■ Resolver Option MCB 103

MCB 103 Resolver Option is used for interfacing resolver motor feedback to 3G3DV. Resolvers are used basically as motor feedback device for permanent magnet brushless synchronous motors.

When the resolver option is ordered separately the kit includes:
- Resolver Option MCB 103
- Enlarged LCP fixture and enlarged terminal cover

Selection of parameters: 17-5x resolver interface.

MCB 103 Resolver Option supports a various number of resolver types.

Resolver specifications:	
Resolver poles	Par. 17-50: 2 *2
Resolver Input Voltage	Par. 17-51: 2.0-8.0 Vrms *7.0 Vrms
Resolver Input Frequency	Par. 17-52: 2-15 kHz *10.0 kHz
Transformation ratio	Par. 17-53: 0.1-1.1 *0.5
Secondary input voltage	Max. 4 Vrms
Secondary load	App. 10 kΩ

130BA247.10
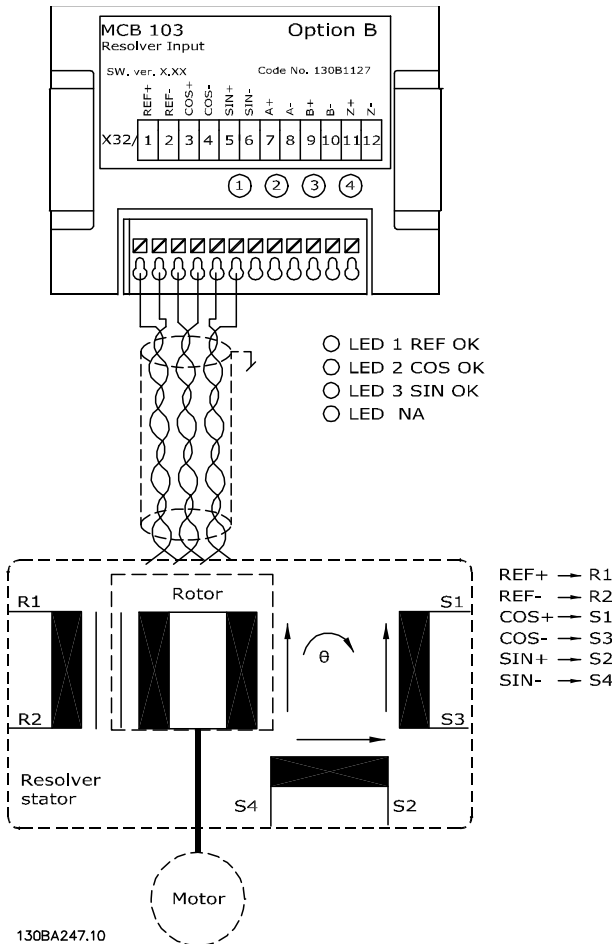
![NB icon] **NB!**
The resolver option MCB103 can only be used with rotor-supplied resolver types.
Stator-supplied resolvers cannot be used.

LED Indicators

LED 1 is on when the reference signal is OK to resolver

LED 2 is on when Cosine signal is OK from resolver

LED 3 is on when Sinus signal is OK from resolver

The LEDs are active when par. 17-61 is set to *Warning* or *Trip*.
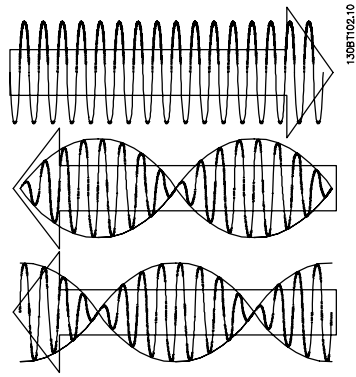
Set-up example

In this example a Permanent Magnet (PM) Motor is used with the resolver as speed feedback. A PM motor must usually operate in flux mode.

Wiring:

The max. cable length is 490 ft [150 m] when a twisted-pair type of cable is used.

NOTE!
Resolver cables must be shielded and separated from the motor cables.

NOTE!
The shield of the resolver cable must be correctly connected to the de-coupling plate and connected to chassis (ground) on the motor side.

NOTE!
Always use shielded motor cables and brake chopper cables.

Adjust following parameters:		
Par. 1-00	Configuration Mode	Speed closed loop [1]
Par. 1-01	Motor Control Principle	Flux with feedback [3]
Par. 1-10	Motor Construction	PM, non salient SPM [1]
Par. 1-24	Motor Current	Nameplate
Par. 1-25	Motor Nominal Speed	Nameplate
Par. 1-26	Motor Contr. Rated Torque	Nameplate
AMA is not possible on PM motors		
Par. 1-30	Stator Resistance	Motor data sheet
Par. 1-37	d-axis Inductance (Ld)	Motor data sheet (mH)
Par. 1-39	Motor Poles	Motor data sheet
Par. 1-40	Back EMF at 1000 RPM	Motor data sheet
Par. 1-41	Motor Angle Offset	Motor data sheet (Usually zero)
Par. 17-50	Poles	Resolver data sheet
Par. 17-51	Input Voltage	Resolver data sheet
Par. 17-52	Input Frequency	Resolver data sheet
Par. 17-53	Transformation Ratio	Resolver data sheet
Par. 17-59	Resolver Interface	Enabled [1]