

# LABOR – ASTER

## INDUSTRIAL AUTOMATION



AC 083  
QMS

## FREQUENCY DUPLICATOR

- two outputs type F-S2-L2p
- three outputs type F-S2-L3p
- four outputs type F-S2-L4p

- Full separation between input, output and power supply circuits
- Bistate output type OC

### APPLICATION

Converter **F-S2-L2p** is designed to be duplicator, repeater of frequency pulse strings. Pulses from the input are converted to two separated output pulses strings.

Converters **F-S2-L3p**, **F-S2-L4p** duplicate the input pulses from the input respectively to three or four bistate outputs.

Bistate output signals are 0/24V or potential-free outputs type OC according to the order.

Typical application of the converter is cooperation with::

- angular-impulse road transducers,
- proximity sensors,
- vibration sensors,
- turbine and vortex type flowmeters,
- flowmeters with pulse output signal.

After agreement the input circuit can be adjusted to small or high amplitudes of the input signals.

### BASIC TECHNICAL PARAMETERS

#### Input pulses:

NAMUR standard sensors	-	1.2/2.1mA; 8.2V
other three-wire sensors	-	sensors supply max 18V / 25mA
potential-free contacts	-	8.2 V / 1 kΩ
PNP, NPN (OC)	-	input 8.2V/1kΩ
voltage pulses	-	1mV...100V
current pulses	-	10μA...5A

#### Frequency band

1Hz...10kHz

#### Input resistance:

voltage input	-	100kΩ (U≥50mV) 10kΩ (U<50mV)
current input	-	50Ω



#### Outputs

bistate 0/24V	-	Rload>10kΩ
type OC	-	30V / 100 mA

#### Power supply

- 21...28Vdc, 80mA

#### Galvanic separation

- between all circuits

isolation test voltage

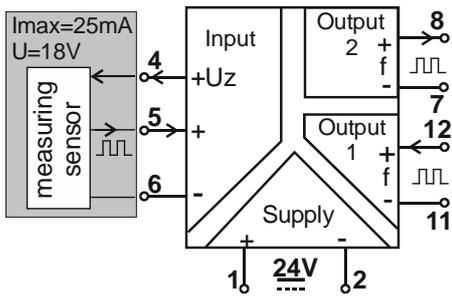
- 2 kV

#### Rail housing

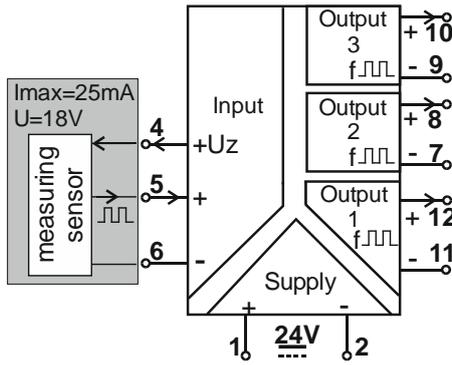
**F-S2-L2p** - Width : 25mm  
Height : 79mm  
Depth : 74mm

**F-S2-L3p, F-S2-L4p** - Width: 40mm  
Height: 79mm  
Depth: 74mm

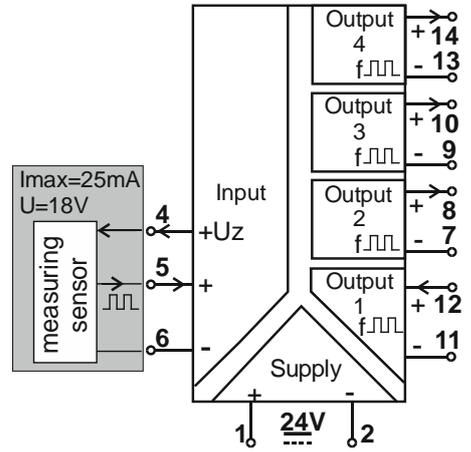
Mounting - Universal rail clamp



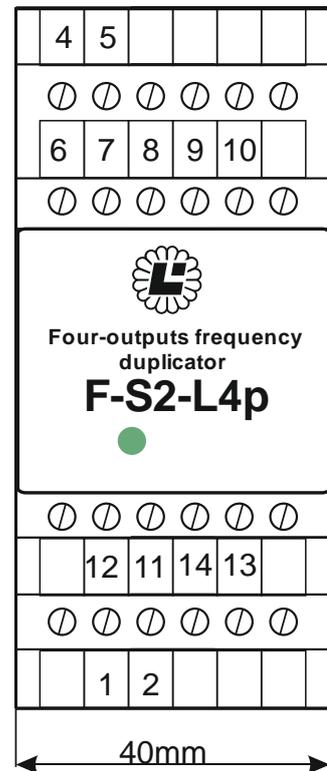
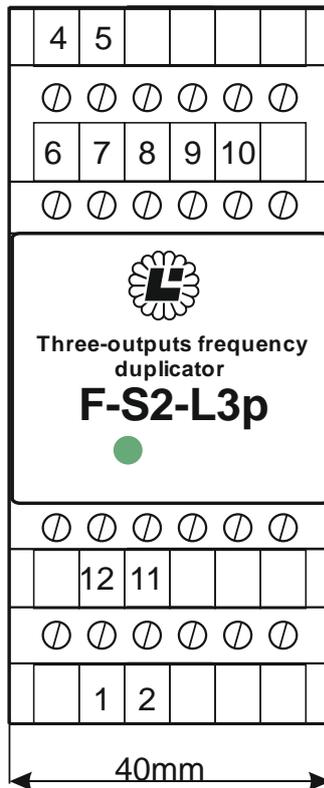
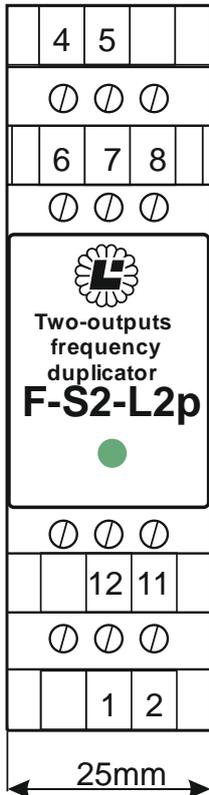
Two bistate outputs



Three bistate outputs



Four bistate outputs



**Note:** please describe in details frequency range, amplitude, shape of the input pulses (terminals 4-5-6) as well as amplitude of two, three or four output pulses string or declare them to be type OC. Typically OC outputs operates in phase with input signal (e.g. OC switch connector to terminals 4-5 of the converter – closed input switch gives closed OC outputs of the converter).

**HOW TO ORDER** F-S2- \_\_\_\_\_

version -L2p, -L3p, -L4p \_\_\_\_\_

Parameters of the input signal - shape, amplitude, frequency range ( FLOWER , FUPPER ) shall be given in description form or a drawing.

Specify type of outputs: voltage square wave (specify amplitude e.g. 0/24V) or type OC

**Order example:** frequency duplicator, two outputs type F-S2-L2p  
supply 24Vdc, lower frequency 30Hz, upper frequency 1000Hz,  
amplitude peak-peak of the input square wave 2V, both outputs 0/24V.

**Production and distribution:**

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The manufacturer reserves the right to make changes to the product.

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