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Totalizers electronic

Small impulse counters and position displays

Display LCD, 8-digits

ISI30, ISI31, ISI32, ISI33



ISI30 - Totalizer

Features

- **ISI30 - Impulse counter**
- **ISI31 - Up/down, difference counter**
- **ISI32 - Up/down counter**
- **ISI33 - Position display**

Technical data - electrical ratings

Voltage supply	Lithium battery (approx. 8 years at 20 °C)
Display	LCD, 7-segment display
Backlit	24 VDC ±20 %, 50 mA
Number of digits	8-digits
Display range	-9999999...+99999999
Digit height	8 mm
Reset	Button and electric
Keylock	Yes, electric (keylock)
Emitted interference	DIN EN 61000-6-4
Interference immunity	DIN EN 61000-6-2
Programmable parameters	Count mode
Approvals	UL/cUL, CE conform
ISI30	
Function	Fast and slow counting
Count mode	Adding or subtracting
Control	NPN, PNP, Floating contact, Pulses 10...260 VAC/VDC
ISI31	
Function	Counting with direction signal Difference counter
Count modes	INP A and INP B (up/down) INP A - INP B
Control	NPN, PNP, Pulses 10...260 VAC/VDC
ISI32	
Function	Counting with direction signal
Count mode	INP B and INP A (Up/Down)
Control	Pulses 10...260 VAC/VDC

Technical data - electrical ratings

ISI33	
Function	Position display
Count modes	A 90° B phase evaluation x1 A 90° B phase evaluation x2
Control	NPN, PNP

Technical data - mechanical design

Operating temperature	-10...+60 °C
Storing temperature	-20...+70 °C
Relative humidity	80 % non-condensing
Core cross-section	2.5 mm² fine wire AWG 12
Protection DIN EN 60529	IP 65 face with seal
Housing type	Housing for control panel installation
Housing colour	Deep grey, RAL 7021
Dimensions W x H x L	48 x 24 x 48 mm
Installation depth	47.7 mm
Mounting	Clip frame or screw mount
Cutout dimensions	25 x 50 mm (+0.5)
Weight approx.	50 g

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Type table

ISI30 - Impulse counter

Without backlit **With backlit**	**ISI30.010AA01** **ISI30.010AB01**	**ISI30.012AA01** **ISI30.012AB01**	**ISI30.013AA01** **ISI30.013AB01**
Version	**NPN**	**PNP**	**AC/DC**
Brief description	Fast and slow counting processes	Fast and slow counting processes	Slow counting processes
Signal input INP A	Fast counting NPN 7 kHz	Fast counting PNP 12 kHz	Slow counting AC/DC 30 Hz
Signal input INP B	Slow counting NPN or floating contact 30 Hz	Slow counting NPN or floating contact 30 Hz	External reset AC/DC –
Operating mode	Adding or subtracting	Adding or subtracting	Adding

ISI31 - Up/down counter / Difference counter

Without backlit **With backlit**	**ISI31.010AA01** **ISI31.010AB01**	**ISI31.011AA01** **ISI31.011AB01**	**ISI31.013AA01** **ISI31.013AB01**
Version	**NPN**	**PNP**	**AC/DC**
Brief description	Fast counting processes with direction signal (Up/Down) or difference counting	Fast counting processes with direction signal (Up/Down) or difference counting	Slow difference counting
Signal input INP A, INP B	NPN, 7 kHz	PNP, 12 kHz	AC/DC, 30 Hz
Operating mode	Counting with direction signal INP A - Counting input INP B - Direction signal Difference counting INP A - Adding INP B - Subtracting	Counting with direction signal INP A - Counting input INP B - Direction signal Difference counting INP A - Adding INP B - Subtracting	Difference counting INP A - Adding INP B - Subtracting

ISI32 - Up/down counter / ISI33 - Position display

Without backlit **With backlit**	**ISI32.013AA01** **ISI32.013AB01**	**ISI33.010AA01** **ISI33.010AB01**	**ISI33.011AA01** **ISI33.011AB01**
Version	**AC/DC**	**NPN**	**PNP**
Brief description	Slow, direction-controlled counting processes	For position display or lenght measurement in conjunction with an incremental encoder	For position display or lenght measurement in conjunction with an incremental encoder
Signal input INP A	Direction signal AC/DC 30 Hz	Counting input 0° NPN 3 kHz	Counting input 0° PNP 6 kHz
Signal input INP B	Direction signal AC/DC 30 Hz	Counting input 90° out of phase NPN 3 kHz	Counting input 90° out of phase PNP 6 kHz
Operating mode	Counting with direction signal	INP A 90° INP B x1 or INP A 90° INP B x2	INP A 90° INP B x1 or INP A 90° INP B x2

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Part number

ISI30.01 [ ] [A] [ ] [01]

Display
- A Not backlit
- B Backlit

Design
- 0 NPN 7 kHz, contact 30 Hz
- 2 PNP 12 kHz, contact 30 Hz
- 3 AC/DC 30 Hz

ISI31.01 [ ] [A] [ ] [01]

Display
- A Not backlit
- B Backlit

Design
- 0 NPN 7 kHz (Up/Down, A-B)
- 1 PNP 12 kHz (Up/Down, A-B)
- 3 AC/DC 30 Hz (A-B)

ISI32.01 [3] [A] [ ] [01]

Display
- A Not backlit
- B Backlit

Design
- 3 AC/DC 30 Hz (Up/Down)

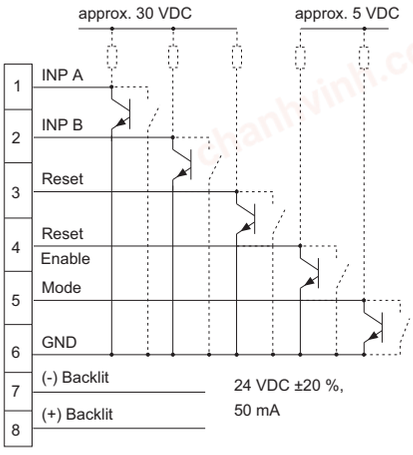
ISI33.01 [1] [A] [ ] [01]

Display
- A Not backlit
- B Backlit

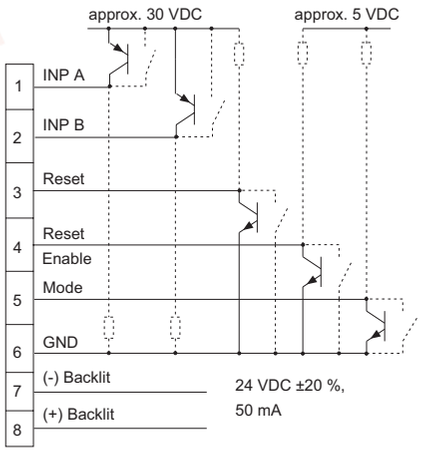
Design
- 1 PNP 6 kHz (A 90° B)

Connection diagram

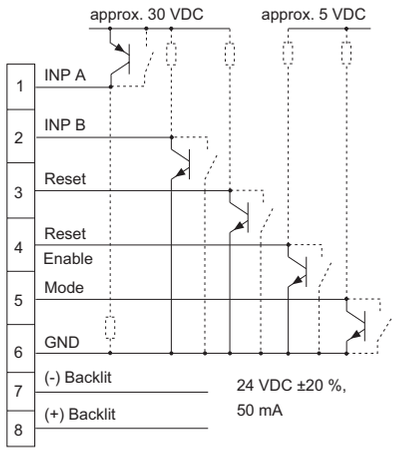
ISI30, ISI31, ISI33, DC, NPN



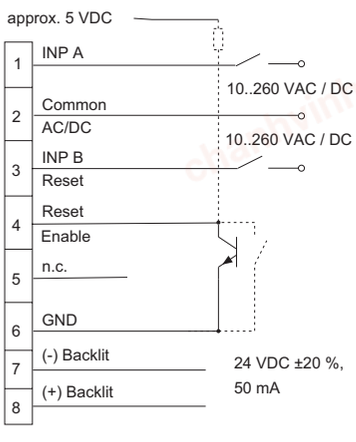
ISI31, ISI33, DC, PNP



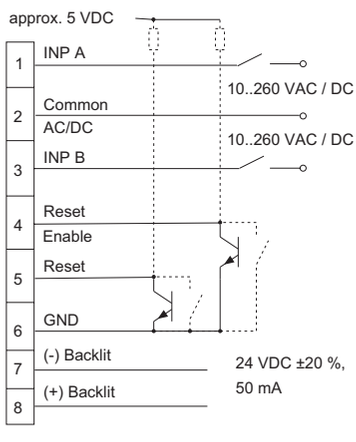
ISI30, DC, PNP



ISI30, AC/DC



ISI31, ISI32, AC/DC



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Trigger level

Inputs NPN inputs	Input circuit Comparator (pin 1+2)
Input level Low	0...0.7 VDC
Input level High	3...30 VDC
Input resistance	1 MΩ

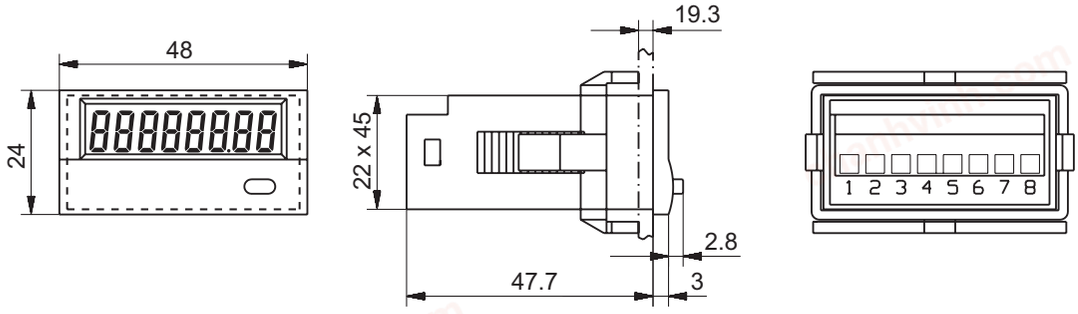
PNP inputs	Comparator (pin 1+2)
Input level Low	0...0.7 VDC
Input level High	4...30 VDC
Input resistance	100 kΩ

Inputs AC/DC inputs	Input circuit Optocoupler (pin 1+3)
Input level Low	0...2 VDC/VAC
Input level High	10...260 VDC/VAC
Input resistance	160 kΩ

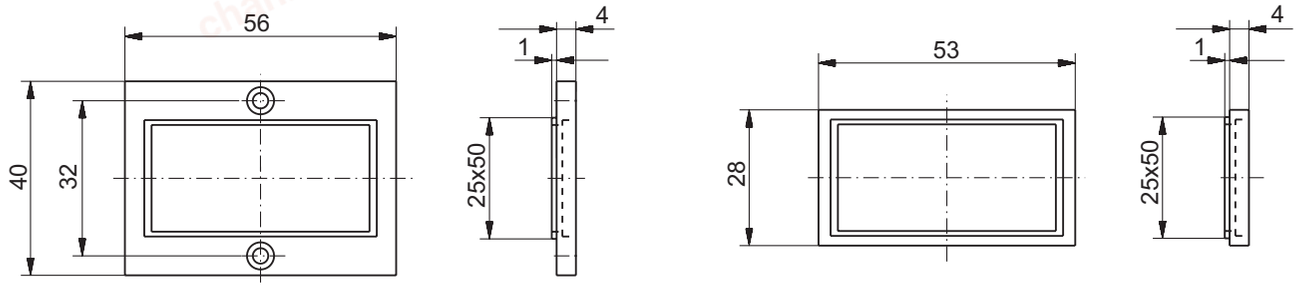
NPN control inputs	Pin 4, 5
Input level Low	0...0.7 VDC
Input level High	3...5 VDC
Input resistance	2.2 MΩ

Dimensions

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Front frame for screw/clip mount (included with delivery)



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