

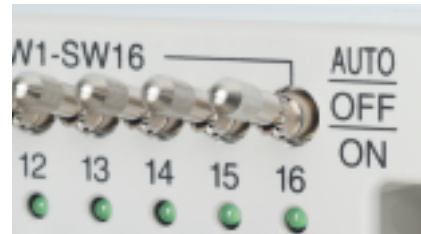


Switch Installed Relay Terminal Block Interface

PXGRS_{series}

Features

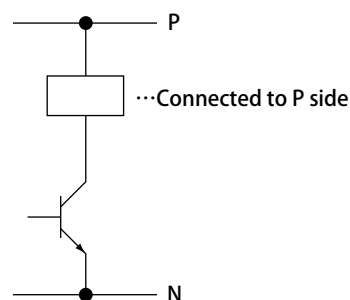
- A switch allows operators to control ON / OFF directly, making it ideal for debugging, trial, testing, and maintenance of equipment.



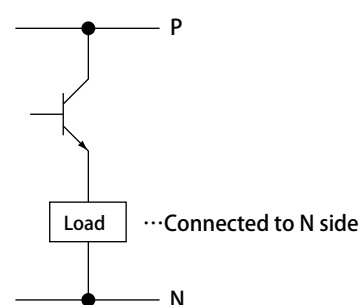
Hold toggle switch installed

- Can connect to both NPN and PNP devices.

● PNP for input and output

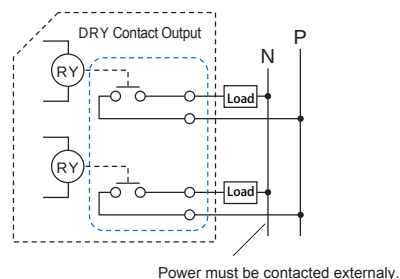


● NPN for output



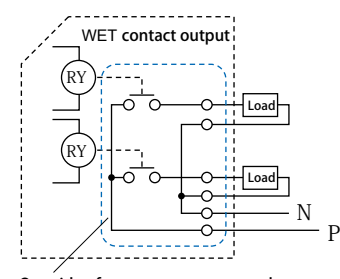
- Both "DRY" and "WET" circuits are available.

● DRY circuit



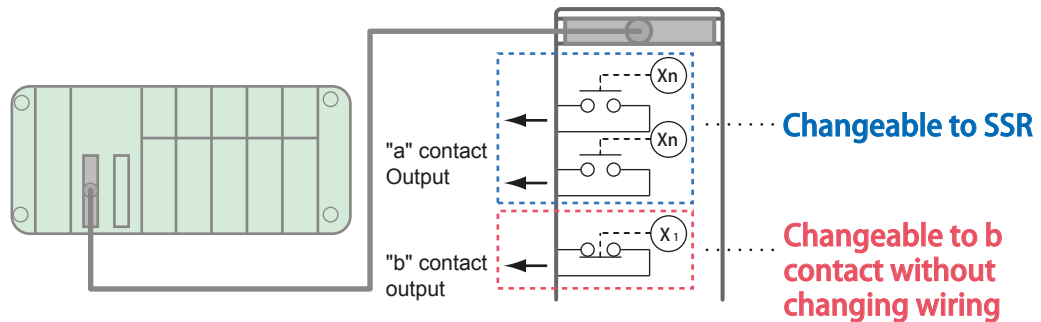
Power must be contacted externally.

● WET circuit



One side of contacts are connected

- Choose between B contact relay or SSR* specification by changing relays. *Solid State Relay



- Relays can be replaced with only one hand by pulling lever, without removing cover.

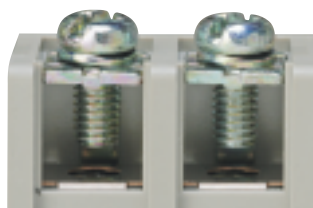


- Mounting on 35mm DIN rail is available.

- 3 types of terminal blocks are available.



Standard Terminal



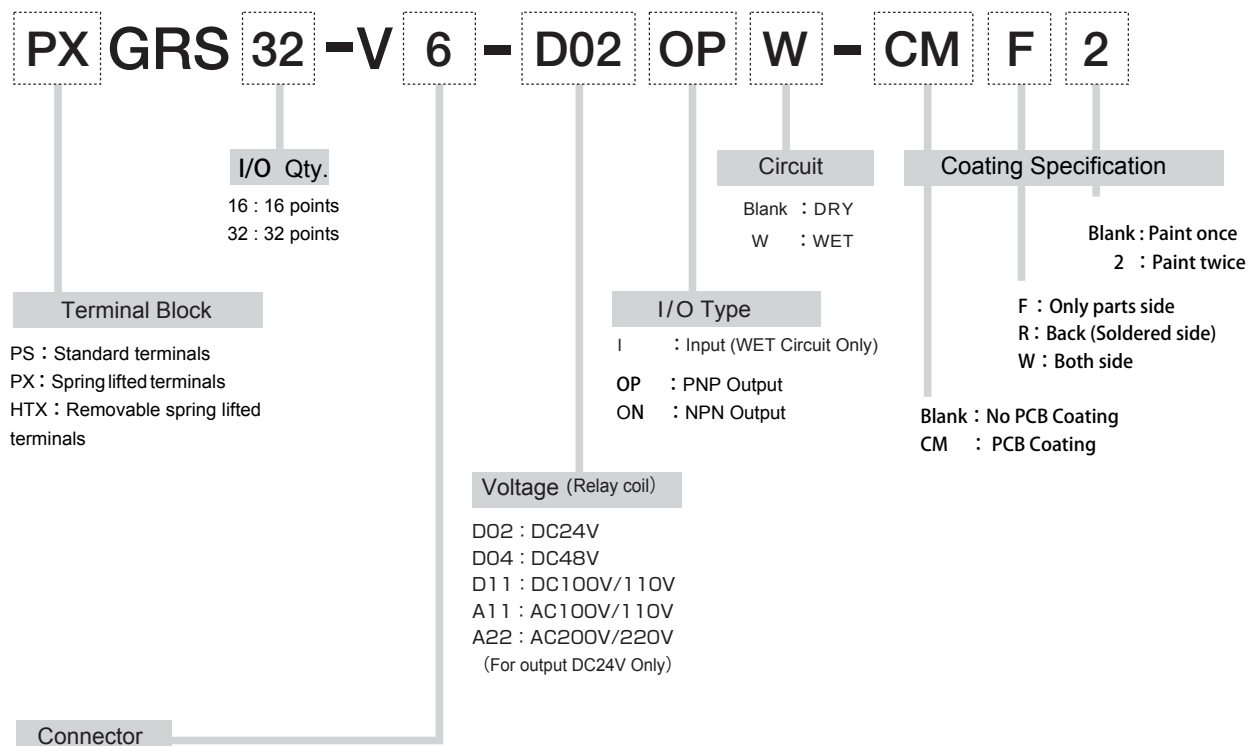
Spring Lifted Terminal



Removable Spring Lifted Terminal

PXGRSseries

How To Order



Connector P / N	Manufacturer	Connector P / N	
		For 16 points	For 32 points
2	Omron	XG4A-2031	XG4A-4031
3	JAE	PS-20PE-D4T1-LP1	PS-40PE-D4T1-LP1
4	Hirose Connectors	HIF3BA-20PA-2、54DSA	HIF3BA-40PA-2、54DSA
5	Fujitsu	FCN-704Q020-AU/M	FCN-704Q040-AU/M
6	Fujitsu	FCN364P024-AU (24P) *1	FCN-364P040-AU
10	Yamaichi Electronics	FAP-2001-1204-OBS	FAP-4001-1204-OBS
11	KEL	6201-020-256	6201-040-256
12	Daiichi Denshi Kogyo	FRC5-C20S53T-OL	FRC5-C40S53T-OL
13	JST	RX-H201TD-1190	RX-H401TD-1190
14	3M	3428-6002LCSC	3432-6002LCSC

*1) 24 pin connector

*Please see page 4 "Relay / SSR" list if you prepare SSR yourself.

Specifications

Rating*1)	Input	Relay Coil Side (Terminal Block side)		DC24V,48V,100 (110)V AC100(110)V,200(220)V	
		Contact Side (connector side)		Resistance/ Inductive Load :AC125V-1A／DC125V-1A	
	Output	Relay coil side (connector side)		DC24V	
		Contact side (terminal blockside)		Resistance load : AC250V-3A／DC30V-3A Inductive load : AC250V-2A／DC30V-2A	
		Common line (WET Circuit)	Current	MAX10A	
			Common points	16 points ／1common	
Insulation Resistance				DC500V Mega more than 1000MΩ (*Between terminals and ground)	
Withstand Voltage				AC2000V (50/60Hz) 1min (*Between terminals and ground)	
Lightening Impulse				1.2/50μs、4000V (*Between terminals and ground)	
Vibration Resistant				Frequency :10～55Hz, Double amplitude :1.5mm	
Shock Resistant				491m/s ² >50G (*Exept relay)	
Recommended Wire				Maximum 2mm ²	
Recommended Crimp terminal				R2-3.5	
Tightening Torque				0.8 - 1.2N/m (When using crimp terminal)	
Relay failure rate "P standard"		Input		DC1V-100μA	
		Output		DC5V-10mA	
Ambient Temperature *Storage				－20～＋55℃	
Ambient Temperature *Operating				－25～＋70℃	
Relative Humidity				45～85％R.H.	
Installed Relay				G7T-1112S、1122S (Omron)	
Weight				PXGRS16 : 980g PXGRS32 : 1800g	

*1) Rating is not same as relay specifications.

● Please contact us when using AC power on connector side. (The power supply line between terminal and connector side equipment is DC only)

Relay / SSR combination list

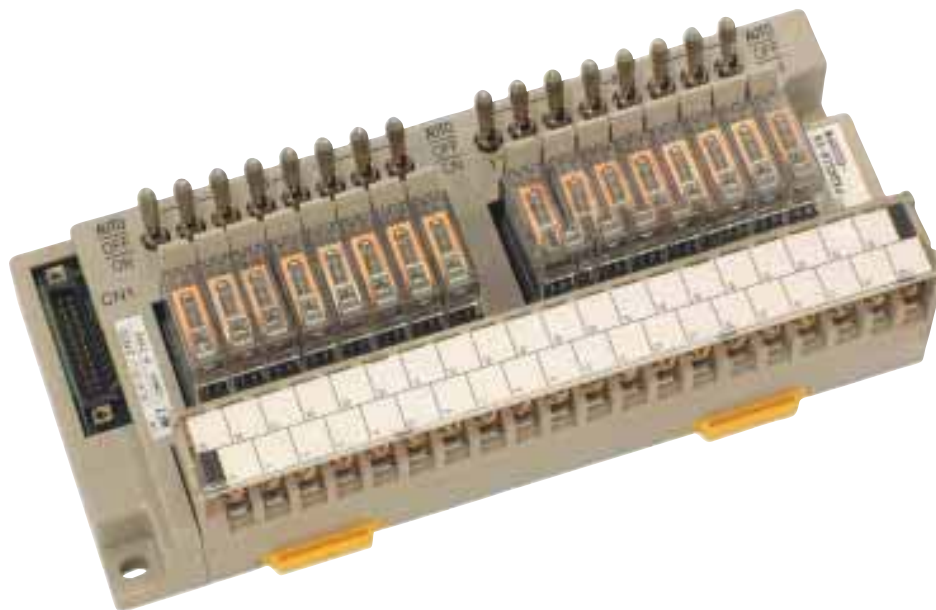
Use	Voltage Specification		Relay (Omron)	SSR (Omron)
For Input	A11	AC100V/110V	G7T-1122S	G3TA-IAZR02S AC100-240V
	A22	AC200V/220V		
	D02	DC24V		G3TA-IDZR02S DC5-24V
For Output	D02	AC100V~240V Load	"a" contact : G7T-1112S	G3TA-OA202SZ DC24V
		DC5V~48V Load	"b" contact : G7T-1012S	G3TA-ODX02S DC24V
		DC48V~200V Load		G3TA-OD201S DC24V

1) SSR has polarity, upper terminal is positive / lower terminal is negative.

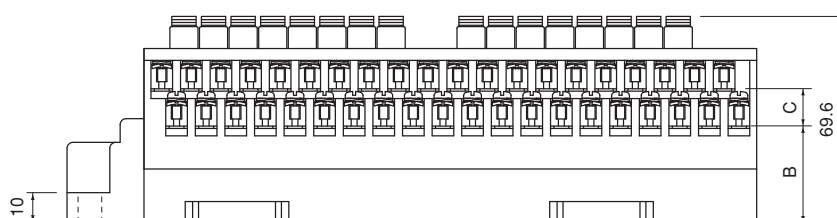
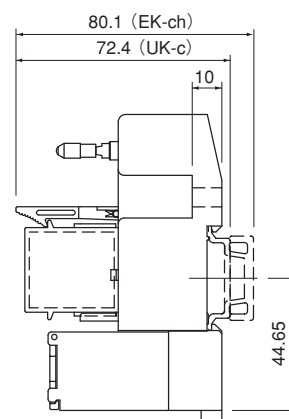
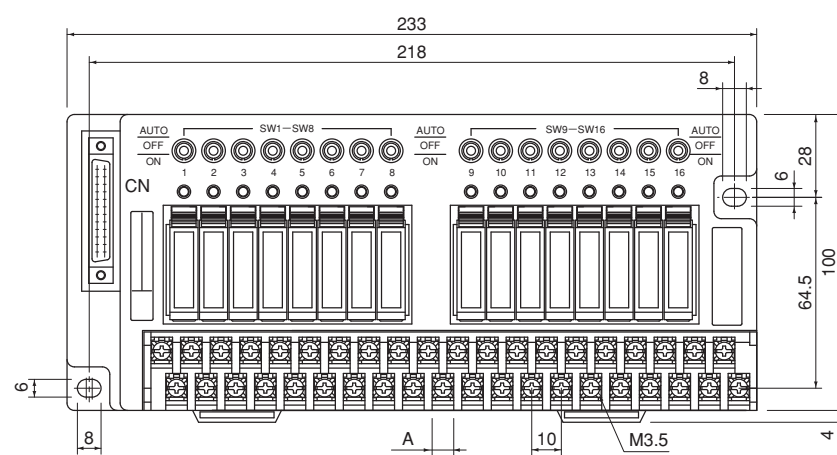
2) When using SSR for output, Please install SSR alternately (every other slot) to the unit.

*Maximum 16 slots

PXGRS16 16 Points

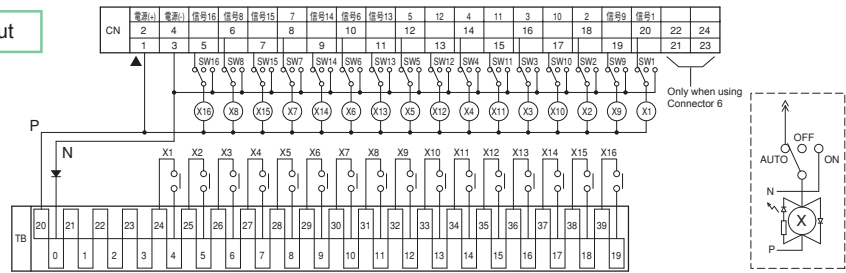


Dimensions

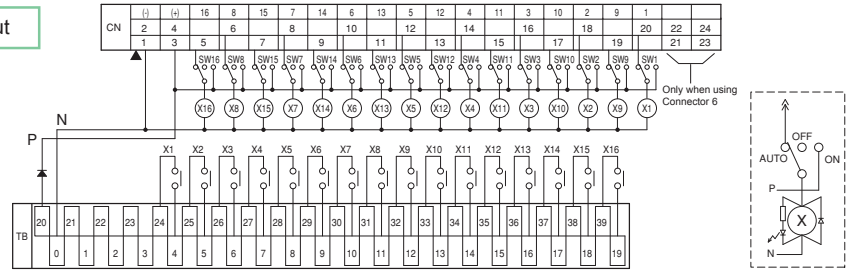


	A	B	C
PSGRS16	8.2	24.8	11.5
PXGRS16	7.3	30.3	12.6
HTXGRS16	7	43.2	12.5

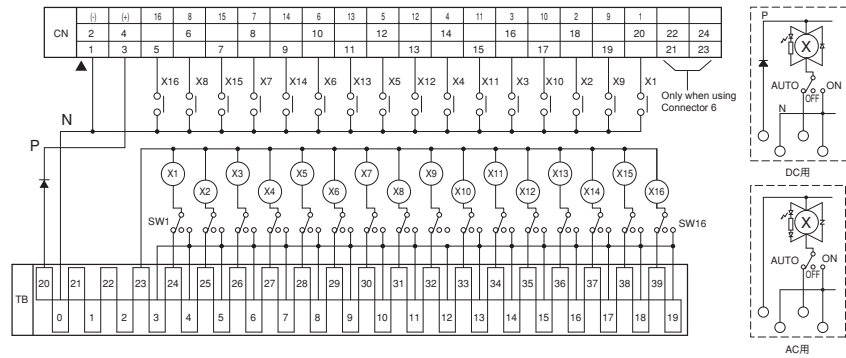
DRY Circuit **OP** For PNP output



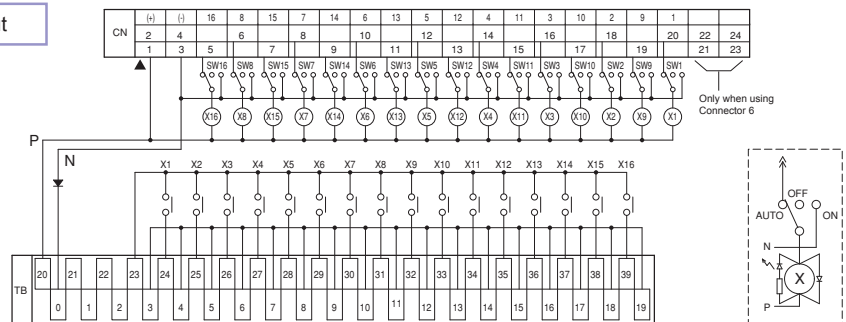
DRY Circuit **ON** For NPN output



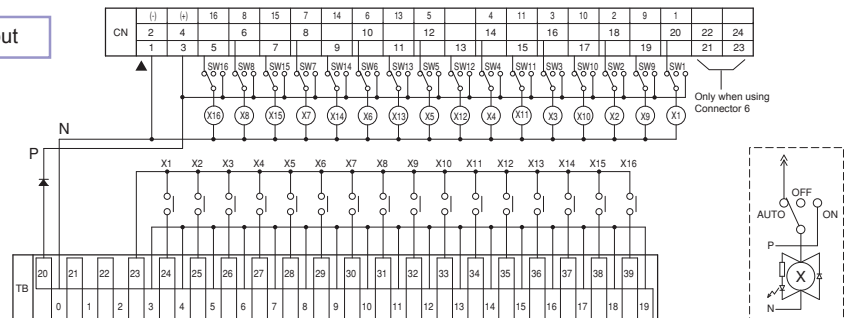
WET Circuit **IW** For Input



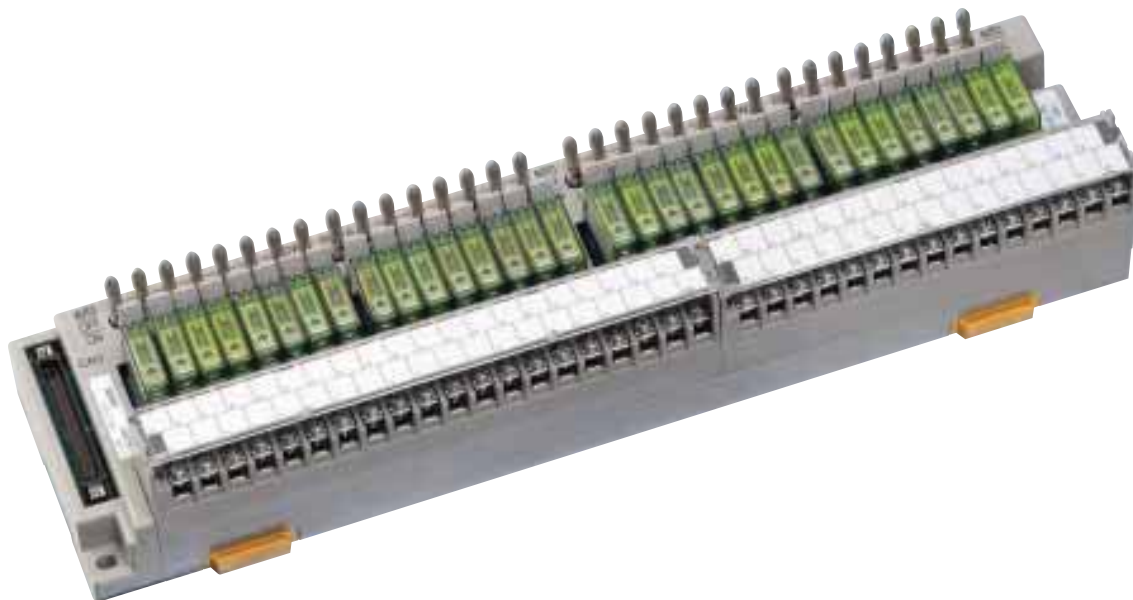
WET Circuit **OPW** For PNP output



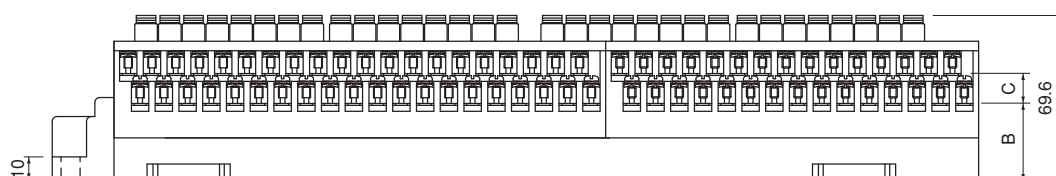
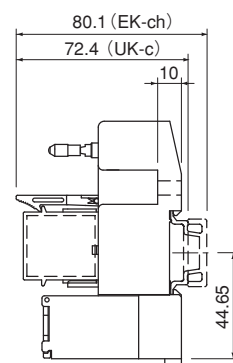
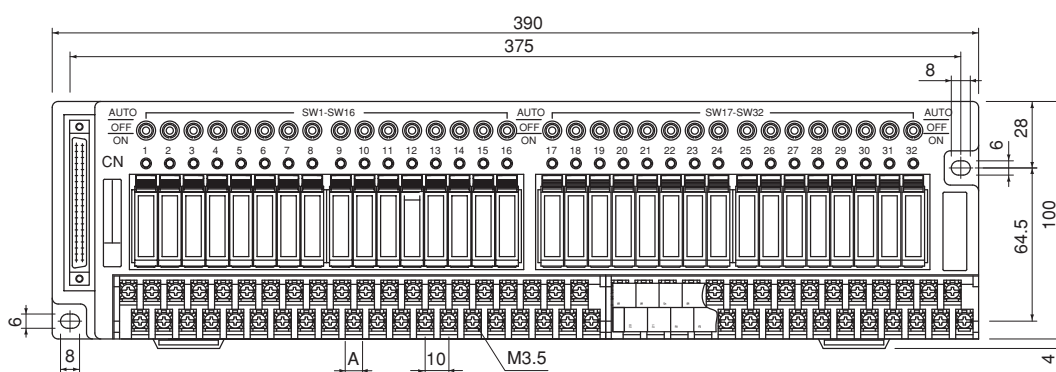
WET Circuit **ONW** For NPN output



PXGRS32 32 Points

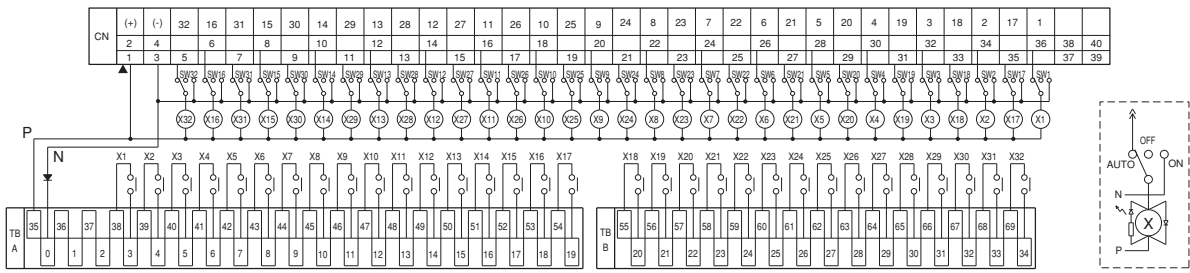


Dimensions

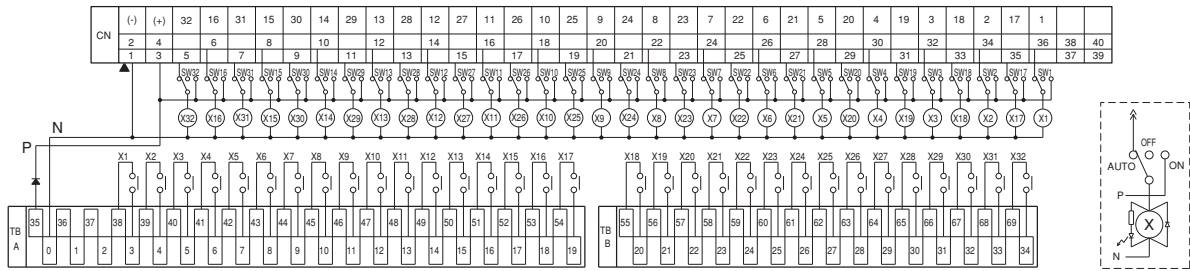


	A	B	C
PSGRS32	8.2	24.8	11.5
PXGRS32	7.3	30.3	12.6
HTXGRS32	7	43.2	12.5

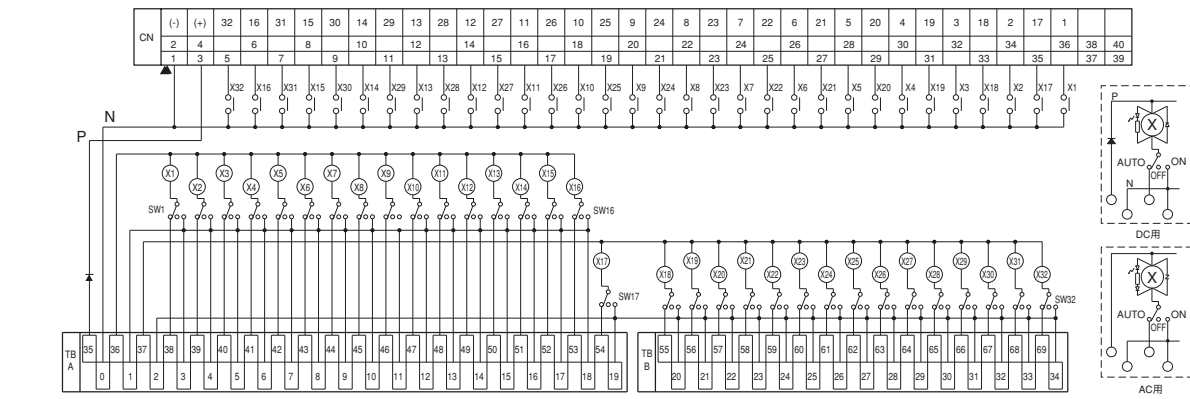
DRY Circuit OP For PNP output



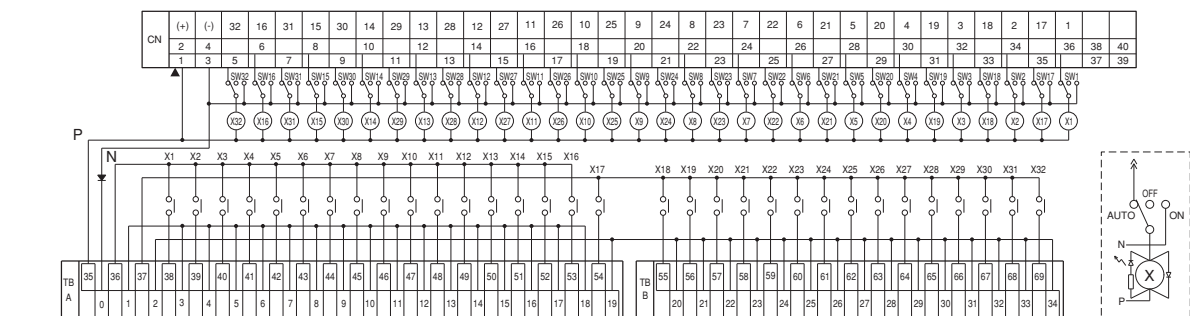
DRY Circuit ON For NPN output



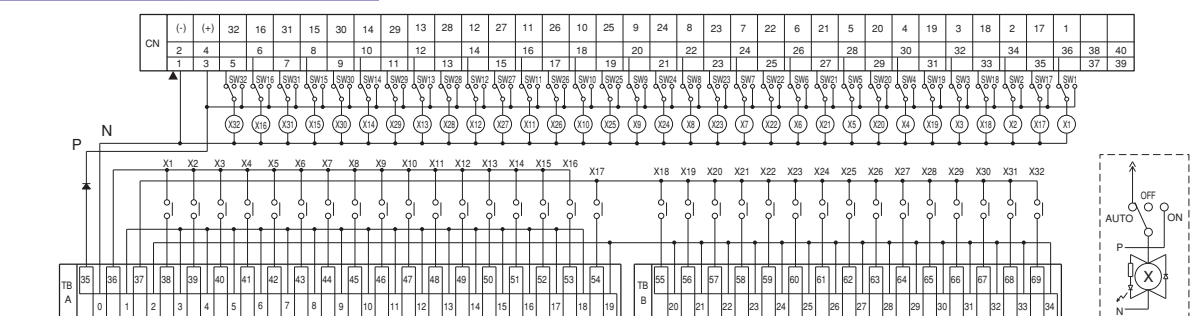
WET Circuit IW For Input



WET Circuit OPW For PNP output



WET Circuit ONW For NPN output



Caution

Replacing Relay

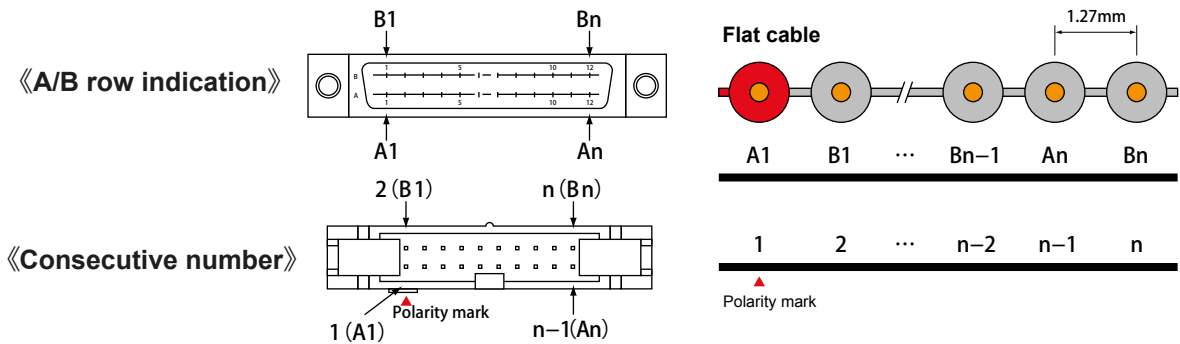
- Do not remove or insert relay while power is on. It may cause a failure and electric shock.

Wiring

- Be careful of wiring voltage and polarity of power or signal wires. Wrong wiring may cause failure.
- Do not remove or insert connector while power is on. It may cause a failure and electric shock.
- Verify the connector is properly installed.

Connector Pin Assignment

- Ensure connector pins are assigned properly.



Recommended Tightening Torque

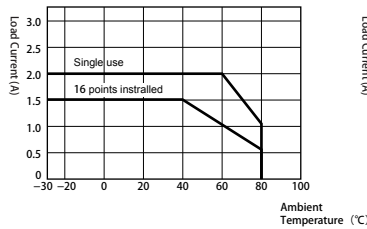
- 0.8~1.2 N/m *When wiring without a crimp terminal, tightening torque of 0.5 N/m is recommended.

When using SSR

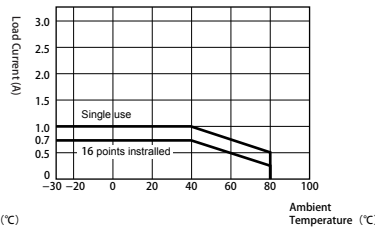
- When using SSR for output, please install SSR alternately (every other slot) to the unit.
- Load current is depending on the temperature. Please refer to the graph below:

«Load current — Ambient Temperature»

G3TA-OA202SZ / G3TA-ODX02S



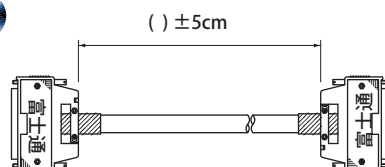
G3TA-OD201S



Cable Assembling

● PLC Pre-wired Cable

Cable for 32 points I/O

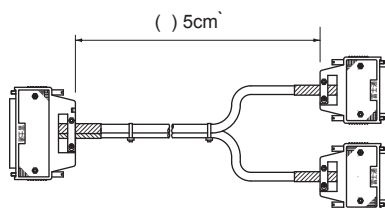


() : Each additional cable order will be 10 cm
 ex): 10 = 10 cm
 20 = 20 cm
 100 = 100 cm

Interface Unit	I/O	Cable P / N	PLC maker	PLC P / N			
PXGRS32-V6 PSGRS32-V6 HTXGRS32-V6	Input	32MI-AI-H0001-()	Mitsubishi	QX41	QX42	QX71	QX72
				A1SX41	A1SX42	AX42	
	PNP Output	32MI-AOP-H0002-()		QY41P	QY42P		
				A1SY41	A1SY42	A1SY42P	AY42
	NPN Output	32MI-AON-H0003-()		QY81P	A1SY81		
	Input	32TO-AI-H0036-()	Toshiba	DI235	DI335	DI335H	
				DI634	DI635		
	PNP Output	32TO-AOP-H0037-()		DO235	DO335	DO634	DO635
	Input	32YO-AI-H0017-()	Omron	CJ1W-ID231/ ID261	CS1W-ID231/ID261		
				C200H-ID216/ID218	C200H-ID217/ID21`		
			Yokogawa	F3XD32-3F/4F/5F	F3XD32-3N/4N/5N		
				F3X XD64-3F/4F	F3XD64-3N/4N		
	PNP Output	32YO-AOP-H0018-()	Omron	CJ1W-OD231/OD261	CS1W-OD231/OD261		
				C200H-OD218/OD21			
			Yokogawa	F3YD32-1A	F3YD64-1A		
				F3YD64-1F			
NPN Output	32OM-AON-H0006-()	Omron	CJ1W-OD232 / OD262				
	32OM-AON-H0052-()		CS1W-OD232 / OD262		C200H-OD21B		
		32YO-AON-H0019-()	Yokogawa	F3YD32-1B			
Input	32KQ-C-H0027-()	Keyence	KV-C32XA/C64XA/C64XB				
PNP Output			KV-C32TA/C64TA				
NPN Outout			KV-C32TAP/C64TAP				

We offer customized cable assembling.

● Cable for 16 points I/O



() : Each additional cable order will be 10 cm
 ex): 10 = 10 cm
 20 = 20 cm
 100 = 100 cm

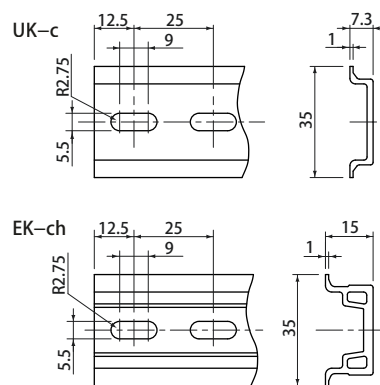
Interface Unit	I/O	Cable P / N	PC` Maker	PLC P/ N				
PXGRS16-V6 PSGRS16-V6 HTXGRS16-V6	Input	16MI-AI-H0007-()	Mitsubishi	QX41	QX42	QX71	QX72	
				A1SX41	A1SX42	AX42		
	PNP Output	16MI-AOP-H0008-()		QY41P	QY42P			
				A1SY41	A1SY42	A1SY42P	AY42	
	NPN Output	16MI-AON-H0009-()		QY81P	A1SY81			
				DI235	DI335	DI335H		
	Input	16TO-AI-H0015-()	Toshiba	DI634	DI635			
				DO235	DO335	DO634	DO635	
	PNP Output	16TO-AOP-H0016-()	Omron	CJ1W-ID231/ ID261	CS1W-ID231/ID261			
				C200H-ID216/ID218	C200H-ID217/ID21`			
	Input	16YO-AI-H0020-()	Yokogawa	F3XD32-3F/4F/5F	F3XD32-3N/4N/5N			
				F3X XD64-3F/4F	F3XD64-3N/4N			
	PNP Output	16YO-AOP-H0021-	Omron	CJ1W-OD231/OD261		CS1W-OD231/OD261		
				C200H-OD218/OD21				
			Yokogawa	F3YD32-1A F3YD64-1A				
				F3YD64-1F				
	NPN Output	16OM-AON-H0012-() 16OM-AON-H0053-() 16YO-AON-H0022-()	Omron	CJ1W-OD232 / OD262				
				CS1W-OD232 / OD262		C200H-OD21B		
			Yokogawa	F3YD32-1B				
	Input	16KQ-C-H0038-()	Keyence	KV-C32XA/C64XA/C64XB				
	PNP Output			KV-C32TA/C64TA				
	NPN Output			KV-C32TAP/C64TAP				

A large variety of conversion cables are available. Example: Breakout cable (The other side are crimp terminals or 4 connectors for 8 point common). We also offer connector branching unit *PSC Series which is used for PLC connection.

Accessories

	P / N	Rail	Length (mm)	Packaging
Rail	UK-c	—	1000, 1500, 2000	10
	EK-ch	—	1000, 1500, 2000	10
End Bracket	EK-b	UK-c, EK-ch	—	100
	UK-b	UK-c, EK-ch	—	100
Rail End Cap	UK-ec	UK-c	—	50
	EK-ec	EK-ch	—	50

	P / N	Note
Short Bar	PXG-2YC	For terminal block between A • B (For 32 points unit)
	P10-() SLC	() Terminal Pole Numbers



Safety Precautions



- Please use appropriate current and voltage according to the manual.
- Please do not apply abnormal shock or vibration. It may cause a malfunction or failure.
- Please do not touch terminal block part and close the terminal cover while the power is alive.
- Never use a relay for a load that exceeds the contact ratings of the relay, such as the switching capacity. Doing so may result in reducing relay performance for insulation failure, contact welding, and contact faults, and might even result in burning or other damage to the relay itself.
- Relay durability is greatly affected by the switching conditions. Always test the relay under actual application conditions to confirm applicability and use the relay only for the number of switching operations that will not affect performance.
- Our products were not designed or manufactured for use in devices or systems directly related to human life. Users who intend to use the product described in this manual for special purposes must contact Toho Technology Inc beforehand.
- If this product is to be involved a life and death situation or in a facility where failure may cause a serious accident, safety devices must be installed to minimize the likelihood of any accident.

★The products and specifications described in this manual or the content and presentation of the manual may be changed without notice to improve the product and/or the manual.



Toho Technology

www.tohotechnology.com

Toho Technology Inc. 4809 North Ravenswood Avenue, Chicago, Illinois 60640 Tel: 773.583.7183

ver1.1
2008.12.2KK