

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Visit our website - *Click HERE*

USB Communication converter

COM-K Instruction Manual

IMR01Z01-E3

Thank you for purchasing this RKC product. In order to achieve maximum performance and ensure proper operation of your new instrument, carefully read all the instructions in this manual. Please place this manual in a convenient location for easy reference.

CAUTION

- This is a Class A instrument. In a domestic environment, this instrument may cause radio interference, in which case the user may be required to take adequate measures.
- All precautions described in this manual should be taken to avoid damage to the instrument or equipment.

NOTICE

- This manual assumes that the reader has a fundamental knowledge of the principles of electricity, process control, computer technology and communications.
- The figures, diagrams and numeric values used in this manual are only for purpose of illustration.
- RKC is not responsible for any damage or injury that is caused as a result of using this instrument, instrument failure or indirect damage.
- RKC is not responsible for any damage and/or injury resulting from the use of instruments made by imitating this instrument.
- Periodic maintenance is required for safe and proper operation of this instrument. Some components have a limited service life, or characteristics that change over time.
- Every effort has been made to ensure accuracy of all information contained herein. RKC makes no warranty expressed or implied, with respect to the accuracy of the information. The information in this manual is subject to change without prior notice.
- No portion of this document may be reprinted, modified, copied, transmitted, digitized, stored, processed or retrieved through any mechanical, electronic, optical or other means without prior written approval from RKC.

1. PRODUCT CHECK

Before using this product, check each of the following:

- Model code
- Check that all of the accessories delivered are complete.
- Check that there are no scratch or breakage in external appearance (case, front panel, terminal, etc).

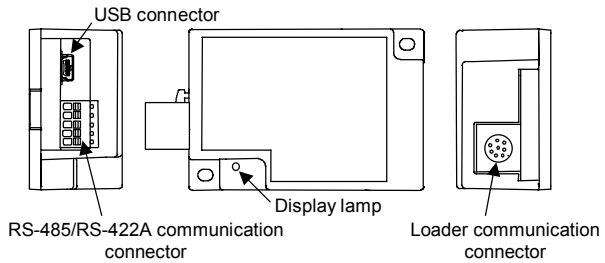
COM–K– □
(1)

(1) Loader communication cable (Option)
N: None
1: With loader communication cable (1.5 m)

Accessories
USB cable 1
3.5 inches floppy disk (USB device driver) 1
Instruction Manual (IMR01Z01-E3)..... 1

If any of the products are missing, damaged, or if your manual is incomplete, please contact RKC sales office or the agent.

2. PARTS DESCRIPTION



- Display lamp

Loader power	Communication state	Lamp state
Supply the power	Standby/during data receive	A orange lamp turns on
	During data send	A orange lamp is flashing
Power not supplied	Standby/during data receive	A green lamp turns on
	During data send	A green lamp is flashing

3. MOUNTING

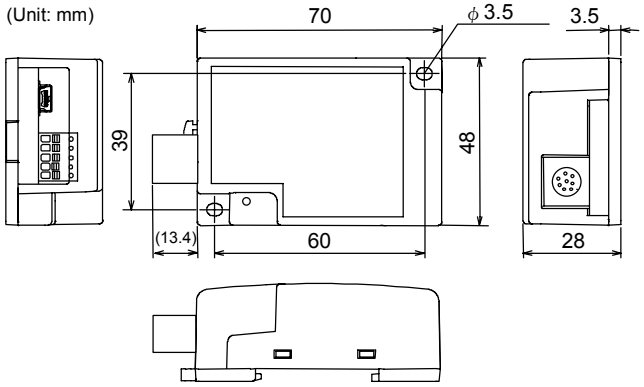
■ Mounting Cautions

(1) Use this instrument within the following ambient temperature and ambient humidity.
- Allowable ambient temperature: −10 to +50 °C
- Allowable ambient humidity: 5 to 95 % RH
(Absolute humidity: MAX. W. C 29 g/m^3 dry air at 101.3 kPa)

(2) Avoid the following when selecting the mounting location:
- Rapid changes in ambient temperature, which may cause condensation.
- Corrosive or inflammable gases.
- Direct vibration or shock to the mainframe.
- Water, oil, chemicals, vapor or steam splashes.
- Excessive induction noise, static electricity, magnetic fields or noise.
- Direct air flow from an air conditioner.
- Exposure to direct sunlight.
- Excessive heat accumulation.

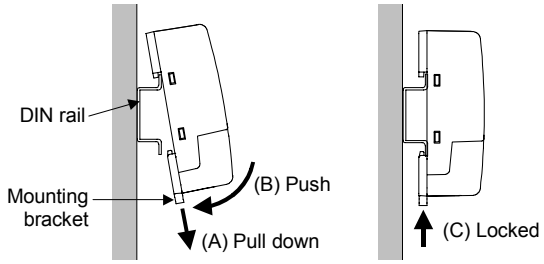
(3) Mounting consideration
- Install the module 200 mm away from the main power line.
- Ensure at least 50 mm space on top and bottom of the control unit for maintenance and environmental reasons.

■ Dimensions



■ DIN rail Mounting

1. Pull down the mounting bracket at the bottom of the module (A). Attach the hooks on the top of the module to the DIN rail and push the lower section into place on the DIN rail (B).
2. Slide the mounting bracket up to secure the module to the DIN rail.



■ Panel Mounting

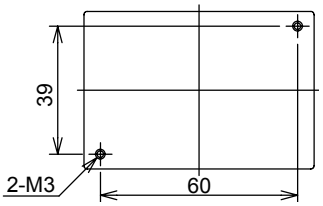
Mount COM-K directly on the panel with screws which are inserted in the mounting holes of the top and bottom mounting brackets.

Recommended tightening torque: 0.3 N·m (3 kgf·cm)

The customer needs to provide the M3 size screws. Select the screw length that matches the mounting panel.

Mounting dimensions

(Unit: mm)



All Rights Reserved, Copyright © 2004, RKC INSTRUMENT INC.

4. WIRING

⚠ WARNING

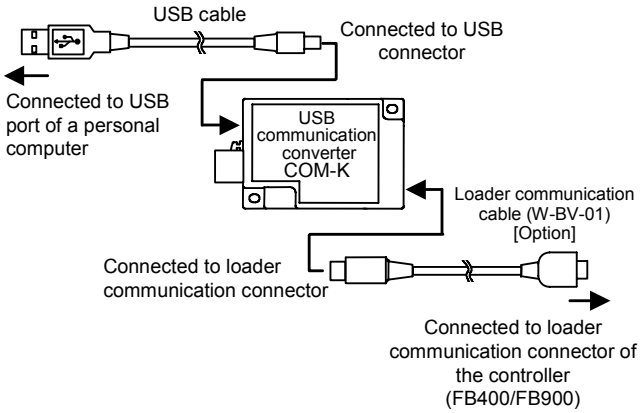
To prevent electric shock or instrument failure, turn off the power before connecting or disconnecting the instrument and peripheral equipment.

■ Wiring Cautions

To avoid noise induction, keep communication signal wire away from instrument power line, load lines and power lines of other electric equipment.

■ Method to connect

(1) For loader communication

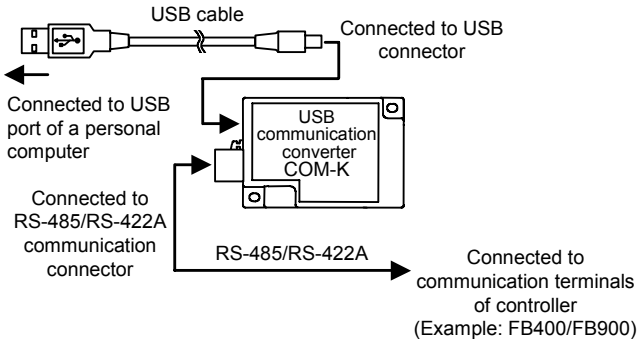


While loader communication is being performed, DO NOT turn on or off the instrument power supply (e.g. FB400/FB900). The loader may be stopped.
Please refer to our web site http://www.rkcinst.com for how to communicate to FB series with a COM-K.

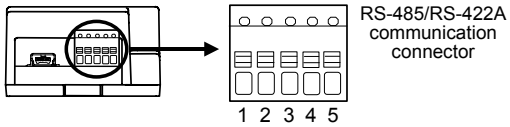
The COM-K can be connected at either the power turned ON or OFF of the controller. When the power of the controller is turned off, COM-K supplies power to the controller after approximately 2 seconds.

While the power is being supplied from the COM-K, the "----" is displayed on the PV/SV display of the controller.

(2) For RS-485/RS-422A communication



● Connector pin configuration



[RS-485]

Pin No.	Signal name	Symbol
1	Signal ground	SG
2	Send data/ Receive data	T/R (A)
3	Send data/ Receive data	T/R (B)
4 *	Unused	—
5 *	Unused	—

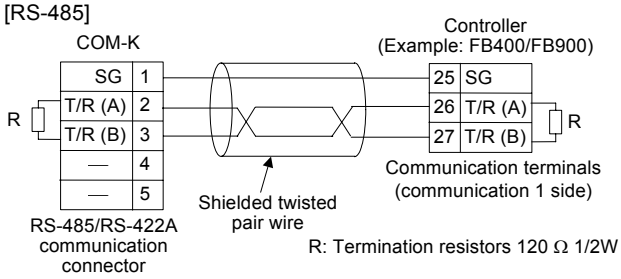
[RS-422A]

Pin No.	Signal name	Symbol
1	Signal ground	SG
2	Send data	T (A)
3	Send data	T (B)
4	Receive data	R (A)
5	Receive data	R (B)

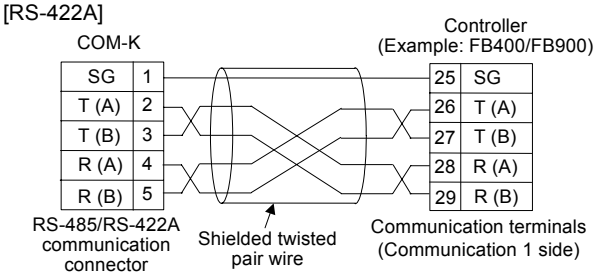
* Do not connect wires to 4 and 5 pins. Malfunction may result.

● Connection diagram

[RS-485]

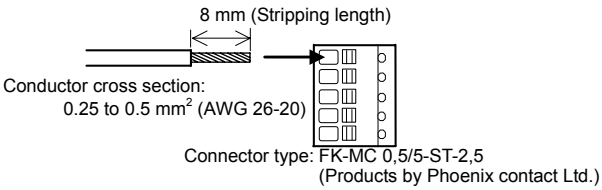


[RS-422A]



● Attention in connector wiring

- The lead wires use the stranded wire.
- Use the stranded wire from size 0.25 to 0.5 mm^2 (AWG 26-20).
- Stripping length is as follows.



■ Installation of USB device driver

Installs an USB device driver in a personal computer before use.

1. Connect COM-K to USB port of a personal computer.
2. Install an USB device driver from attached floppy disk according to an on screen instruction.

5. SPECIFICATIONS

USB function

Interface: Based on USB Ver. 2.0
Communication speed: Full speed (12 Mbps)
Connection: Connected by universal USB cable (Mini-B connector)
Power source method: Bus power (The power is supplied from the USB port on the personal computer side)
Compatible OS: Windows XP/ 2000 Professional/ Me/ 98 Second Edition

Communication function

Interface: Based on RS-485, EIA standard
Based on RS-422A, EIA standard
Connection method: 2-wire system, half-duplex multi-drop connection (RS-485)
4-wire system, half-duplex multi-drop connection (RS-422A)
Synchronous method: Half-duplex start-stop synchronous type
Communication speed: 2400 bps, 4800 bps, 9600 bps, 19200 bps, 38400 bps
Data bit configuration: Start bit: 1
Data bit: 7 or 8
Parity bit: Without, Odd or Even
Stop bit: 1 or 2
Protocol: Protocol depends on application of the personal computer side
Number of connecting controllers
Maximum 31 controllers (RS-485, RS-422A)
Termination resistor: Externally connected (RS-485)

General specifications

Power supply voltage: 5 V DC ±5 % (Supplied by USB bus cable)
Current consumption: 150 mA max. (Loader communication)
60 mA max. (RS-485/RS-422A communication)
Allowable ambient temperature range:
−10 to +50 °C
Allowable ambient humidity range:
5 to 95 %RH (Non condensing)
Absolute humidity:
MAX.W.C 29 g/m^3 dry air at 101.3 kPa
Weight: Approx. 40 g

RKC INSTRUMENT INC. The first edition: DEC. 2004 [IMQ00]
The third edition: AUG. 2005 [IMQ00]

HEADQUARTERS: 16-6, KUGAHARA 5-CHOME, OHTA-KU TOKYO 146-8515 JAPAN
PHONE: 03-3751-9799 (+81 3 3751 9799) E-mail: info@rkcinst.co.jp
FAX: 03-3751-8585 (+81 3 3751 8585)

AUG. 2005

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP