

Electromechanical Automation Change Bulletin



Bulletin # TC415
Date: July 14, 2007
To: All Master Price List Holders, Direct Customers
Product: SM16, SM23 Servomotors
Subject: Encoder Change

Parker Electromechanical Automation makes every effort to ensure our products exceed our customers' expectations. We occasionally have to change/improve some aspect of the product. This technical bulletin describes the improvement and serves as Parker's product change notification. This information is provided so that you may take appropriate action with users of Electromechanical Automation products.

Product Improvement

Due to the impending obsolescence of our current encoder (RCM15) from our encoder vendor, Parker has changed to a different encoder for the SM16 and SM23 motors.

The new encoder, called the R35i, is now the standard encoder for these two motor sizes. Here are a few items to note:

- The R35i encoder is RoHS compliant.
- The R35i encoder still has the same 1000 line count as the existing "E" option encoder.
 - The 500 line encoder (option D) is obsolete as a standard encoder option. Refer to SB#742.

Improvement Impact

- The new R35i uses 26 gauge wire, whereas the older encoder used 24 gauge wire. Due to this smaller wire gauge, two ground leads are required to handle the current requirement of the encoder.
- The new encoder does require new wire color changes on any flying lead motors. This color change only affects flying lead connector options on the SM motors. It does not affect connectorized (PS, MS, etc.) or cabled motors (10, 25, or xx).
- This bulletin pertains only to the SM motor family. The BE and the N0/J0 family of motors will be converting to the R35i at a later date.
- All distributors must contact their customers to inform them of this change to all SM encoder motors, standard and custom.

This change started to cut in to production 3/31/07. All SM16/23 models are expected go complete by late August 2007.

The following table shows the new wire color changes for all flying lead (FL and FO) SM motors.

Old FL or FO wire colors		New FL or FO wire colors	
Enc +5	Red	Vcc +5	Red & Brown/white*
Enc Gnd	Black	Gnd	Black & Black/White**
A+	White	A+	Yellow
A-	Yellow	A-	Yellow/White
B+	Green	B+	Blue
B-	Blue	B-	Blue/White
Index+	Orange	Index+	Orange
Index-	Brown	Index-	Orange/White
Brake	Red/Blue	Brake	Red/Blue
Brake	Red/Blue	Brake	Red/Blue
Temp	Orange/Yellow	Temp	Yellow / Orange
Temp	Orange/Yellow	Temp	Yellow / Orange
Hall Gnd	White/Green	Hall Return	Green/White
Hall +5	White/Blue		
Hall 1	White/Brown	Hall 1	Brown
Hall 2	White/Orange	Hall 2	Green
Hall 3	White/Violet	Hall 3	Violet
Shield	Clear	Shield	Clear

* Both wires must be attached to +5 Volts

** Both wires must be attached to Gnd

The following table shows the new wire color changes for all cabled (10, 25, or xx) SM motors.

Old Cabled (10, 25, or xx)		New Cabled (10, 25, or xx)	
Enc +5	Red	Vcc +5	Red
Enc Gnd	Black	Gnd	Black & Gray**
A+	White	A+	White
A-	Yellow	A-	Yellow
B+	Green	B+	Green
B-	Blue	B-	Blue
Index+	Orange	Index+	Orange
Index-	Brown	Index-	Brown
Brake	Red/Blue	Brake	Red/Blue
Brake	Red/Blue	Brake	Red/Blue
Temp	Orange/Yellow	Temp	Orange/Yellow
Temp	Orange/Yellow	Temp	Orange/Yellow
Hall Return	White/Green	Hall Return	White/Green
Hall +5	White/Blue	Hall +5	White/Blue
Hall 1	White/Brown	Hall 1	White/Brown
Hall 2	White/Orange	Hall 2	White/Orange
Hall 3	White/Violet	Hall 3	White/Violet
Shield	Clear	Shield	Clear

** Both wires must be attached to Gnd

If you have any questions, please contact:

- Technical Assistance, Applications Engineering Department (e-mail: emn_support@parker.com) or call 800-358-9070 North America, 707-584-7558 International)