# KNX

## Description

The KNX driver allows the FieldServer to transfer data to and from devices using KNX protocol. The Fieldbus connection is included with the FieldServer. The FieldServer can emulate a Passive Client.

The KNX driver enables data access from KNX networks to other FieldServer protocols. Most KNX data point types are supported, allowing communication to almost any kind of KNX device in the installation, such as temperature sensors, shutters, light switches, actuators, alarms etc. This allows BMS systems to access a KNX network using direct read and write of KNX configured groups. This setup does not require the use of ETS4 to configure the QuickServer KNX gateway.

The KNX protocol is a connectionless protocol and therefore supports multiple clients and multiple servers.

The QuickServer is intended to act as a Passive Client on the KNX bus and make information available to other protocols.

**NOTE: A KNX compatible power supply is required on the KNX network.**

## Connection Facts

| FieldServer Mode | Nodes | Comments |
|---|---|---|
| Client | 255 | Maximum number in a KNX bus zone |

## Formal Driver Type

Fieldbus

Passive Client

## Compatibility

| FieldServer Model | Compatible | FieldServer Model | Compatible |
|---|---|---|---|
| ProtoCessor | No | QuickServer FS-QS-10xx | No |
| ProtoCarrier | No | QuickServer FS-QS-12xx | Yes |
| ProtoNode | No | QuickServer FS-QS-20xx | No |
| ProtoAir | No | QuickServer FS-QS-22xx | No |

## Connection Information

**Connection Type:** KNX

**Baud Rates:** 9600 (FieldServer uses 19200 to communicate to the KNX modem in the FieldServer.)

**Data Bits:** 8

**Stop Bits:** 1

**Parity:** Odd Only

**Hardware Interface:** KNX TP

**Multidrop Capability:** Yes

## Devices Tested

| Device | Tested (FACTORY, SITE) |
|---|---|
| UP562/11 Siemens Binary Relay Output | FACTORY |
| UP220/21 Siemens Pushbutton Interface | FACTORY |
| E981.03 Elmos KNX Temperature, Pushbutton & Dimmer Demoboard | FACTORY |
| RMU720B/RMU730B Siemens Universal Controllers | SITE |
| Input MTN649908 | SITE |
| Switch MTN6174xx | SITE |

## Data Types Supported

| KNX Datapoint Name | Description | Recommended Data Array Value |
|---|---|---|
| DPT1 | 1-bit Binary Switch | BYTE |
| DPT2 | 2-bit Step Control | BYTE |
| DPT3 | 4-bit Dimming | BYTE |
| DPT4 | 8-bit Set | BYTE |
| DPT5 | 8-bit Unsigned Value | BYTE |
| DPT6 | 8-bit Signed Value | SINT16 |
| DPT7 | 16-bit Unsigned Value | UINT16 |
| DPT8 | 16-bit Signed Value | SINT16 |
| DPT9 | 16-bit Floating point value | FLOAT |
| DPT12 | 32-bit Unsigned Value | UINT32 |
| DPT13 | 32-bit Signed Value | SINT32 |
| DPT14 | 32-bit Float | FLOAT |
| DPT15 | 32-bit Access | UINT32 |
| DPT17 | 8-bit Scene Number | BYTE |
| DPT18 | 8-bit Scene Control | BYTE |
| DPT20 | 8-bit Enum Value | BYTE |

## Read Operations Supported

| FieldServer as a Client | FieldServer as a Server |
|---|---|
| Request Group Address Values | Respond to Group Requests |
| | Store Group Address Values |

## Write (Control) Operations Supported

| FieldServer as a Client | FieldServer as a Server |
|---|---|
| Broadcast Group Address Values | Broadcast Group Address Values |

## Unsupported Functions and Data Types

| Function | Reason |
|---|---|
| Programming messages | FieldServer is a data transfer device so programming messages are not required |

## Functions Described

The communication nature on a KNX network are best described using ARS, RDBX and WRBX functions as opposed to RDBC and WRBC functions.

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