



Flex Network Specialty I/O

High Speed Counter, & Single Axis Positioning

- Compatible with GLC2000 models.
- Compatible with GLC150 (LT type B, B+, C) models with Flex Network Interface.
- Counter unit supports a wide variety of I/O counter configurations.
- Single Axis Unit and HMI can share and store positioning data.
- Positioning Unit includes optional teaching unit to simplify high-precision application setup.
- Compatible with GP-PRO 03 Software.

Note: Picture above represents sample connection layout.

FEATURES

HIGH-SPEED COUNTER:

- 200Khz High-speed Counter Input
- 2-phase/1-phase rotary encoder input
- Linear counter, ring counter, frequency counter

SINGLE-AXIS POSITIONING:

- Output Frequency: 250k/500k/1 M/2Mpps selectable
- Pulse Output Method: CW/CCW line driver, open collector
- Positioning Setting: Absolute/incremental

SPECIALTY I/O MODULE SELECTION



FN-HC10SK41
High-speed Counter Unit
16 and 32 bit up/down counter



FN-PC10SK41
Single-axis Positioning Unit

FN-PC10LD41(optional)
Teach Loader Pendant

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
FN-HC10SK41	High-speed Counter input (200Khz) w/comparator outputs (CE/UL/cUL)
FN-PC10SK41	Single-Axis Positioning Unit, Main Unit (CE/UL/cUL)
FN-PC10CB01	Motor Driver Connection Cable for Single-Axis Positioning Unit
FN-PC10LD41	Handheld Teach/Loader for Single-Axis Positioning Unit (CE/UL/cUL)
FN-LD10CBL	Cable for Handheld Teach/Loader Unit

FLEX NETWORK SPECIFICATIONS

Model		FN-PC10SK41	FN-HC10SK41
Electrical	Rated Voltage	DC24V	
	Rated Voltage Range	DC20.4V to DC28.8V	
	Allowable Voltage Drop	10ms or less (for DC24V power supply)	
	Power Consumption	4.5W or less	2.5W or less
	In-rush Current	30A or less	15A or less
Environmental	Voltage Endurance	AC500V 20mA for 1 min. (combined I/O power and FG terminals)	AC500V 20mA for 1 min. (between I/O and earth terminals)
	Insulation Resistance	DC500V at 10MΩ or higher (combined I/O power and FG terminals)	DC500V at 10MΩ or higher (between I/O and earth terminals)
	Operating Temperature	0°C to 55°C	
	Storage Temperature	-25°C to +70°C	
	Operating Humidity	30% RH to 95% RH (non-condensing) Level RH-1	
Structural	Storage Humidity	30% RH to 95% RH (non-condensing) Level RH-1	
	Air Purity (Dust)	0.1mg/m ³ or less (non-conductive levels)	
	Corrosive Gases	Free of corrosive gases	
	Atmospheric Pressure	800hPa to 1,114 hPa (2,000m or lower)	
	Vibration Resistance	*1	
Functional	Shock Endurance	IEC61131-2 (JIS B3502) Compliant 147m/s ² (for 11ms in X,Y,Z directions-2 times each)	
	Noise Immunity (via noise simulator)	Noise voltage: 1000Vp-p, Pulse Duration: 1μs, Rise time: 1ns	
	Electrostatic Discharge Immunity	Contact discharge of 8kV (IEC 61000-4-2 Level 3)	
	Cooling Method	Natural air circulation	
	Weight	Approx. 700g (Main unit only) [1.54lb]	Max. 150g [0.33lb]
Performance Specifications	External Dimensions	W122mm [4.8in] x H196mm [7.72in] x D35mm [1.38in]	108mm (W) x 49mm (H) x 45mm (D) 4.25in (W) x 1.93in (H) x 1.77in (D)
	Rating	IP30	IP20
	No. of Control Axis	1	
	Input Control	Photocoupler Isolation	
	Program Method	Sequence program, Teaching loader	
Data Transfer Settings	Max. Positioning Memory	90 points (ABS/INC)	
	Pulse Output Method	CW/CCW Line Driver Output/Open Collector Output	
	Output Frequencies*2	1.5625pps to 62.5kpps/6.25pps to 250kpps/12.5pps to 500kpps/50pps to 2Mpps (set via parameters)	
	Max. Pulse Output	+/-2,147,483,647 pulses	
	Accelerate/Decelerate Method	Trapezoidal and Sinusoidal curves	
Input	Position Settings	Absolute/Incremental	
	Backlash Correction	0 to 65,535 pulses	
	Control Mode	Manual, Automatic, Direct	
	Origin Point Return	4 Types (option, low-speed, 2 types of high speed)	
	Origin Point Correction	-32,767 to 32,767 pulses	
Output	Communication Configuration	1:N	
	Connection Method	Multi-Drop Connection	
	Maximum Distance	200m/channel at 6 Mbps 100m/channel at 12 Mbps	
	Communication Method	Cycle Time Division, half-duplex	
	Communication Speed	6Mbps, 12Mbps	
Input	Communication Interface	Differential, pulse-transformer isolation	
	Error Check	Format, bit, CRC-12 verification	
	Number of Connectable Nodes	63 (max.), 1008 I/O points (number of occupied nodes varies according to I/O units)	
	Number of Occupied Nodes	8	
	Input Type	Differential Input(line driver)	DC Input (DC24V Open collector)
Output	Rated Input Voltage	DC5V	DC24V
	Max. Input Voltage	DC4.5V to DC5.5V	DC26.4V
	Calculated Speed (Rise and Fall time)	t = 0.5μs or less (200kpps)	t = 10μs or less (10kpps)
	Min. Pulse Width	2.5μs, 5μs	50μs, 100μs, 2.5ms
	Input Signal Phase	90° phase differential 2-phase signal, 1 phase + directional signal, 1 phase addition signal	
Input	Input Impedance	470Ω	4.9kΩ
	Input ON Voltage	DC19V or higher	
	Input OFF Voltage	DC5V or lower	
	Input Delay	OFF-ON	Maximum: 1.5ms
	ON-OFF	Maximum: 1.5ms	
Output	Rated Output Voltage	DC24V	
	Rated Output Voltage Range	DC24V(+/-10%)	
	Output Voltage Drop	DC1.5V or lower	
	Output Current	50mA or lower	
	Output Delay	OFF-ON	Maximum: 1ms
ON-OFF	Maximum: 1ms		
Pulse Output	Leakage Current	0.1mA or lower	
	Rated Output Voltage	DC5V	
	Maximum Allowable Output Voltage	DC4.5V to DC5.5V	
	No. of Output Points	2 points (CW/CCW)	
	Maximum Load Current	50mA or less	
Line Driver(non-isolated)	Voltage Drop (ON Voltage)	DC0, 8V or less	
	Differential Output	Equivalent to TI Corp. SN75158	

*1 IEC61131
*2 Max. speed for open collector output is 100kpps.
*3 See User's Manual for each measurement speed.

Xycom Automation, Inc.
a Pro-face America Company
734-429-4971
Fax: 734-429-1010
http://www.xycom.com

Customer Support Hotline:
734-944-0482





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Schneider Electric USA, Inc.
800 Federal Street
Andover, MA 01810 USA
888-778-2733
www.schneider-electric.us

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Schneider Electric México, S.A. de C.V.
Av. Ejercito Nacional No. 904
Col. Palmas, Polanco 11560 México, D.F.
55-5804-5000
www.schneider-electric.com.mx

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Schneider Electric Canada, Inc.
5985 McLaughlin Road
Mississauga, ON L5R 1B8 Canada
800-565-6699
www.schneider-electric.ca