TYPE	ID	
Position	**Read current percent position of local zone** 0-100% scale: 0 = Fully Open, 100 = Fully Closed	AI	1	30001
Angle	**Read current tilt angle of local zone** Lower tilt to upper tilt 0 to 90 or -90 to 90 depending on system configuration	AI	2	30002
Function	**Read current function owner of local zone (1-9)** 1 = default, 2 = localpccommand, 3 = localcommand, 4 = pcsecuritylock, 5 = fire, 6 = majorerror, 7 = keybuildinglock, 8 = securitytimer, 9 = comfortimer	MI	3	30003
Function Priority	**Read current function priority of local zone** Lower number = higher priority (12500 – 32000 range) See Appendix for system function priorities for animeo IP	AI	4	30004
Up	**Write active to move local zone to upper limit**	BV	5	00001
Down	**Write active to move local zone to lower limit**	BV	6	00002
Stop	**Write active to stop local zone during movement**	BV	7	00003
Move	**Write to move local zone to saved location** Recallable stop locations within motors limits Set within Somfy Connect BMS Interface (1 - # range)	MV	8	40001
Write Position	**Write to move local zone to specific percent position** 0-100% scale: 0 = Fully Open, 100 = Fully Closed	AV	9	40003
Write Angle	**Write to move local zone to specific tilt angle** Lower tilt to upper tilt 0 to 90 or -90 to 90 depending on system configuration	AV	10	40004
Reset	**Write true to release control of local zone**	BV	11	00004

GROUP DEVICE				*Read not available for Group devices*
DEVICE OBJECT PROPERTY	DESCRIPTION	BACNET OBJECT:		MODBUS REGISTER
		TYPE	ID	
Up	**Write active to move group to upper limit**	BV	1	00001
Down	**Write active to move group to lower limit**	BV	2	00002
Stop	**Write active to stop group during movement**	BV	3	00003
Move	**Write to move group to saved location** Recallable stop locations within motors limits Set within Somfy Connect BMS Interface (1 - # range)	MV	4	40001
Write Position	**Write to move group to a specific percent position** 0-100% scale: 0 = Fully Open, 100 = Fully Closed	AV	5	40003
Write Angle	**Write to move group to specific tilt angle** Lower tilt to upper tilt 0 to 90 or -90 to 90 depending on system configuration	AV	6	40004
Write Priority	**Write 12500-32000 to get priority of future commands for group** **Write -1 to clear blocks and reset priority to 12500** (-1, 12500-32000 range) See Appendix for system function priorities for animeo IP	AV	7	40002

MOTOR (ACTUATOR) DEVICE				
DEVICE OBJECT PROPERTY	DESCRIPTION	BACNET OBJECT:		MODBUS REGISTER
		TYPE	ID	
Position (Percent)	**Read current percent position of motor** 0-100% scale: 0 = Fully Open, 100 = Fully Closed	AI	1	30001
Angle	**Read current tilt angle of motor** Lower tilt to upper tilt 0 to 90 or -90 to 90 depending on system configuration	AI	2	30002
Type	**Read current control type of motor (1-10)** Type of control currently imposed on motor 1 = All, 2 = Auto, 3 = Comfort, 4 = Local, 5 = Security, 6 = Error, 7 = Block, 8 = Alarm, 9 = Disable Local, 10 = Reset Local	MI	3	30003
Owner	**Read current control owner of motor (1-7)** Owner currently controlling motor 1 = minor_error, 2 = major_error, 3 = keylock, 4 = fire, 5 = maintenance, 6 = remote controller id, 7 = block id	MI	4	30004
Function Priority	**Read current function priority of motor** Lower number = higher priority (12500 – 32000 range) See Appendix for system function priorities for animeo IP	AI	5	30005
Up	**Write active to move motor to upper limit**	BV	6	00001
Down	**Write active to move motor to lower limit**	BV	7	00002
Stop	**Write active to stop motor during movement**	BV	8	00003
Move	**Write to move motor to saved location** Recallable stop locations within motors limits Set within Somfy Connect BMS Interface (1 - # range)	MV	9	40001
Write Position	**Write to move motor to specific percent position** 0-100% scale: 0 = Fully Open, 100 = Fully Closed	AV	10	40002
Write Angle	**Write to move motor to specific tilt angle** Lower tilt to upper tilt 0 to 90 or -90 to 90 depending on system configuration	AV	11	40003
Write Priority	**Write 12500-32000 to get priority of future commands for motor** **Write -1 to clear blocks and reset priority to 12500** (-1, 12500-32000 range) See Appendix for system function priorities for animeo IP	AV	12	40004
Status	**Read current status of motor (0-14)** 0 = OK, 1 = Moving, 2 = Error, 3 = IPIO Unknown, 4 = IPIO NoResult, 5 = Overheated, 6 = Obstacle, 7 = No Results, 8 = Locked, 9 = Lock Error, 10 = Not Configured, 11 = Disabled, 12 = Unknown, 13 = Over Current, 14 = Encoder Error	MI	13	30006

APPENDIX

[APPENDIX A] ANIMEO IP PRIORITIES

1. DESCRIPTION

Animeo IP operates with a priority scale of 0 (highest) – 32000 (lowest). A Somfy Connect BMS Interface V2 command can be sent at a priority level between 12500 and 32000. A device priority level can be set individually. By default, the Somfy Connect BMS applies a priority of 12500 to all devices in the system. Changing a priority level of a device will only affect future commands and not affect previously sent commands. Once a command is sent to a device, it will remain locked at that priority level until unlocked by adjusting the device priority to -1; the device will not be able to be moved unless a command with a higher priority is sent to the device.

A Virtual Keypad priority is not able to be managed. When a command is sent to a Virtual Keypad, the lock will timeout based on the local command off delay programmed in animeo IP.

2. PRIORITY VALUES

PRIORITY TYPE	PRIORITY VALUE
ANIMEO IP SECURITY	0-12500
SOMFY CONNECT BMS (LIMIT)	12500
LOCAL PC COMMAND	13000
LOCAL COMMAND TIMER	14000
LOCAL COMMAND	15000
TIMER	19000
GET HEAT	20000
PRESERVE HEAT	21000
SUN	22000
DEFAULT	32000
CUSTOM DEFAULT	32000

SOMFY® is the leading global manufacturer of strong, quiet motors with electronic and app controls for interior window coverings and exterior solar protections. Over 270 million users worldwide enjoy the more than 200 million motors produced by Somfy. During the past 50 years, Somfy engineers have designed products for both the commercial and residential markets to motorize window coverings such as interior shades, wood blinds, draperies, awnings, rolling shutters, exterior solar screens and projection screens. Somfy motorization systems are easily integrated with security, HVAC and lighting systems providing total home or building automation.

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