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Toshiba LF620 Manual

Electromagnetic flowmeter converter

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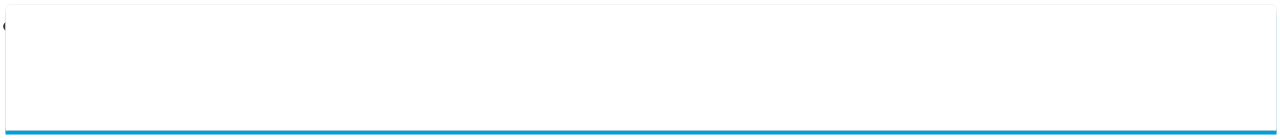

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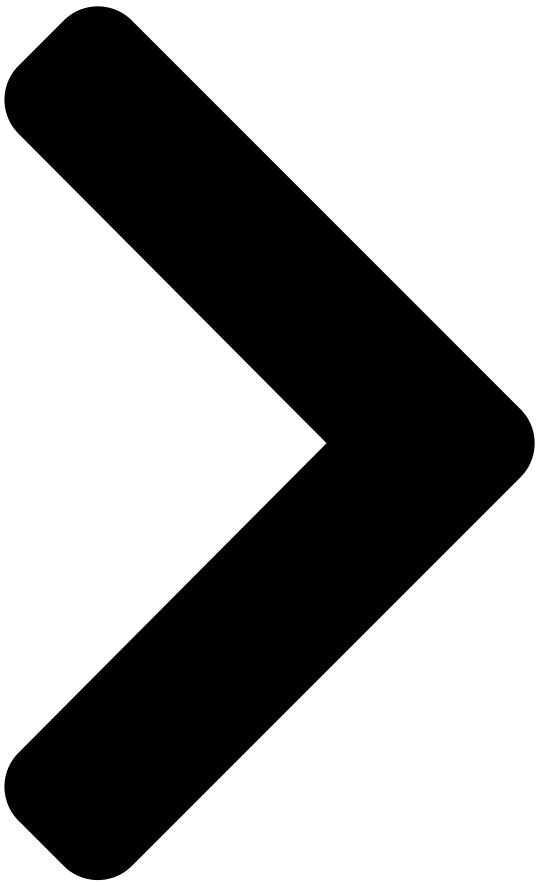

M.A. Selmon Company, Inc
4 Oxford Rd. 203-377-3525
Milford, CT 06460

Introduction

Combined with a multi-functional converter LF620 (combined type) or LF622 (separate type) equipped with its original noise-suppression circuit and advanced algorithms, IR (Infrared) switches enable parameter setting of the converter without removing the cover. Flow direction can be set in either way, and its 128 x 128 dot matrix LCD display allows the unit to be rotated electronically to 90, 180 and 270 degrees without opening the cover. The terminal block in LCD side make easy to wire in case of the combined type.

TOSHIBA
Field Intelligent Device Series
Electromagnetic Flowmeter Converter
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Specifications

■ **Model LF620 and LF**

Input signals

Analog signal — the
proportional to pr

*1: HART protocol (Highway Addressable Remote Transducer) is a communication protocol for industrial sensors recommended by the HCF (HART Communication Foundation).
** DevComm2000 Smart Device Communicator available through TIC for performing HART device configurations on PC or laptop .
*2: PROFIBUS is the communication protocol for factory automation and process automation that the PROFIBUS Organization recommends. Instead of analog control with a conventional analog signal (4-20mA), it is one kind of the fieldbus which digitizes all signals. Flowmeters support PROFIBUS-PA.
*3: Modbus is the communication protocol that Modicon Inc. developed. Physical layer is RS485.

Figure1. LF620 series Flowmeter Converters

Field Intelligent Device Series

Electromagnetic Flowmeter Converter

LF620
LF622
LF620F
LF622F
Certification number
Z01207

Specifications

■ Model LF620 and LF622 converters

Input signals

Analog signal — the voltage signal from detector, proportional to process flow rate (For LF622 separate type converter).

Digital input DI
Signal type: 20 to 30Vdc voltage signal
Input resistance: 2.7kΩ
Number of inputs: one point
Note: DI cannot be used with the Modbus communication.

DI function — One of the following functions can be assigned to the optional DI signals.

Range switching — Selects either the higher or lower range in the unidirectional or bidirectional 2-range setting.

Totalizer control — Starts and stops the built-in totalizer.

Fixed-value outputs — Outputs fixed-values for current and pulse outputs.

Zero adjustment — Executes zero adjustment (on-stream at zero flow rate).

Output signals

Current output:
4–20mAdc (load resistance 0 to 750Ω)
Note: The current output cannot be used with the PROFIBUS-PA communication.

Digital outputs — Two points are available as

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Figure1. LF620 series Flowmeter Converters

Specifications

■ Model LF620 and LF

Input signals

Analog signal — the
proportional to pr
separate type conv

Digital input DI
Signal type: 20 to
Input resistance: 2
Number of inputs

Note: DI cannot b
communica

DI function — One of
be assigned to the op

Range switching —
lower range in the
bidirectional 2-ra

Totalizer control —
totalizer.

Fixed-value outputs
current and pulse

Zero adjustment —
(on-stream at zero

Output signals

Current output:
4–20mAdc (load

Note: The current
the PROFI

Digital outputs — Tw
follows.

Digital output DO1
Output type: Tran
Number of output
Output capacity:

Note: DO1 cannot
communica

Digital output DO2
Output type: Solic
polarity)
Number of output
Output capacity:

follows:
Digital output DO1 :
Output type: Open collector
Number of outputs: One point
Output capacity: 30Vdc, 200mA maximum
Note: DO1 cannot be used if Modbus communication connection is 3 lines.
Digital output DO2 :
Output type: Solidstate relay output (non polarity)
Number of outputs: One point
Output capacity: 150Vdc,150mA maximum or 150 V ac (peak to peak), 100mA maximum
Note: DO2 cannot be used with the Modbus communication.

LF620,LF622

TIC-LF620E

TOSHIBA | Field Intelligent Device Series

Electromagnetic Flowmeter Converter

Introduction

Combined with a multi-functional converter LF620 (combined type) or LF622 (separate type) equipped with its original noise-suppression circuit and advanced algorithms. IR (Infrared) switches enable parameter setting of the converter without removing the cover. Flow direction can be set in either way, and its 128 x 128 dot matrix LCD display allows the LCD

Specifications

■ **Model LF620 and LF**

Input signals

Analog signal — the proportional to pr separate type conv

Digital input DI

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Related Manuals for Toshiba LF620

Media Converter Toshiba LF620 Instruction Manual

Electromagnetic flowmeter converter (160 pages)

Measuring Instruments Toshiba GF630 Manual

Electromagnetic flowmeter (18 pages)

Measuring Instruments Toshiba LF410 Manual

Field intelligent device – mount-anywhere series - wafer electromagnetic flowmeter (15 pages)

Measuring Instruments Toshiba LF620F Instruction Manual

Electromagnetic flowmeter converter (162 pages)

Measuring Instruments Toshiba LF654 Instruction Manual

Lf654 series electromagnetic flowmeter detector (51 pages)

Measuring Instruments Toshiba LF622 Quick Start Manual

Magmeter (13 pages)

Measuring Instruments Toshiba GF642 Manual

Electromagnetic flowmeter (11 pages)

Measuring Instruments Toshiba LF470 Quick Start Manual

Electromagnetic flowmeter field intelligent device (8 pages)

Media Converter Toshiba TOSVERT VF-AS3 Instruction Manual

(32 pages)

Toshiba VEC008Z - Digital Encoder Manual

(article)

Media Converter Toshiba TOSVERT VF-S15 Series Manual

(51 pages)

Media Converter Toshiba VEC008Z Installation Manual

Digital encoder (2 pages)

Media Converter Toshiba TOSVERT VF-AS1 Instruction Manual

Expansion io card option 2 (19 pages)

Media Converter Toshiba TOSVERT VF-AS3 Instruction Manual

Rs485 communication function (20 pages)

Media Converter Toshiba USB001Z Instruction Manual

Usb-to-serial conversion unit (8 pages)

Media Converter Toshiba TOSVERT VF-nC3 Instruction Manual

(66 pages)

Summary of Contents for Toshiba LF620

Page 1 Field Intelligent Device Series LF620,LF622 Electromagnetic Flowmeter Converter Introduction Specifications Combined with a multi-functional converter LF620 □ Model LF620 and LF622 converters (combined type) or LF622 (separate type) equipped Input signals with its original noise-suppression circuit and advanced algorithms. IR (Infrared) switches enable Analog signal —...

Page 2 Function blocks : AI(Flow)×1 , Totalizer×1 • Modbus(opt.) Cable connection ports: Physical layer : RS485 Cable glands — Protocol : Modbus LF620 and LF622 without cFMus Approval: Mode : RTU Provided as standard OD of cableφ11~13mm Baudrate : 4800, 9600,

19200bps Material Nylon 66 Data length : 8bit G (PF) 1/2 male threads..

Page 3 TIC-LF620E Applicable diameter — 11 to 13mm (0.433 to 0.512 inch) Vibration resistance: No resonance to the following levels of vibration: • 10 to 150Hz with acceleration of 9.8m/s • Vibration of 30Hz with 29.4 m/s in 4h in each direction will not cause any defect to unit.

Page 4: Installation

TIC-LF620E Installation Dimension Attachment LCD display I/O cable ground Excitation cable ground Plate Power supply Signal cable ground cable ground Option cable ground IR Switch Note: Cable glands are not provided for LF622F cFMus approved type. Refer to the part Cable connection port at detector. Figure 2.

Page 5 *1 Locate an external double-pole power switch on the power line near the flowmeter within easy reach of operation. Use the appropriate switch rating as shown below: Switch rating: 250Vac, 6A or more In rush current: 15A or more Figure 3. Combined type LF620 and LF620F converters Wiring Diagram...

Page 6: Profibus-Pa

TIC-LF620E Instrument panel : Ordered separately Grounding with 100Ω or less IV wire 5.5mm or more ground resistance Power switch Grounding with 100Ω or less (External double-pole power switch) ground resistance Power supply Thick walled steel conduit Current output (4 20mAdc) Signal cable or PROFIBUS (2-wire shielded hard-rubber sheathed cable)

Page 7: Wiring Precautions

An independent earth ground is recommended. (2) The allowable cable lengths between Toshiba detector and Toshiba converter for the separate type flowmeter depend on the electrical conductivity of the object fluid. Refer to each specification sheet.

Page 8 Specifications are subject to change without notice. Printed in Japan 2011-6 (TDOC) Misuse of this product can result in damages to property or human injury.

This manual is also suitable for:

Lf622Field intelligent device seriesLf620fLf622f