# High voltage software modules LIB 520*4.1 A1

# Buyer's Guide

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Page 1
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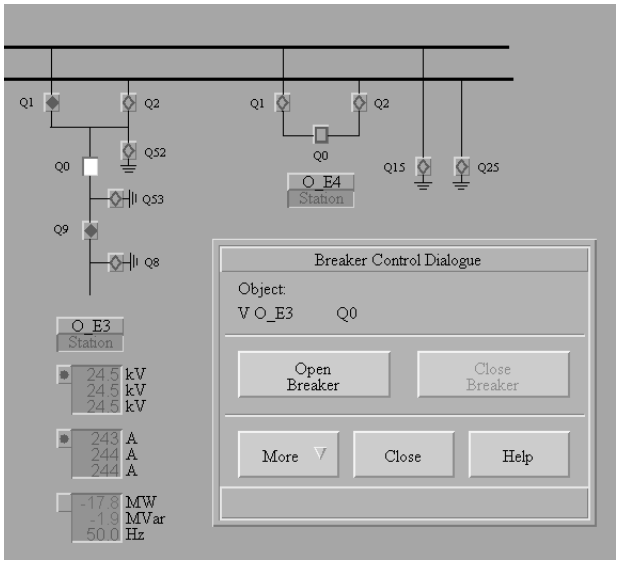
Data subject to change without notice




## Features

- LIST OF IEDs SUPPORTED FOUND IN TABLE 2 and TABLE 3.
- Consists of standard library functions for easy application engineering of a station HSI
- For REx 670 IEDs:
  - Supervision and control (HV/Control 670 package)
  - Automatic creation of process objects for Alarm and Event and automatic address mapping of the same. Works for pre-configured IEDs only (HV/IED 670 package).
- For REx 5xx IEDs:
  - Supervision and control (HV/Control package)
  - Supervision, monitoring and control of voltage on secondary side of power transformer (HV/VCTR package)
  - Collection of disturbances (HV/Collect package)
- Provides on-request information from REx 5xx IEDs, excluding RED 521, comprising:
  - setting and configuration of parameters
  - reading/resetting of indications
  - measured values at fault
  - service values from analogue and digital inputs
  - handling of spontaneous events and presentation in lists

  (HV/REx 500 package)
- Handling of spontaneous events and presentation in lists for RED 521 v 1.0 (HV/REx 500 package)

## Application

The LIB 520 package provides the following main functions:

- User interface for interaction with the control system and the controlled process.
- Automatic supervision and control
- Alarm and event handling
- Data acquisition, calculating and reporting

The high voltage software modules are a complement to the standard MicroSCADA software and provides an easy-to-build and easy-to-use HSI for supervision, control,

disturbance collection (REx 5xx only, not for REx 670 IEDs. PCM 600 has to be used for disturbance collection from REx 670) and SMS functionality in MicroSCADA.

The software is made for high voltage IEDs, and are providing the same user interface as the LIB 500/510 standard library functions.

## Design

The modules are designed as Micro-LIBRARY functions for easy installation and configuration of the standard functions.

The control functions in HV/Control and HV/Control 670 are designed to match the design of the bay and apparatus controls in the control IEDs REC 561 and REC 670, respectively.

The supervision, monitoring and control functions in HV/VCTR are designed to match the design of the voltage control function in the transformer differential protection RET 521.

The module HV/Collect is designed for collection of disturbances from REx 5xx IEDs only. PCM 600 has to be used for collection of disturbances from REx 670 IEDs.

For communication between the IEDs and the MicroSCADA, a normal SPA or LON communication setup must be made. In the case of REx 670 IEDs, only LON communication is supported.

HV/REx 500 is the software module for parameter setting and event handling of the corresponding protection terminal in the REx 5xx series.

HV/IED 670 is the software module to use with pre-configured REx 670 IEDs for automatic creation of process objects for Alarm and Event and automatic address mapping of the same.

The basic REL 5xx comes with a single command block. Picture functions to be made during the engineering process.

## Technical data

**Table 1: General requirement**

| |
|---|
| LIB 520 4.1 requires the MicroSCADA release 8.4.4 or newer. |

**Table 2: Serial communication IED REx 5xx**

| IED REx 5xx[a)] | Note |
|---|---|
| REL 501*2.0, REL 501*2.3, REL 511*2.0, REL 511*2.2, REL 511*2.3, REL 521*2.0, REL 521*2.2, REL 521*2.3, REL 521*3.0, REL 531*2.0, REL 531*2.3, REL 531*3.0, REL 531*3.1, REL 551*2.0, REL 551*2.3, REL 561*2.0, REL 561*2.3, REL 561*3.0, REL 561*3.1, REB 551*2.0, REB 551*2.2, REB 551*2.3, REC 561*2.0, REC 561*2.3, REO 517*2.1, REO 517*2.4, RES 505*2.3 | SPA/IEC 60870-5-103 interface<br>LON interface |
| RET 521*2.0, RET 521*2.1, RET 521*2.3, RET 521*2.4, RET 521*3.0, RET 521*3.1, | SPA interface<br>LON interface |
| RED 521*1.0 | LON interface(events) |

a) When ordering HV/REL 501, 511, 521, 531, 551, 561, REB 551, REC 561 for terminal versions earlier than 2.0, please contact an ABB Power Technologies sales representative for technical clarification.

**Table 3: Serial communication IED REx 670**

| IED REx 670 | Note |
|---|---|
| REL 670*1.0, RED 670*1.0, RET 670*1.0, REB 670*1.0, REC 670*1.0 | LON interface |
| REL 670*1.1, RED 670*1.1, RET 670*1.1, REB 670*1.1, REC 670*1.1, REG 670*1.1 | LON interface<br>LIB 520 4.1 A1 needed |

**Table 4: Fibre optic loop data**

| Type | Maximum fibre length |
|---|---|
| Plastic fibre cable | 30 m (between two units) |
| Glass fibre cable | 500 m (between two units) |

**Table 5: Summary of software packages in LIB 520 4.1**

| Software module |
|---|
| HV/Control |
| HV/Collect |
| HV/REx 500 |
| HV/VCTR |
| HV/Control 670 |
| HV/IED 670 |

## Ordering

Ordering of licenses is done using the Micro SCADA Ordering Tool. There is a specific tool for every SYS version.

The software can be downloaded from www.abb.com/microscada, or be delivered on a CD (currently not available).

| Software modules<br>Type designation | for MicroSCADA version 8.4.4 or later (Windows 2000 and XP) Ordering No. | Printed user's manual excl. software modules[a)] |
|---|---|---|
| HV/Control*2.5-00 | --[b)] | 1MRK 511 118-UEN |
| HV/Collect*3.1-00 | --[b)] | 1MRK 511 117-UEN |
| HV/VCTR*2.3-00 | --[b)] | 1MRK 511 116-UEN |
| HV/REx 500*4.1-00 | --[b)] | 1MRK 511 119-UEN |
| HV/Control 670*1.0-01 | --[b) c)] | 1MRK 511 180-UEN |
| HV/IED 670*1.0-00 | --[b)] | 1MRK 511 181-UEN |

a) Please contact ABB Power Technologies AB.
b) CD is currently not available, thus no ordering number
c) HV/Control 670*1.0-01 included in LIB 520 4.1 A1 package

For previous versions of MicroSCADA please refer to "LIB 520 Compatibility Overview", see references.

## References

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|---|---|
| Substation Automation Concept | 1MRK 500 060-BEN |
| PST User's Manual | 1MRK 511 112-BEN |
| LIB 520 Compatibility Overview | 1MRK 511 124-REN |

## Manufacturer

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