

Wiring and Cable Specifications

Flying Leads, Cabled and "MS" Connection Options

The **"FL" (Flying Lead) Connection** option for the NeoMetric and J Series motors features 18" leads extending from the motor body. Wire color codes are the same as listed below for "MS" wired NeoMetric and J Series motors. The "FL" option is only available on 70 mm/size 34 motors with encoder feedback.

The **"10" connection** option for the NeoMetric and J Series motors consists of 10 feet of hard-wired cable extending from the motor body. These cables terminate in flying leads. Wire color codes are the same as listed below for the "MS" connection option. The "10" option is only available on 70 mm/size 34 motors with encoder feedback.

The **"MS" connection** option for the NeoMetric and J Series motors provides quick disconnect, bayonet style connectors attached to the motor body. Mating cables are specified and ordered separately. With the "MS" connection option, the motor phase wires are in one connector, and the hall, encoder and temperature switch wires are in the other connector. This option works well when using an amplifier with a built-in controller, or when all cables enter into a cabinet or enclosure and then are wired into a terminal strip. When specifying the "R" (resolver) feedback option, the motor phase wires reside in one connector, the resolver signal and temperature switch wires in the other.

Motor Connection

Designation	Pin Number MS14-12 ¹	Wire Color "MS"/"RS" Cables	Wire Color "GS/GB" Cables
Phase A	J	Red/Yellow	Black 1
Phase B	K	White/Yellow	Black 2
Phase C	L	Black/Yellow	Black 3
Ground	M	Green/Yellow	Green/Yellow
Shield	N.C.	Clear	N.C.

- ¹ 70 mm/size 34 motor connector is MS14-12. 92 mm motor connector is MS18-5.
- ² Brake will operate regardless of polarity of connection.

Encoder/Hall Feedback Connection

Designation	Pin Number MS14-18	Wire Color
Encoder +5	H	Red
Encoder Ground	G	Black
CH A +	A	White
CH A -	B	Yellow
CH B +	C	Green
CH B -	D	Blue
Index +	E	Orange
Index -	F	Brown
Hall Ground	K	White/Green
Hall +5	M	White/Blue
Hall 1	T	White/Brown
Hall 2	U	White/Orange
Hall 3	P	White/Violet
Brake ²	R	Red/Blue
Brake ²	S	Red/Blue
Temp	L	Orange/Yellow
Temp	N	Orange/Yellow
Shield	N.C.	Clear

Resolver Feedback Connection

Designation	Pin Number MS14-18	Wire Color
S1, COS +	E	Black
S2, SIN +	L	Green
S3, COS -	J	Red
S4, SIN -	G	Blue
R1, EXC +	C	Brown
R2, EXC -	U	White
Temp	R	Orange/Yellow or Yellow
Temp	N	Orange/Yellow or Yellow
Brake ²	S	Red/Blue
Brake ²	T	Red/Blue
Shield	N.C.	Clear



Wiring and Cable Specifications (Continued)

The following cable sets are available for NeoMetric or J Series motors with the "MS" connection option. The cable sets include one motor power cable and one feedback cable. These cables have mating motor connectors at one end, flying leads at the other.

70MS CABLE-XX

One set of cables for 70 mm/size 34 motors with encoder feedback and "MS" connection option. "-XX" is cable length. "70MS CABLE" sets available in lengths of 10, 25 and 35 feet.

70RS CABLE-XX

One set of cables for 70 mm/size 34 motors with resolver feedback and "MS" connection option. "-XX" is cable length. "70RS CABLE" sets available in lengths of 10, 25, 35, and 50 feet.

92MS CABLE-XX

One set of cables for 92 mm motors with encoder feedback and "MS" connection option. "-XX" is cable length. "92MS CABLE" sets available in lengths of 10, 25 and 35 feet.

92RS CABLE-XX

One set of cables for 92 mm motors with resolver feedback and "MS" connection option. "-XX" is cable length. "92RS CABLE" sets available in lengths of 10, 25, 35, and 50 feet.

The following hi-flex cables are also available for NeoMetric or J Series motors with the "MS" connection option. Motor power cable and feedback cable must be ordered separately. These cables have mating motor connectors at one end, flying leads at the other. Wire colors in hi-flex cables do not match the standard wiring diagram. Contact Compumotor for wiring diagram.

71-016529-XX

70 mm/size 34 "MS" motor cable, hi-flex "-XX" is cable length. Cable available in lengths of 10, 25, 35 and 50 feet.

71-016530-XX

92 mm "MS" motor cable, hi-flex "-XX" is cable length. Cable available in lengths of 10, 25, 35 and 50 feet.

71-016022-XX

Encoder feedback cable, hi-flex "-XX" is cable length. Cable available in lengths of 10, 25, and 35 feet.

71-016374-XX

Resolver feedback cable, hi-flex "-XX" is cable length. Cable available in lengths of 10, 25, 35 and 50 feet.

The following cable sets are available for NeoMetric or J Series motors for use with the Gemini family of amplifiers. The "MS" connection option should be specified for the NeoMetric or J Series motors when using these cable sets.

These cable sets consist of one motor power cable and one feedback cable. These cables have mating motor connectors at one end, and molded connectors for wiring to a Gemini amplifier at the other. These cables have a braided shield and are CE(EMC) compliant. The "GB" cable sets have leads for wiring NeoMetric or J Series motors with internal brakes, the "GS" cable sets do not.

70GS CABLE-XX

One set of cables for 70 mm/size 34 motors with encoder feedback and "MS" connection option. Cables include molded connectors for wiring to Gemini amplifier. **No connection for internal brake.** "-XX" is cable length. "70GS CABLE" sets available in lengths of 10, 25, and 35 feet.

70GB CABLE-XX

One set of cables for 70 mm/size 34 motors with encoder feedback and "MS" connection option. Cables include molded connectors for wiring to Gemini amplifier. **Includes connection for internal brake.** "-XX" is cable length. "70GB CABLE" sets available in lengths of 10, 25, and 35 feet.

92GS CABLE-XX

One set of cables for 92 mm motors with encoder feedback and "MS" connection option. Cables include molded connectors for wiring to Gemini amplifier. **No connection for internal brake.** "-XX" is cable length. "92GS CABLE" sets available in lengths of 10, 25, and 35 feet.

92GB CABLE-XX

One set of cables for 92 mm motors with encoder feedback and "MS" connection option. Cables include molded connectors for wiring to Gemini amplifier. **Includes connection for internal brake.** "-XX" is cable length. "92GB CABLE" sets available in lengths of 10, 25, and 35 feet.

Servo Motors

Custom Designed Servo Motors For Your Specific Application. Call 1-800-358-9070 Today.

Wiring and Cable Specifications (continued)

“TQ” Connection Option (70mm/Size 34 Only)

The **“TQ” Connection** option for the NeoMetric or J series motors provides quick disconnect, bayonet style connectors attached to the motor body. Mating cables are specified and ordered separately. The “TQ” connection option joins the motor phase wires, temperature switch, and hall effect signals in one

connector. The second connector has only encoder signals. This connection option applies well in applications where the hall and motor phase wires connect directly to an amplifier, while the encoder signals connect directly to a controller.

Motor/Hall Connection

Designation	Pin Number MS14-12	Wire Color
Phase A	J	Red/Yellow
Phase B	K	White/Yellow
Phase C	L	Black/Yellow
Ground	M	Green/Yellow
Temp	G	Orange/Yellow or Yellow
Temp	H	Orange/Yellow or Yellow
Shield	N.C.	Clear
Hall Ground	F	White/Green
Hall +5	B	White/Blue
Hall 1	C	White/Brown
Hall 2	D	White/Orange
Hall 3	E	White/Violet

Encoder Feedback Connection

Designation	Pin Number MS14-18	Wire Color
Encoder +5	H	Red
Encoder Ground	G	Black
CH A +	A	White
CH A -	B	Yellow
CH B +	C	Green
CH B -	D	Blue
Index +	E	Orange
Index -	F	Brown
Brake ¹	R	Red/Blue
Brake ¹	S	Red/Blue

¹ Brake will operate regardless of polarity of connection

The following cable sets are available for NeoMetric or J Series motors with the “TQ” connection option. The cable sets consist of one motor power cable and one feedback cable. These cable sets have mating motor connectors at one end, flying leads at the other.

70TQ CABLE-XX

One set of cables for 70mm/size 34 motors with encoder feedback and “TQ” connector option. “-XX” is cable length. “70TQ CABLE” sets available in lengths of 10, 25 and 35 feet.

The following hi-flex cables are available for NeoMetric or J Series motors with the “TQ” connection option. Motor power cable and feedback cable must be ordered separately. These cables have mating motor connectors at one end, flying leads at the other. Wire colors in hi-flex cables do not match the standard wiring diagram. Contact Compumotor for wiring diagram.

71-017677-XX

TQ motor cable, hi-flex “-XX” is cable length. Cable available in lengths of 10, 25, and 35 feet.

71-016022-XX

Encoder feedback cable, hi-flex “-XX” is cable length. Cable available in lengths of 10, 25, and 35 feet.

“PT” Connection Option

The **“PT” connection** option features two 1/2 - 14 NPT threaded holes in the connector housing, and internal screw terminal connections for motor and feedback leads. This connection option is recommended when running cable conduit between the motor and an enclosure containing the amplifier and controller. The “PT” connection option is only available on 92mm motors.

