+HTL59 Wiring guide for multi-function frequency division encoder card

1. Support collector/push-pull encoder, encoder shielded cable A/B/Z and power supply respectively connected to A-/B-/Z- and VCC(+12.5V)/GND ports of PG card, PG card A+/B+/Z+ is not connected. As shown in Figure 3 and Figure 4, the shielded wire is connected to the PE port of DB9 (the PE port of DB9 is marked as "GND" on the physical object, this "GND" is not the signal GND, but the metal shell of Db9).
2. If necessary, the control system (numerical control system, PLC, etc.) is connected to the DB15 port of the PG card through a shielded cable:If it is given by differential pulse, then connect to PA+/PA-, PB+/PB-, GND (6 or 15), which is mostly used in numerical control systems, etc., as shown in Figure 4.If using NPN drain pulse setting, then connect to PA-, PB-, GND (6 or 15). It is mostly used in Mitsubishi, Delta and other Japanese and Taiwanese PLCs, as shown in Figure 5.

If using PNP source type pulse setting, connect to PA+, PB+, GND (6 or 15). It is mostly used in Siemens and other European PLCs, as shown in Figure 6.
If using differential pulse frequency division output, connect to AO+/AO-, BO+/BO-, ZO+/ZO-, GND (6 or 15), which are mostly used in numerical control systems, etc., as shown in Figure 7.
If you use open collector (NPN drain type) pulse frequency division output, then connect to AO, BO, ZO, GND (6 or 15), mostly used in PLC, etc., as shown in Figure 8.

Db9 female connector			
1	A+	6	A-
2	B+	7	B-
3	Z+	8	Z-
4	GND	9	GND
5	VCC/+12.5V	"GND"	PE

Db15 male connector					
1	AO+	6	GND	11	PA+
2	AO-	7	AO	12	PA-
3	BO+	8	BO	13	PB+
4	BO-	9	ZO	14	PB-
5	ZO+	10	ZO-	15	GND
"GND"	PE				

Figure 1 +TTL 59 DB9/DB15 port definition

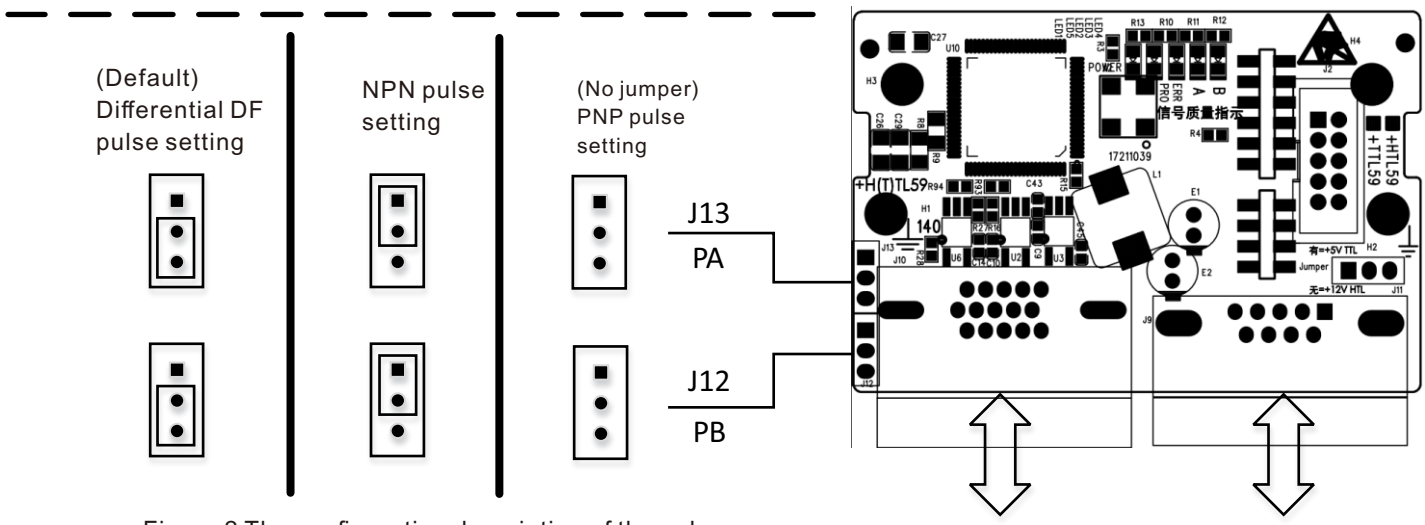

Figure 2 The configuration description of the pulse given signal type of the control system

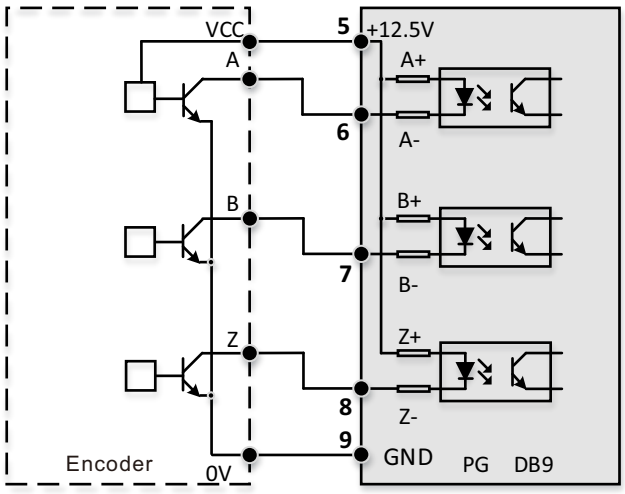

Figure 3 Differential encoder wiring diagram

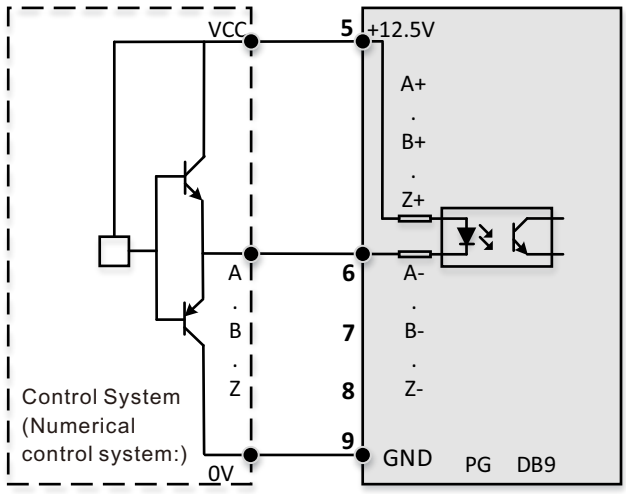

Figure 4 Wiring diagram of differential pulse setting

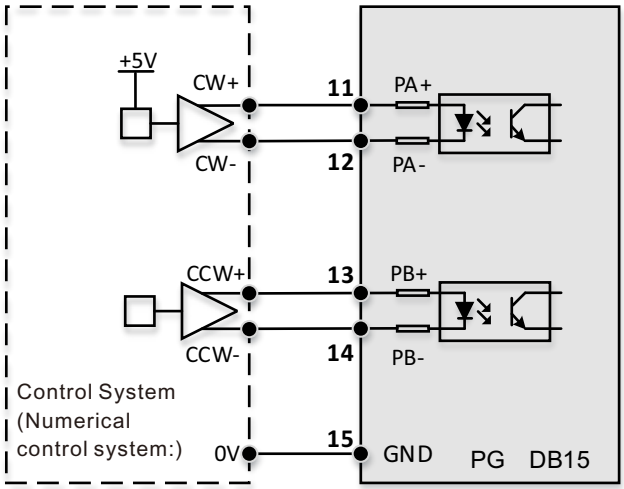

Figure 5 Wiring diagram of differential pulse setting

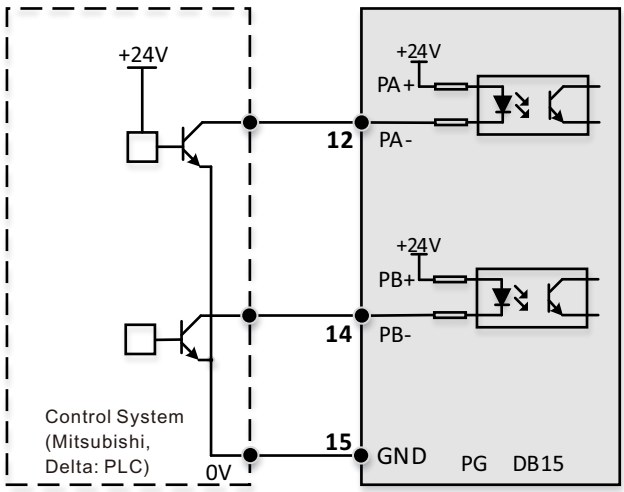

Figure 6 Wiring diagram of NPN pulse setting

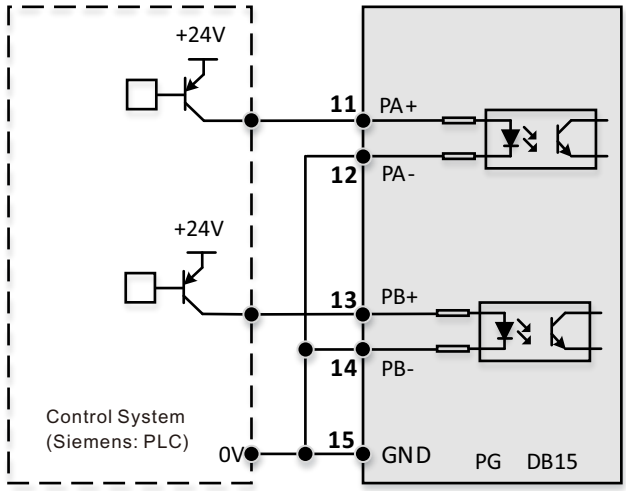

Figure 7 Wiring diagram of PNP pulse setting

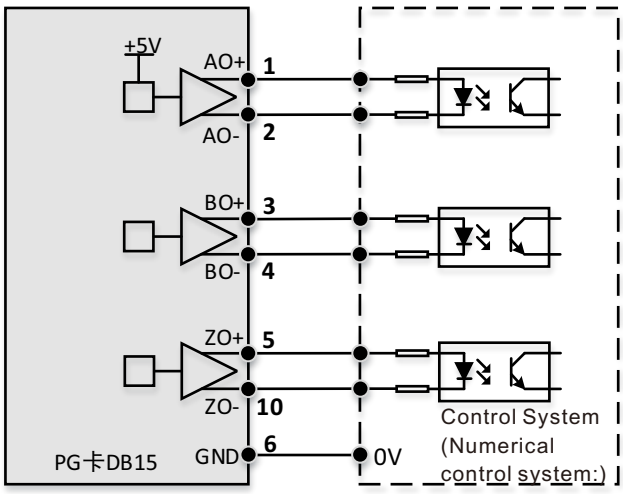

Figure 8 Differential pulse frequency division output wiring diagram

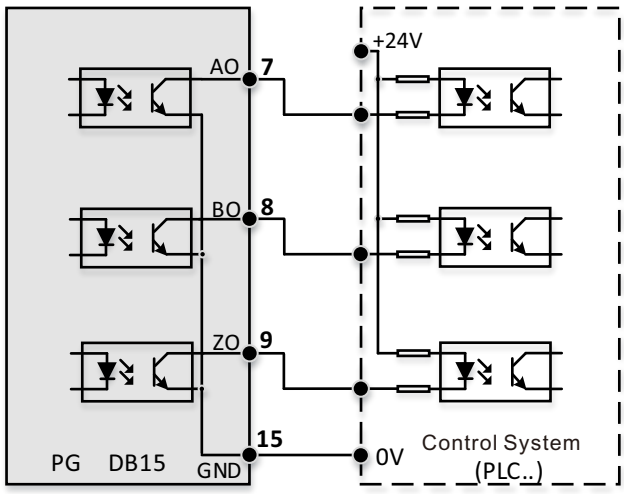

Figure 9 NPN pulse frequency division output wiring diagram

+TTL59 Wiring guide for multi-function frequency division encoder card

1. Only differential encoder is supported. The shielded cable of the encoder is respectively connected to the signal port corresponding to the DB9 male connector of the PG card and the power VCC (+5V)/GND port. As shown in Figure 3, the shielded wire is connected to the PE port of the DB9 male connector (the PE port of the DB9 male connector is marked as "GND" in kind, and this "GND" is not the signal GND, but the metal shell of the Db9).
2. If necessary, the control system (numerical control system, PLC, etc.) can be connected to the DB15 female port of the PG card through a shielded cable:If it is given by differential pulse, then connect to PA+/PA-, PB+/PB-, GND (6 or 15), which is mostly used in numerical control systems, etc., as shown in Figure 4.If using NPN drain pulse setting, then connect to PA-, PB-, GND (6 or 15). It is mostly used in Mitsubishi, Delta and other Japanese and Taiwanese PLCs, as shown in Figure 5.

If using PNP source type pulse setting, connect to PA+, PB+, GND (6 or 15). It is mostly used in Siemens and other European PLCs, as shown in Figure 6.If using differential pulse frequency division output, connect to AO+/AO-, BO+/BO-, ZO+/ZO-, GND (6 or 15), which are mostly used in numerical control systems, etc., as shown in Figure 7.If you use open collector (NPN drain type) pulse frequency division output, then connect to AO, BO, ZO, GND (6 or 15), and it is mostly used in PLC, etc., as shown in Figure 8.Be sure to connect the shielding wire of the control system to the PE port of DB15 (the PE port of DB15 female is marked as "GND" in kind, this "GND" is not the signal GND, but the metal shell of DB15).

Db9 female connector			
1	A+	6	A-
2	B+	7	B-
3	Z+	8	Z-
4	GND	9	GND
5	VCC/+5V	"GND"	PE

Db15 male connector					
1	A0+	6	GND	11	PA+
2	A0-	7	A0	12	PA-
3	B0+	8	B0	13	PB+
4	B0-	9	Z0	14	PB-
5	Z0+	10	Z0-	15	GND
"GND"	PE				

Figure 1 +TTL 59 DB9/DB15 port definition

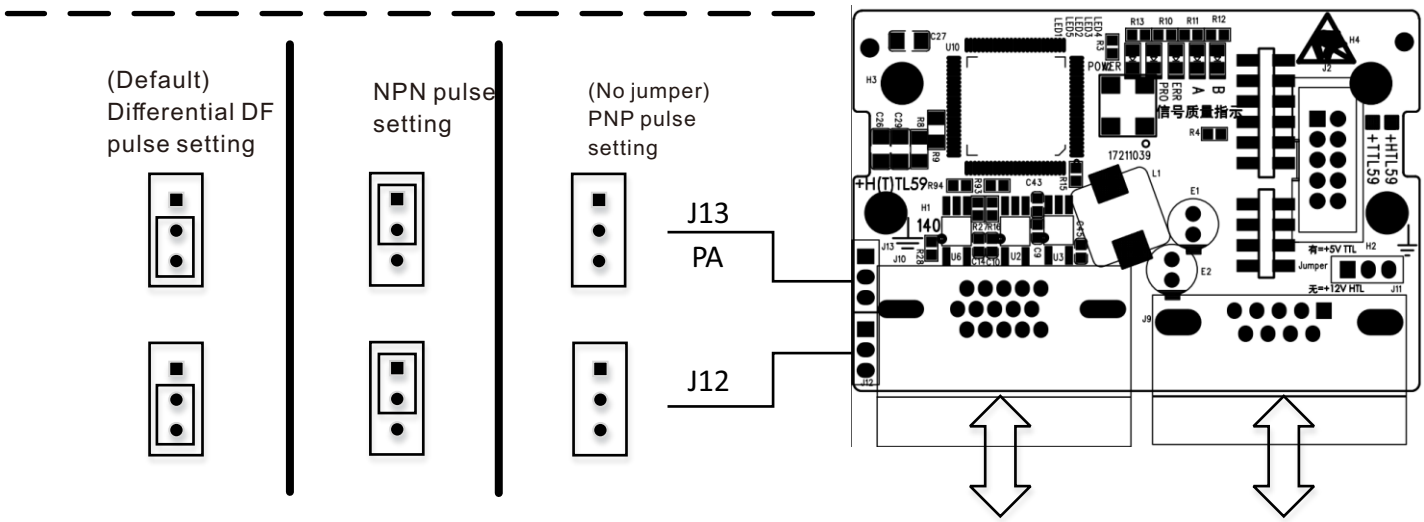

Figure 2 The configuration description of the pulse given signal type of the control system

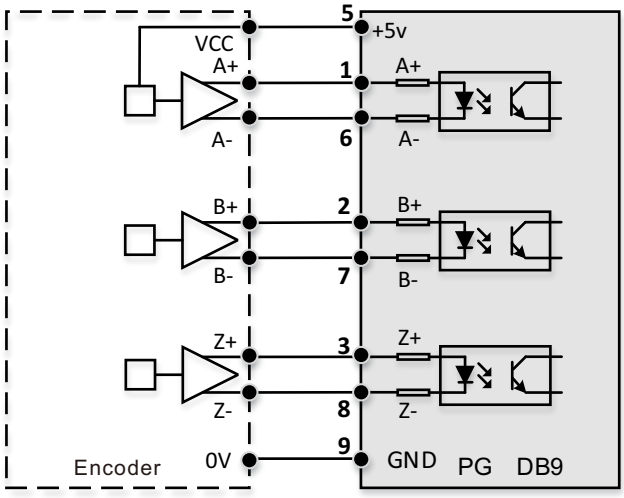

Figure 3 Differential encoder wiring diagram

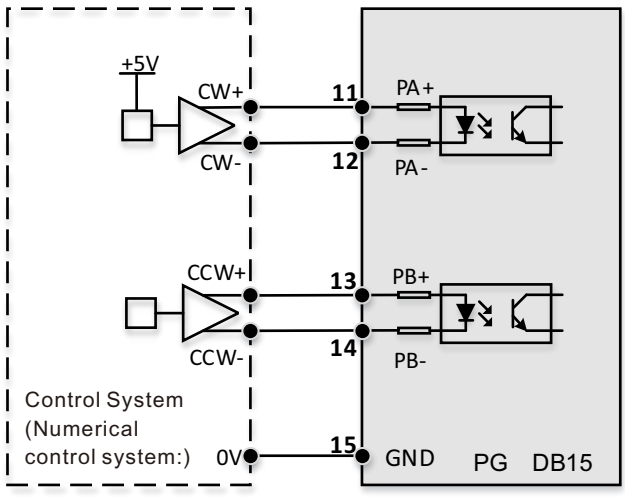

Figure 4 Wiring diagram of differential pulse setting

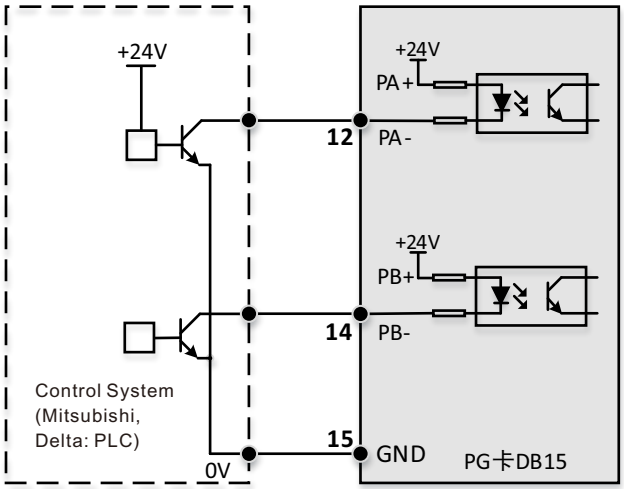

Figure 5 Wiring diagram of NPN pulse setting

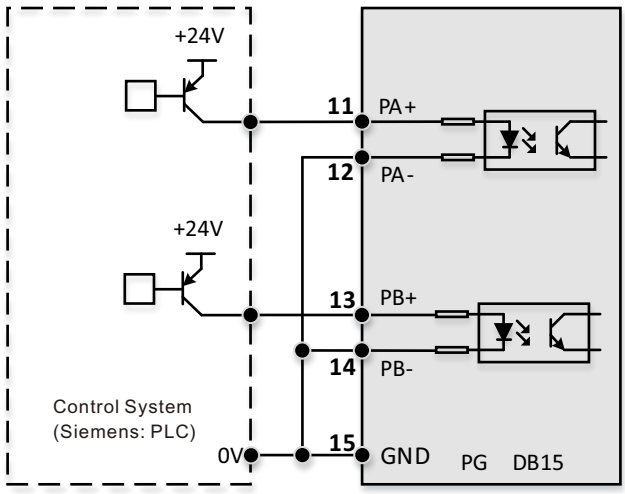

Figure 6 Wiring diagram of PNP pulse setting

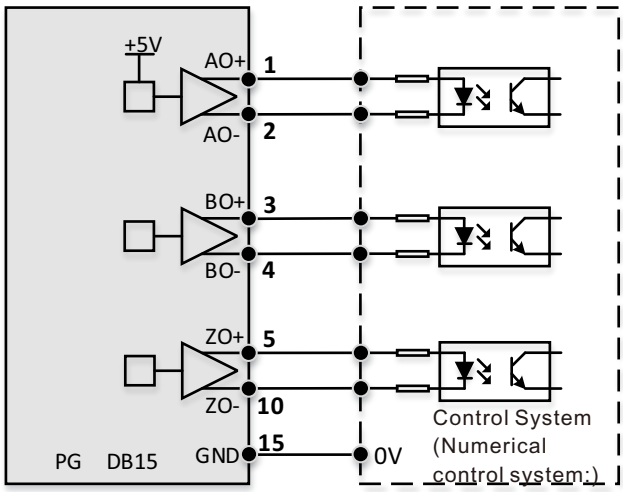

Figure 7: Differential pulse frequency division output wiring diagram

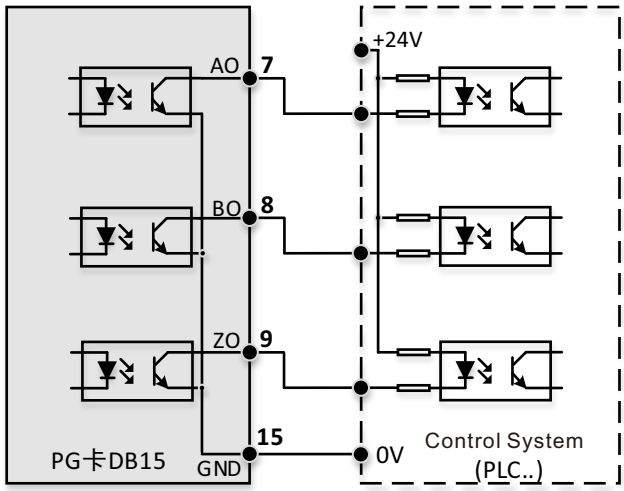

Figure 8 NPN pulse frequency division output wiring diagram