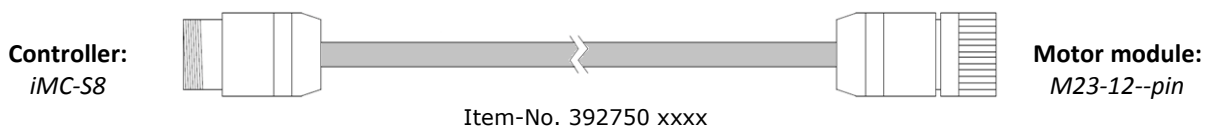
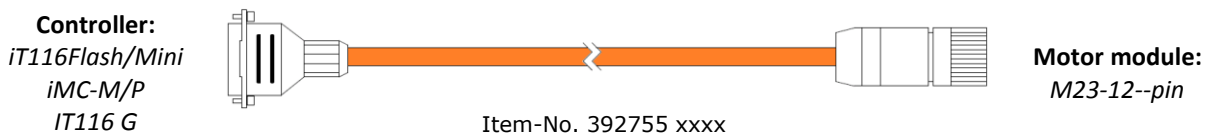


Connection cable M23 12--pin plug - M23 12--pin connector



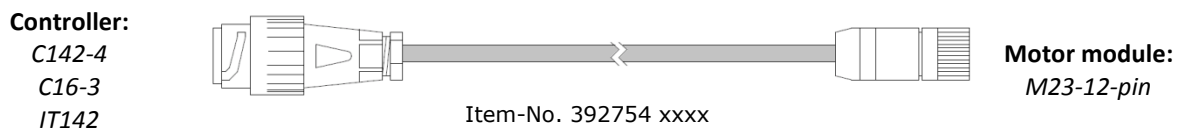
M23 12--pin plug (Controller)	Drag chain cable	M23 12--pin connector (Motor)
1 Motor phase 1A	brown	1 Motor phase 1A
2 Motor phase 1B	white	2 Motor phase 1B
3 Motor phase 2A	yellow	3 Motor phase 2A
4 Motor phase 2B	green	4 Motor phase 2B
5 +24V switch	red	5 +24V switch
6 +24V brake	violet	6 +24V brake
7 GND switch	blue	7 GND switch
8 GND brake	black	8 GND brake
9 Limit switch 1 (Ref.)	grey/-pink	9 Limit switch 1 (Ref.)
10 Limit switch 2	brown/green	10 Limit switch 2
Housing – cable shield	Screen outside + inside	Housing – cable shield

Connection cable SubD9--pin plug – M23 12--pin connector



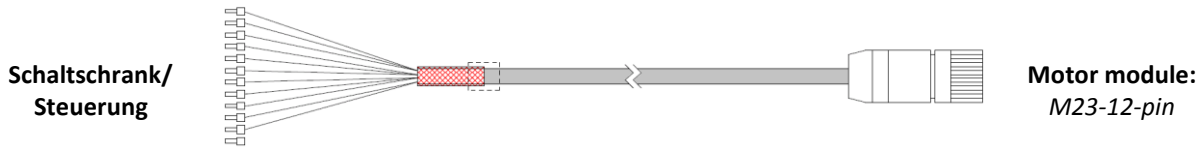
SubD9--pin plug (Controller)	Drag chain cable	M23 12--pin connector (Motor)
1 Motor phase 1A	blue	1 Motor phase 1A
2 Motor phase 1B	white	2 Motor phase 1B
3 Motor phase 2A	brown/green	3 Motor phase 2A
4 Motor phase 2B	white/green	4 Motor phase 2B
5 +24V	-pink	5 +24V
6 + brake	red	6 + brake
7 Limit switch 2	yellow	10 Limit switch 2
8 GND	black	7+8 GND
9 Limit switch 1 (Ref.)	grey	9 Limit switch 1 (Ref.)
Housing	Screen	Housing

Connection cable Amphenol 15-pin Plug - M23 12-pin Connector



Amp. 12-pin Plug (Controller)	Drag chain cable	M23 12-pin Connector (Motor)
1 Motor phase 2B	green	4 Motor phase 2B
2 Motor phase 2A	yellow	3 Motor phase 2A
3 Motor phase 1B	white	2 Motor phase 1B
SL Motor phase 1A	brown	1 Motor phase 1A
4 +24V Brake	violet	6 +24V Brake
5 +24V Switch	red	5 +24V Switch
6 GND BRAKE	black	8 GND Brake
7 PE, Brake	Screen outside + inside	Housing
8 GND Switch	blue	7 GND Switch
9 Limit switch 1 (Ref.)	grey/-pink	9 Limit switch 1 (Ref.)
11 Limit switch 2 (not used)	brown/green	10 Limit switch 2 (not used)

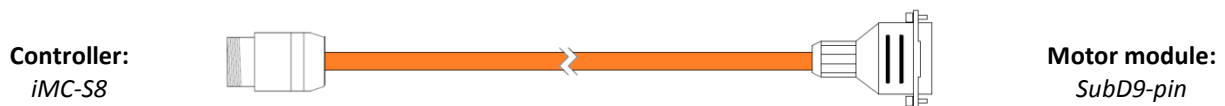
Connection cable Ferrules - M23 12-pin Connector



Item-No. 392762 xxxx

Wire signal	Drag chain cable	M23 12-pin Connector (Motor)
Motor phase 1A	brown	1 Motor phase 1A
Motor phase 1B	white	2 Motor phase 1B
Motor phase 2A	yellow	3 Motor phase 2A
Motor phase 2B	green	4 Motor phase 2B
+24V Switch	red	5 +24V Switch
+24V Brake	violet	6 +24V Brake
GND Switch	blue	7 GND Switch
GND Brake	black	8 GND Brake
Limit switch 1 (Ref.)	grey/-pink	9 Limit switch 1(Ref.)
Limit switch 2	brown/green	10 Limit switch 2
Housing - Cablescreen	Screen outside+inside	Housing - Cablescreen

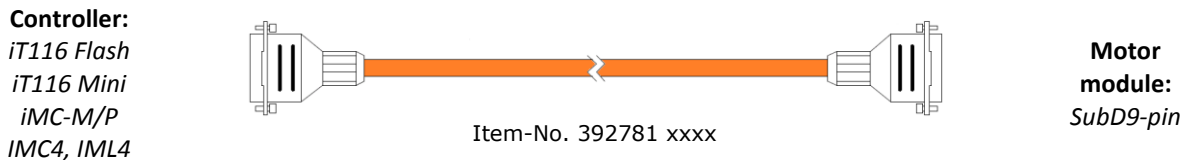
Connection cable M23 12-pin Plug - SubD9-pin Connector



Item-No. 392752 xxxx

M23 12-pin Plug (Controller)	Drag chain cable	SubD9-pin Connector (Motor)
1 Motor phase 1A	white/green	4 Motor phase 1A
2 Motor phase 1B	brown/green	3 Motor phase 1B
3 Motor phase 2A	white	2 Motor phase 2A
4 Motor phase 2B	blue	1 Motor phase 2B
5 +24V Switch	-pink	5 +24V Switch
6 +24 V Brake	red	6 +24V Brake
7+8 GND Brake, Switch	black	8 GND Brake, Switch
9 Limit switch 1 (Ref.)	grey	9 Limit switch 1 (Ref.)
10 Limit switch 2	yellow	7 Limit switch 2
Housing - Cablescreen	Cablescreen	Housing - Cablescreen

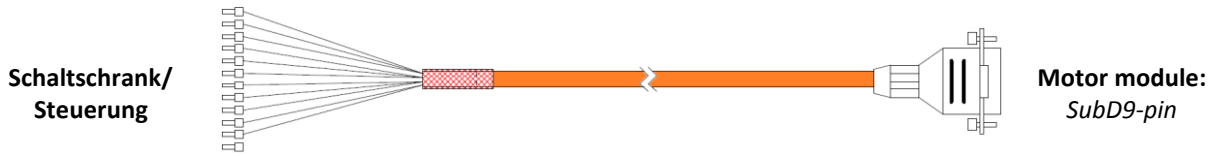
Connection cable SubD9-pin Plug – SubD9-pin Connector



Item-No. 392781 xxxx

SubD9-pin Plug (Controller)	Drag chain cable	SubD9-pin Connector (Motor)
1 Motor phase 2B	blue	1 Motor phase 2B
2 Motor phase 2A	white	2 Motor phase 2A
3 Motor phase 1B	brown/green	3 Motor phase 1B
4 Motor phase 1A	white/green	4 Motor phase 1A
5 +24V Switch	-pink	5 +24V Switch
6 + Brake	red	6 + Brake
7 Limit switch 2	black	7 Limit switch 2
8 GND Brake, Switch	violet	8 GND Brake, Switch
9 Limit switch 1 (Ref.)	grey	9 Limit switch 1 (Ref.)
Housing	Screen	Housing

Connection cable Ferrules - SubD9-pin Connector



Item-No. 392749 xxxx

Wire signal	Drag chain cable	SubD9-pin Connector (Motor)
Motor phase 2B	blue	1 Motor phase 2B
Motor phase 2A	white	2 Motor phase 2A
Motor phase 1B	brown/green	3 Motor phase 1B
Motor phase 1A	white/green	4 Motor phase 1A
+24V Switch	-pink	5 +24V Switch
+24V Brake	red	6 +24V Brake
Limit switch 2	black	7 Limit switch 2
GND Brake, Switch	violet	8 GND Brake, Switch
Limit switch 1 (Ref.)	grey	9 Limit switch 1 (Ref.)
Cablescreen	Screen	Housing

Connection cable Amphenol 15-pin Plug - SubD9-pin Connector

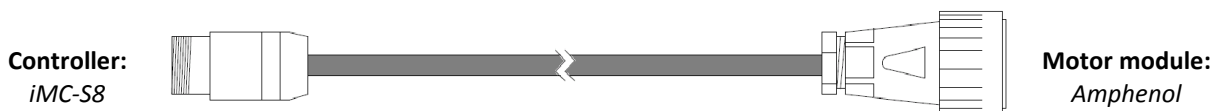


Item-No. 392711, 392710 xxxx

Amp. 12-pin Plug (Controller)	Drag chain cable	SubD9-pin Connector (Motor)
1 Motor phase 2B	blue	1 Motor phase 2B
2 Motor phase 2A	white	2 Motor phase 2A
3 Motor phase 1B	brown / green	3 Motor phase 1B
SL Motor phase 1A	white / green	4 Motor phase 1A
4 +24V Brake	red	5 +24V Brake
5 +24V Switch	-pink	6 +24V Switch
6 GND Brake	black	7 GND Brake, Switch
7 PE, Screen	Screen	Screen, Housing
8* GND Switch	violet	8 GND Switch
9 Limit switch 1 (Ref.)	Grey	9 Limit switch 1 (Ref.)

* In older motor modules, this contact is missing Sub-D9 -pin side, since 2005.

Connection cable M23 12-pin Plug - Amphenol 15-pin Connector

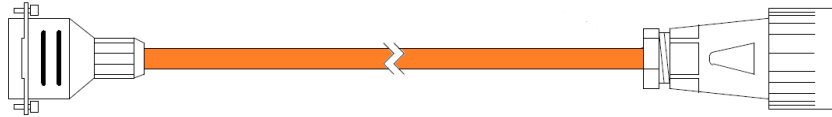


Item-No. 392751 xxxx

M23 12-pin Plug (Controller)	Drag chain cable	Amph. 12-pin Connector (Motor)
1 Motor phase 1A	brown	SL Motor phase 1A
2 Motor phase 1B	white	3 Motor phase 1B
3 Motor phase 2A	yellow	2 Motor phase 2A
4 Motor phase 2B	green	1 Motor phase 2B
5 +24V Switch	red	5 +24V Switch
6 +24V Brake	violet	4 +24V Brake
7 GND Switch	blue	8 GND Switch
8 GND Brake	black	6 GND Brake
9 Limit switch 1 (Ref.)	grey/-pink	9 Limit switch 1 (Ref.)
10 Limit switch 2	white/green	10 Limit switch 2
Housing - Screen	PE, Cablescreen	7 Housing - Screen

Connection cable SubD9-pin Plug – Amphenol 15-pin Connector

Controller:
iT116 Flash
iT116 Mini
iMC-M/P



Motor module:
Amphenol

Item-No. 392102 xxxx

SubD9-pin Plug (Controller)	Drag chain cable	Amph. 12-pin Connector (Motor)
1 Motor phase 2B	blue	1 Motor phase 1A
2 Motor phase 2A	white	2 Motor phase 1B
3 Motor phase 1B	brown/green	3 Motor phase 2A
4 Motor phase 1A	white/green	SL Motor phase 2B
5 +24V Switch	-pink	5 +24V Switch
6 + Brake	red	4 + Brake
7 Limit switch 2	Yellow	10 Limit switch 2
8 GND Brake, Switch	black	6+8 GND Brake, Switch
9 Limit switch 1 (Ref.)	grey	9 Limit switch 1 (Ref.)
Housing	Screen	7 PE

Connection cable Amphenol 12-pin Plug – Amphenol 12-pin Connector

Controller:
C142-4
C16-3
IT142



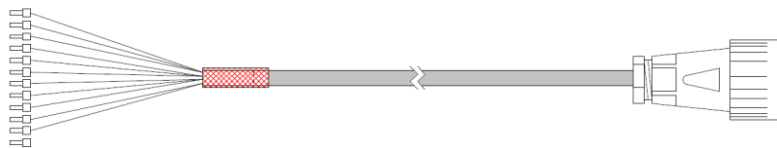
Motor module:
Amphenol

Item-No. 392713 xxxx

Amph. 12-pin Plug (Controller)	Drag chain cable	Amph. 12-pin Connector (Motor)
1 Phase 2B	green	1 Phase 2B
2 Phase 2A	yellow	2 Phase 2A
3 Phase 1B	white	3 Phase 1B
SL Phase 1A	brown	SL Phase 1A
4 + 24 Volt Brake	violet	4 + 24 Volt Brake
5 + 24 Volt Switch	red	5 + 24 Volt Switch
6 GND Brake	black	6 GND Brake
7 PE, Screen	Screen outside+inside	7 PE, Screen
8 GND Switch	blue	8 GND Switch
9 Limit switch 1 (Ref.)	grey/-pink	9 Limit switch 1 (Ref.)
10 Limit switch 2	white/green	10 Limit switch 2

Connection cable Ferrules – Amphenol 15-pin Connector

**cabinet/
control**



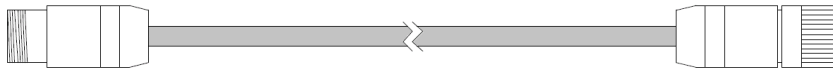
Motor module:
Amphenol

Item-No. 392748 xxxx

Wire signal	Drag chain cable	Amph. 12-pin Connector (Motor)
Phase 2B	green	1 Phase 2B
Phase 2A	yellow	2 Phase 2A
Phase 1B	white	3 Phase 1B
Phase 1A	brown	SL Phase 1A
+ 24 Volt Brake	violet	4 + 24 Volt Brake
+ 24 Volt Switch	red	5 + 24 Volt Switch
GND Brake	black	6 GND Brake
PE, Screen	Screen outside+inside	7 PE, Screen
GND Switch	blue	8 GND Switch
Limit switch 1 (Ref.)	grey/-pink	9 Limit switch 1 (Ref.)
Limit switch 2	white/green	10 Limit switch 2

Motor connection M23 9-pin (8+1) Plug – M23 9-pin (8+1) Connector

Controller:
iMC-DC / EC
iPU-DC / EC

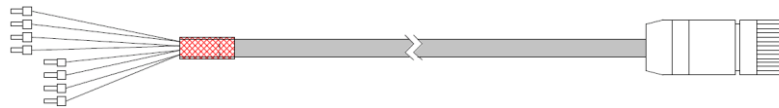


Motor module:
M23 9-pin for
DC/EC 48V

M23 9-pin Plug (Controller)		Drag chain cable / Description	M23 9-pin Connector (Motor)	
1	Motor phase 1 (U+) / U	1	1	Motor phase 1 (U+) / U
2	Motor phase 2 (U-) / V	2	2	Motor phase 2 (U-) / V
3	Motor phase 1 (U+) / W	3	3	Motor phase 1 (U+) / W
4	Motor phase 2 (U-) / --	4	4	Motor phase 2 (U-) / --
5	+24V Brake	5	5	+24V Brake
6	GND Brake	6	6	GND Brake
7	--	n.c.	7	--
8	--	n.c.	8	--
9	PE	green/yellow	9	PE
	Housing	Screen		Housing

Motor connection Ferrules – M23 9-pin (8+1) Connector

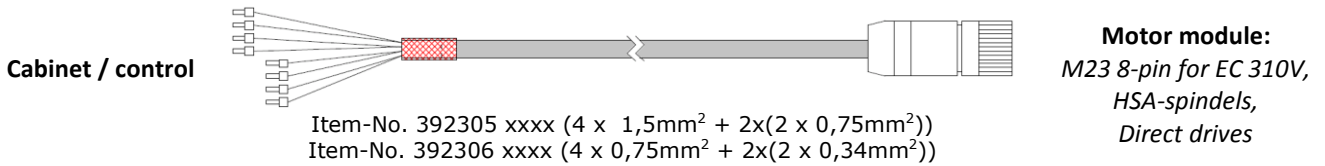
Cabinet / control



Motor module:
M23 9-pin for
DC/EC 48V

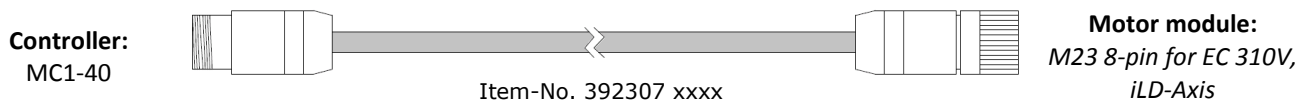
Wire description	Drag chain cable	M23 9-pin Connector (Motor)	
1	1	1	Motor phase 1 (U+) / U
2	2	2	Motor phase 2 (U-) / V
3	3	3	Motor phase 1 (U+) / W
4	4	4	Motor phase 2 (U-) / --
5	5	5	+24V Brake
6	6	6	GND Brake
n.c.	n.c.	7	--
n.c.	n.c.	8	--
green/yellow	green/yellow	9	PE
Screen	Screen		Housing

Ferrules – M23 8-pin (4+3+1) Connector



Wire description	Drag chain cable	M23 9-pin Connector (Motor)			
		-pin	EC Servo 310V	HSA-spindles	Direct drives
1 / U1	1 / U1	1		Motor phase U	
2 / V2	2 / V2	4		Motor phase V	
3 / W2	3 / W3	3		Motor phase W	
PE	green/yellow	PE		PE	
5	5 / brown	A		+24V Brake	
6	6 / white	B		GND Brake	
7	7 / green	C	n.v.	Ventilator 230 V - L	+ Temp.monitoring
8	8 / yellow	D	n.v.	Ventilator 230 V - N	- Temp.monitoring
Screen	Screen			Housing	

Motor connection M23 8-pin (4+3+1) Plug – M23 8-pin (4+3+1) Connector



M23 8-pin Plug (Controller)			Drag chain cable	M23 8-pin Connector (Motor)		
-pin	EC Servo 310V	iLD		-pin	EC Servo 310V	iLD
1		Motor phase U	1 / U1	1		Motor phase U
4		Motor phase V	2 / V2	4		Motor phase V
3		Motor phase W	3 / W3	3		Motor phase W
PE		PE	green/yellow	PE		PE
A		+24V Brake	5 / brown	A		+24V Brake
B		GND Brake	6 / white	B		GND Brake
C	n.v.	+ Temp.monitoring	7 / green	C	n.v.	+ Temp.monitoring
D	n.v.	- Temp.monitoring	8 / yellow	D	n.v.	- Temp.monitoring
		Housing	Screen			Housing

Motor connection M23 9-pin (8+1) Plug / SubD-15 pol. Plug - Amphenol 15-pin Connector

Controller:
iMC-DC
iPU-DC

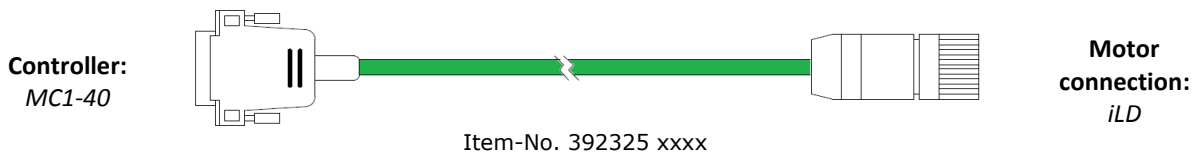


Motor module:
Amphenol DC
Motors

Item-No. 392722 xxxx

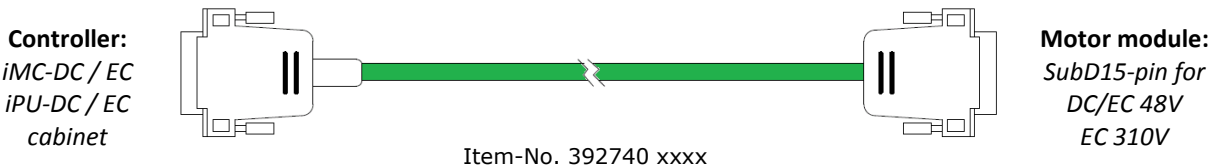
Controller		Drag chain cable		Motor	
- pin	SubD-15-pin	M23-9-pin		-pin	Amphenol Connector
1	n.v.		violet	4	+24V Brake
2	+5V Encoder		red	8	+5V Encoder
3	Encoder track /Z		-pink		n.v.
4	Encoder track /B		yellow	11	Encoder track /B
5	Encoder track /A		brown	10	Encoder track /A
6	+24V Switch		red/blue	14	+24V Switch
7	GND Switch		white/ green	3	GND Switch
8	n.v.		white/yellow		n.v.
9	n.v.		black	6	GND Brake
10	GND Encoder		blue	5	GND Encoder
11	Encoder track Z		grey		n.v.
12	Encoder track B		green	13	Encoder track B
13	Encoder track A		white	12	Encoder track A
14	Limit switch 1		grey/-pink	9	Limit switch 1
15	Limit switch 2		brown/green	7	Limit switch 2
G	Screen		Screen	Screen	Loop
1		Motor phase 1 (U+)	white	1	Motor phase 1 (U+)
2		Motor phase 2 (U-)	brown	2	Motor phase 2 (U-)
3		Motor phase 1 (U+)	yellow	1	Motor phase 1 (U+)
4		Motor phase 2 (U-)	green	2	Motor phase 2 (U-)
5		+24V Brake			
6		GND Brake			
G		Screen	Screen	SL	Loop

Encoder cable SubD15-pin Plug – M23 17-pin Connector



SubD15-pin Plug (Controller)		Drag chain cable / Descript.	M23 17-pin Connector(Motor)	
- pin			-pin	
13	Encoder track A	black	1	Encoder track A
5	Encoder track /A	brown	2	Encoder track /A
11	Encoder track Z	red	3	Encoder track Z
1	Hall Signal A	green/black	4	Hall Signal A
9	Hall Signal B	green/red	5	Hall Signal B
14	Hall Signal C	brown/yellow	6	Hall Signal C
10	GND Encoder	brown/blue	7	GND Encoder
10	GND Hall	brown/yellow	8	GND Hall
2	+5V Hall	brown/red	9	+5V Hall
2	+5V Encoder		10	+5V Encoder
12	Encoder track B	green	11	Encoder track B
4	Encoder track /B	yellow	12	Encoder track /B
3	Encoder track /Z	orange	13	Encoder track /Z
6	2x +24V Switch	grey	14	2x +24V Switch
8	2x GND Switch	blue	15	2x GND Switch
7	Limit switch 1 (Ref.)	white/black	16	Limit switch 1 (Ref.)
15	Limit switch 2	White/yellow	17	Limit switch 2

Encoder cable SubD15-pin Plug – SubD15-pin Connector



SubD15-pin Plug (Controller)			Drag chain cable / Descript.	SubD15-pin Connector(Motor)		
- pin	DC	EC		-pin	DC	EC
1	--	Hall Signal A	violet	1	--	Hall Signal A
2	+5V Encoder	+5V Enc./Hall	red	2	+5V Encoder	+5V Enc./Hall
3	Encoder track /Z		-pink	3	Encoder track /Z	
4	Encoder track /B		yellow	4	Encoder track /B	
5	Encoder track /A		brown	5	Encoder track /A	
6	+24V Switch		red/blue	6	+24V Switch	
7	Limit switch 1 (Ref.)		white/green	7	Limit switch 1 (Ref.)	
8	GND Switch		yellow/brown	8	GND Switch	
9	--	Hall Signal B	black	9	--	Hall Signal B
10	GND Encoder		blue	10	GND Encoder	
11	Encoder track Z		grey	11	Encoder track Z	
12	Encoder track B		green	12	Encoder track B	
13	Encoder track A		white	13	Encoder track A	
14	--	Hall Signal C	grey/-pink	14	--	Hall Signal C
15	Limit switch 2		brown/green	15	Limit switch 2	
	Housing		Screen		Housing	