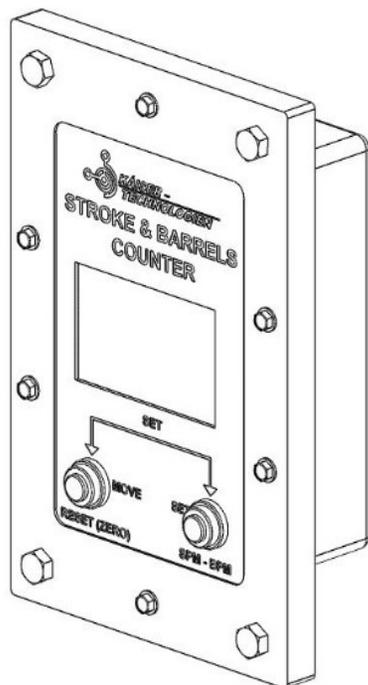


Stroke and Barrels Counte

Operation Guide

DXK-STC03/04/05/07



For details on the advanced operations, please refer to Web Site.

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WARNING

To reduce fire or shock hazard, do not expose the unit to rain.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT SAFEGUARDS

For your protection, please read these safety instructions completely before operating the appliance, and keep this manual for future reference.

Carefully observe all warnings, precautions and instructions on the appliance, or the one described in the operating instructions and adhere to them.

Use

Power Sources

This set should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of electrical power supplied to your home, consult your dealer or local power company. For those sets designed to operate from battery power, or other sources, refer to the operating instructions.

Polarization

This set may be equipped with a polarized ac power cord plug (a plug having one blade wider than the other).

This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the polarized plug by forcing it in.

Overloading

Do not overload wall outlets, extension cords or convenience receptacles beyond their capacity, since this can result in fire or electric shock.

Object and Liquid Entry

Never disassemble the unit when connected, as they may touch dangerous voltage points or short-circuit parts that could cause fire or electric shock. Never spill liquid of any kind on exposed circuits.

Attachments

Do not use attachments not recommended by the manufacturer, as they may cause hazards.

Cleaning

Do not use liquid or aerosol cleaners that contain solvents. Use a cloth slightly dampened with water to clean the outside of the appliance.

Installation

Water and Moisture

The equipment has IP65 protection, which is why it is protected against water and humidity for unsightly environments.

Power-Cord Protection

Route the power cord so that it is not likely to be walked on or pinched by items placed upon or against them, paying particular attention to the plugs, receptacles, and the point where the cord exits.

Accessories

Do not place the set on an unstable cart, stand, tripod, bracket, or table. The set may fall, causing serious injury to a adult, and serious damage to the set. Use only a cart, stand, tripod, bracket, or table recommended by the manufacturer.

Ventilation

The unit does not need external ventilation or forced ventilation, since the unit does not produce the necessary heat to need it. If you have ventilation slots, carry out the following instructions:

- Never cover the slots and openings with a cloth or other materials.
- Never block the slots and openings by placing the set on a bed, sofa, rug, or other similar surface.
- Never place the set in a confined space, such as a bookcase, or built-in cabinet, unless proper ventilation is provided.
- Do not place the set near or over a radiator or heat register, or where it is exposed to direct sunlight.

Lightning

For added protection of this equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from power

and connect the antenna or cable system. This will prevent equipment damage due to lightning strikes and power line surges.

Service

Damage Requiring Service

Unplug the set from power and refer servicing to qualified service personnel under the following conditions:

- When the power cord or plug is damaged or frayed.
- If there is evidence of liquids or humidity inside the device.
- If the set has been exposed to explosion or fire.
- If the set has been subject to excessive shock by being dropped, or the cabinet has been damaged.
- If the set does not operate normally when following the operating instructions. Adjust only those controls that are specified in the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the set to normal operation.
- When the set exhibits a distinct change in performance - this indicates a need for service.

Servicing

Do not attempt to repair the appliance yourself, as opening or removing the covers may expose you to dangerous voltages or other hazards, or further damage the equipment.

Refer all service to qualified service personnel.

Replacement parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original parts.

Unauthorized substitutions may result in fire, electric shock, or other hazards.

Safety Check

Upon completion of any service or repairs to the set, ask the service technician to perform routine safety checks (as specified by the manufacturer) to determine that the set is in safe operating condition.

Read this first

Before operating the unit, please read this manual thoroughly, and retain it for future reference.

CAUTION

In case of using a battery, replace it only with the specified type. Failure to do so could result in fire or injury, or irreparable damage to the equipment.

For customers in the U.S.A. and CANADA

RECYCLING LITHIUM-ION BATTERIES

Lithium-Ion batteries are recyclable.

You can help preserve our environment by returning your used rechargeable batteries to the collection and recycling location nearest you.



For more information regarding recycling of rechargeable batteries, call toll free 1-800-822- 8837, or visit <http://www.rbrcl.org/>

Caution: Do not handle damaged or leaking Lithium-Ion batteries.

Owner's Record

The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call your Kaiser Technology dealer regarding this product.

Model No. DXK-_____

Serial No. _____

Model No. DXK-_____

Serial No. _____

For customers in the LATAM

If you have any questions about this product, you may call:
Kaiser Technology Customer Information Center +57 3155003171

Regulatory Information

Declaration of Conformity

Trade Name: Kaiser

Model No.: DXK-STC01

Responsible Party: Kaiser Technology
Address: Palermo Park Floor 2, Neiva, Colombia

Telephone number: +57 315-6038991

This device complies with the Article NEC500
Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Trade Name: Kaiser

Model No.: DXK-STC02

Responsible Party: Kaiser Technology
Address: Palermo Park Floor 2, Neiva, Colombia

Telephone number: +57 315-6038991

This device complies with the Article NEC500
Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Table of Contents

Declaration of Conformity
 Trade Name: Kaiser
 Model No.: DXK-STC03
 Responsible Party: Kaiser Technology
 Address: Palermo Park Floor 2, Neiva, Colombia
 Telephone number: +57 315-6038991
 This device complies with the Article NEC500
 Operation is subject to the following two conditions:
 (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Declaration of Conformity
 Trade Name: Kaiser
 Model No.: DXK-STC04
 Responsible Party: Kaiser Technology
 Address: Palermo Park Floor 2, Neiva, Colombia
 Telephone number: +57 315-6038991
 This device complies with the Article NEC500
 Operation is subject to the following two conditions:
 (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Declaration of Conformity
 Trade Name: Kaiser
 Model No.: DXK-STC05
 Responsible Party: Kaiser Technology
 Address: Palermo Park Floor 2, Neiva, Colombia
 Telephone number: +57 315-6038991
 This device complies with the Article NEC500
 Operation is subject to the following two conditions:
 (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notes

DXK-STC series equipment must be used only with company-authorized accessories and devices.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

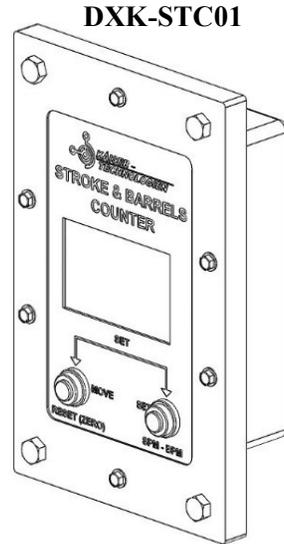
The supplied interface cable must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

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Information

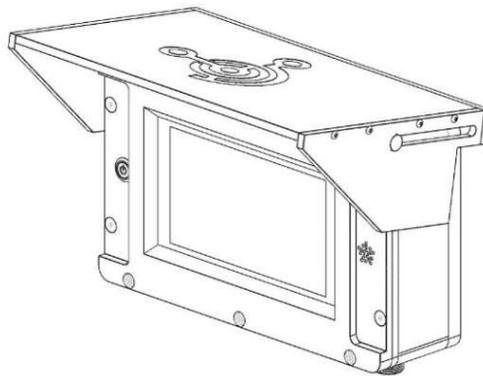
Control Module detail (Basic Model) DXK-STC01

- Dedicated technology for counting strokes.
- Double foam seal for protection against fluids and dust.
- Screen 3.2 inch TFT color.
- Auto Power ON.
- 2 physical buttons for configuration and control.
- Stroke Count (0-99999).
- Barrels Count (0-99999).
- Sensor (Limit Switch, Optical, Capacitive).
- Operating Temperature (-10 to 65 °C).
- Configurable interface according to customer requirements.
- Calibration from control module.
- DC Source 6 to 30Vdc.



Control Module detail (High Performance) DXK-STC03-04-05-07

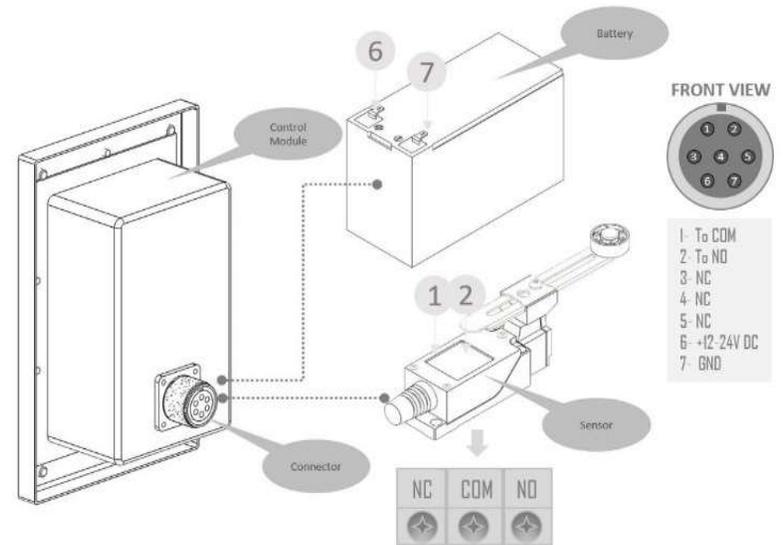
- Dedicated technology for counting strokes.
- Double foam seal for protection against fluids and dust.
- Screen (3-4-5-7) inch TFT color.
- Auto Power ON.
- 6 physical buttons for configuration and control or touch screen.
- Stroke Count (0-99999).
- Barrels Count (0-99999).
- Sensor (Limit Switch, Optical, Capacitive) for 1-2-3 or 4 Pump.
- Operating Temperature (-10 to 65 °C).
- Configurable interface according to customer requirements.
- Calibration from control module.
- DC Source 6 to 30Vdc.
- Data logger.
- Real - Time transmission of data to web server.
- Explosión-Proof sructure NEC 500 article.



Download our Catalog



Step 1: Connections



1 Make the data cable connections.

The data cable is connected directly to the proximity sensor or contact sensor, it is necessary to remember that for the proximity sensor there are 3 cables necessary for the connection, and for the contact sensor only 2 are needed.

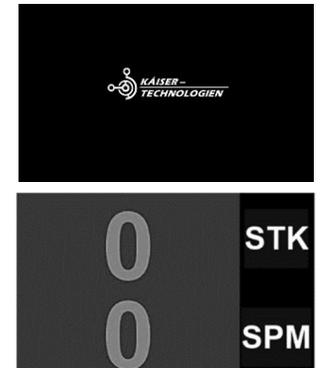
2 Make power cord connection.

The power cable consists of 2 pins (+12 to 36Volt DC) and GND.

3 Power ON the unit.

Once the unit is connected to the power source, the unit will automatically start with a loading screen and starting the counter, once finalize the boot screen

The “STROKES” screen will start which shows the accumulated STK “STROKES” and the SPM (STROKES PER MINUTE).

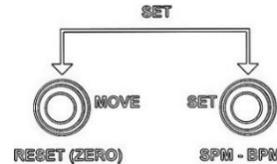


During the startup screen, the system loads the stored variables for the calculation of the stipulated values for the Stroke count and barrel calculations.

Step 2: Operation

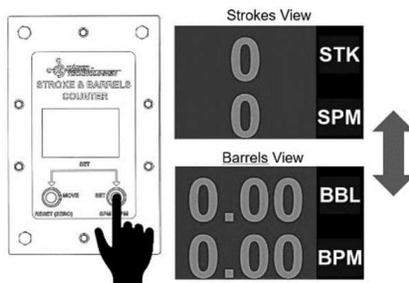
“Standard Model”

For the operation of the unit, there are two buttons, one for navigation and the other for configuring



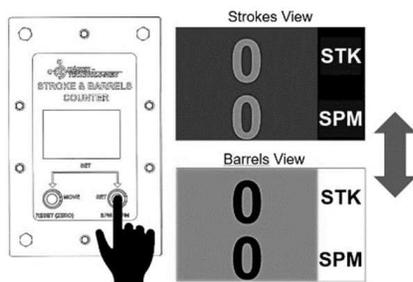
1 Switch between “Strokes” and “Barrels”.

Pressing the SPM-BPM button we will toggle the display mode between Strokes and Barrels of the triplex pump.



2 Change display color.

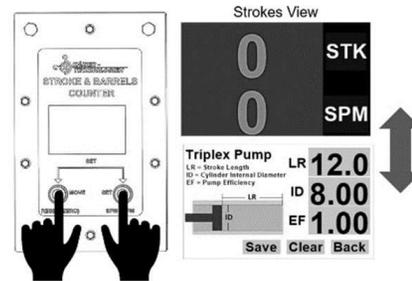
To change the display color, it is necessary to hold down the SPM-BPM button for 5 seconds and again for 5 seconds to return to the initial screen.



3 Enter configuration mode.

The unit can be configured according to the parameters of the pump where the system will be installed.

To do this, press the RESET and SMP-BPM buttons for 5 seconds to enter the configuration module.



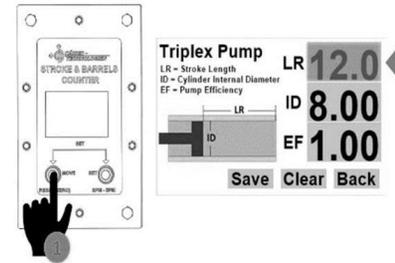
4 Configure pump parameters.

The MOVE and SET buttons will be used to configure the parameters.

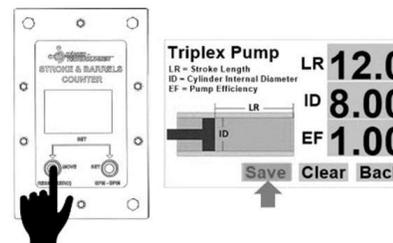
MOVE: it is used to move through the boxes that its variables can be modified, they will be highlighted in yellow.

SET: used to modify the values of the selected yellow box, or press the selected button.

Set the values for LR, ID, EF, position on the respective box with the MOVE key then change the value of the cell with the SET key, if you make a mistake you can clear the value of all the boxes by scrolling to the CLEAR button and pressing the button. SET.



After setting the box values, move the indicator to the SAVE button and press the SET button, then move the indicator to the BACK button and press the SET button to return to the initial screen.



Equations for Calculations.

LR = Stroke pump stroke length (inch).

ID = Internal diameter of the pump cylinder liner (inch).

EF = percentage of pump working efficiency from 0.80 - 1.

$$0.000243 * ID^2 * LR * EF$$

Note: "all values have to be expressed in inches"

Step 3: Operation “Bluetooth Version”.

To configure the unit, commands must be sent through a bluetooth serial connection, from a computer or mobile app.

1 Recommendations.

To perform the configuration quickly, it is recommended to download a mobile app (Serial terminal) to send the commands to configure the LR, ID, EF parameters of the pump.

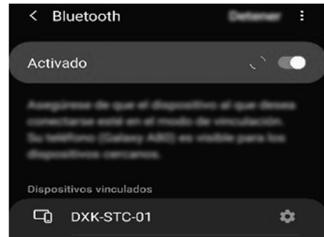
for example "serial Bluetooth Terminal" in google play



2 Pair Bluetooth.

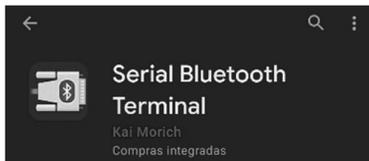
Pair bluetooth of the equipment with the bluetooth of the cell phone.

Make sure the **DXK-STC01** is turned on, then turn on the bluetooth of your cell phone. then enter **SETTINGS / BLUETOOTH / SEARCH DEVICES**, link with "**DXK-STC-01**" no password required.

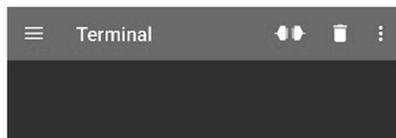


3 Install and open the mobile APP

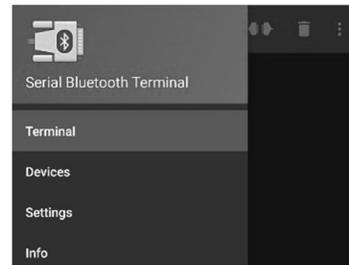
Download the APP on google play and install



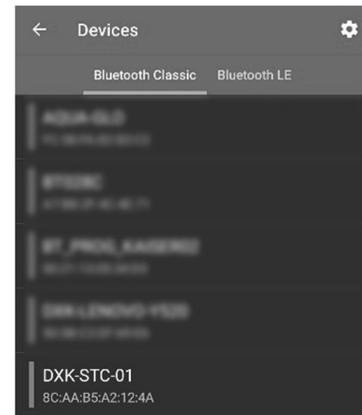
Open the app and click on the three lines in the upper left to display the menu.



Select the option "Devices"

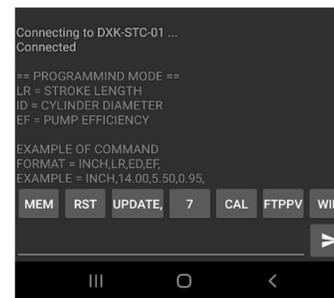


and connect with the device "**DXK-STC-01**" in the list of paired devices, at the same time restart the **DXK-STC01** equipment to enter "**Programming Mode**".



4 Send command and configure.

Once connected with the device, a successful connection message will be displayed, and a message with the format and command to configure the pump parameters.



the command "**INCH,LR,ID,EF,**" updates the parameters for:

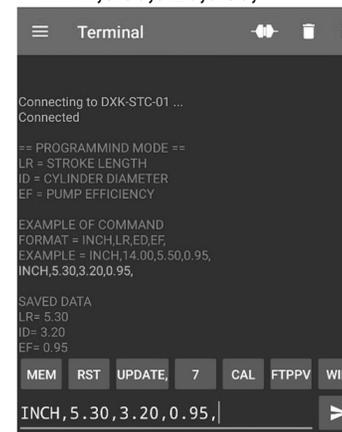
LR = Stroke length.
ID = Internal diameter of the cylinder.
EF = Pump efficiency.

Command format:
INCH,0.00,0.00,0.00,

NOTE: The data entered must be in inches, with 2 decimal digits.

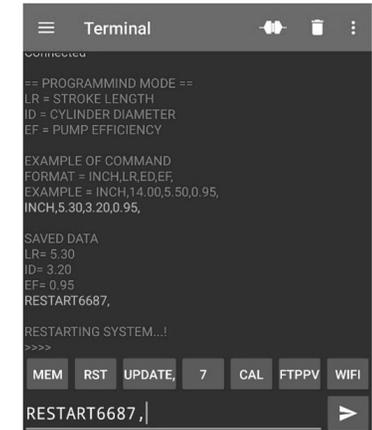
EXAMPLE:
Triplex pump data
LR = 5.3 inch
ID = 3.2 inch
EF = 95%

Command
INCH,5.30,3.20,0.95,



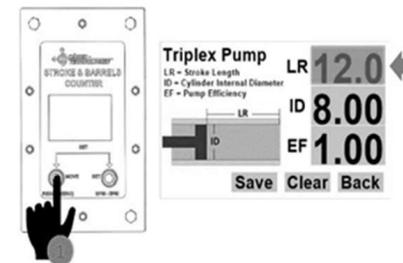
5 Reboot system command.

After configuring the triplex pump parameters, run the command to reboot the system.



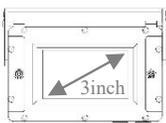
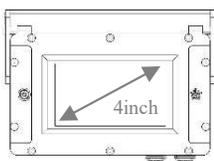
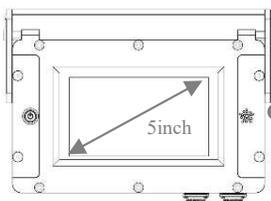
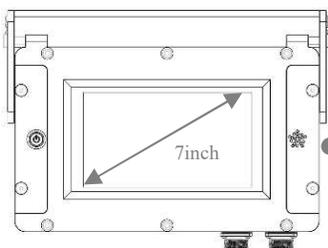
6 View Parameters.

To view the triplex pump parameters on the screen, press and hold the **RESET** button for 3 seconds to enter the "**TRIPLEX PUMP**" screen.



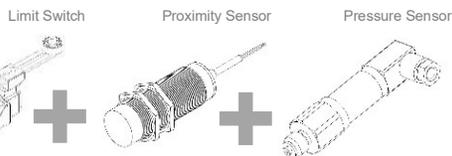
Model Overview

DXK-STC (03-04-05-07)

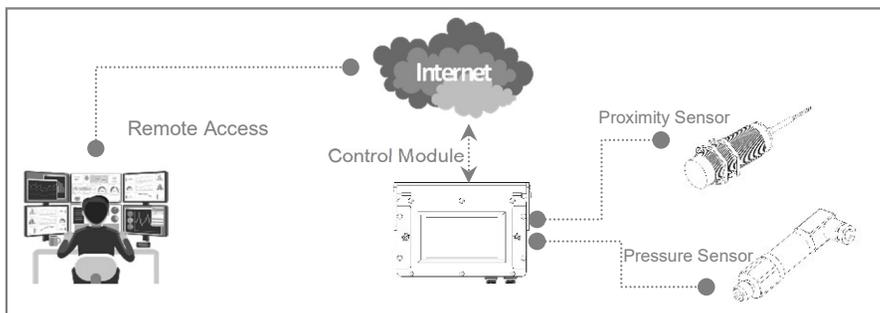


General Features

- 1 to 4 Limit Switch Sensor.
- 1 to 4 Proximity Sensor
- 1 to 2 Pressure Sensor 100 to 10.000 psi
- Explosion – Proof structure. NEC 500.
- Screen 3 to 7 inch color TFT.
- Data logging Pressure and Bbbs. (Optional).
- Pressure plotter. (Optional).
- Stroke plotter. (Optional).
- Pressure alert. (Optional).
- Data export.
- Power supply DC 12 to 30 Vdc.



General data transmission Schema



Additional information on this product and answers to frequently asked questions can be found at our Customer Support Website.

WWW.KAISER-TECHNOLOGY.COM



Printed on 70% or more recycled paper using VOC (Volatile Organic Compound)-free vegetable oil based ink.

Printed in Germany

