4-1 Wiring

It provides 1-phase / 3-phase power

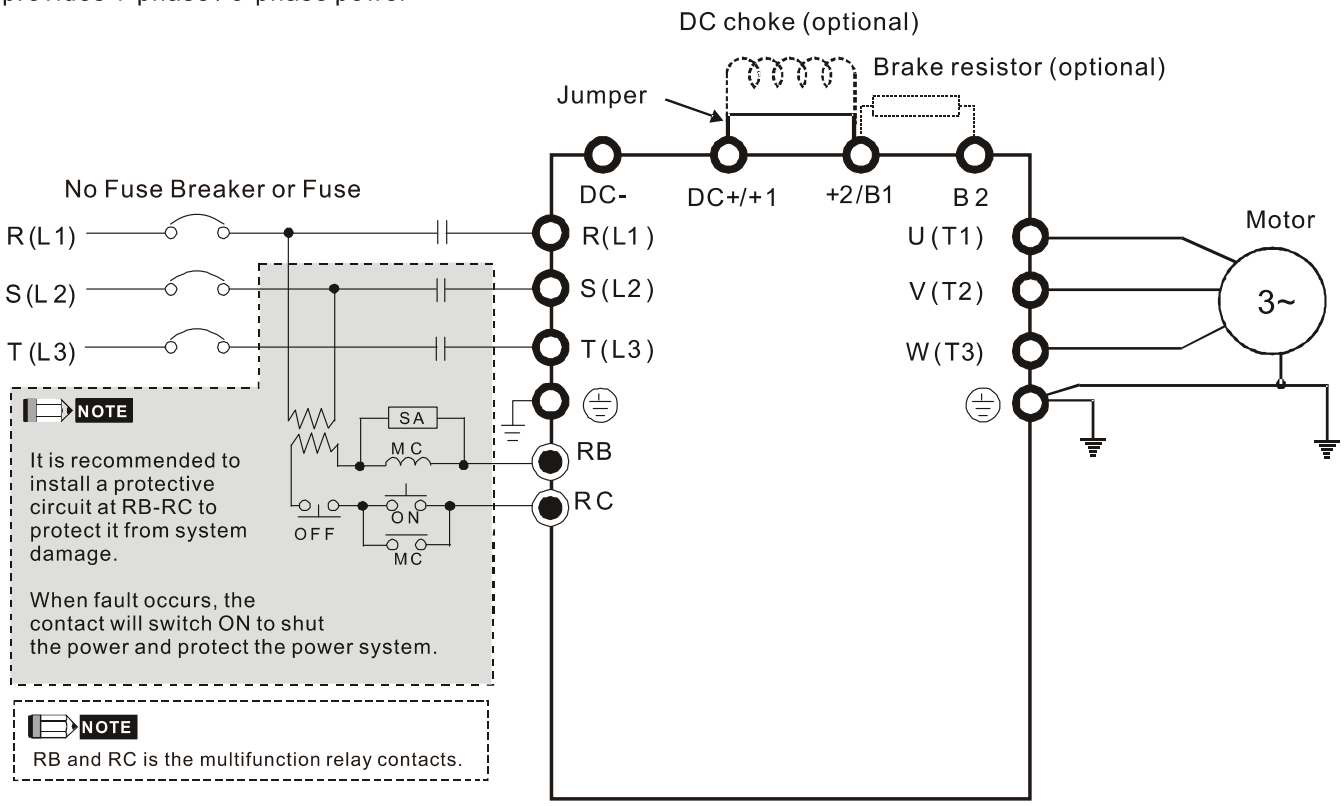


Figure 1

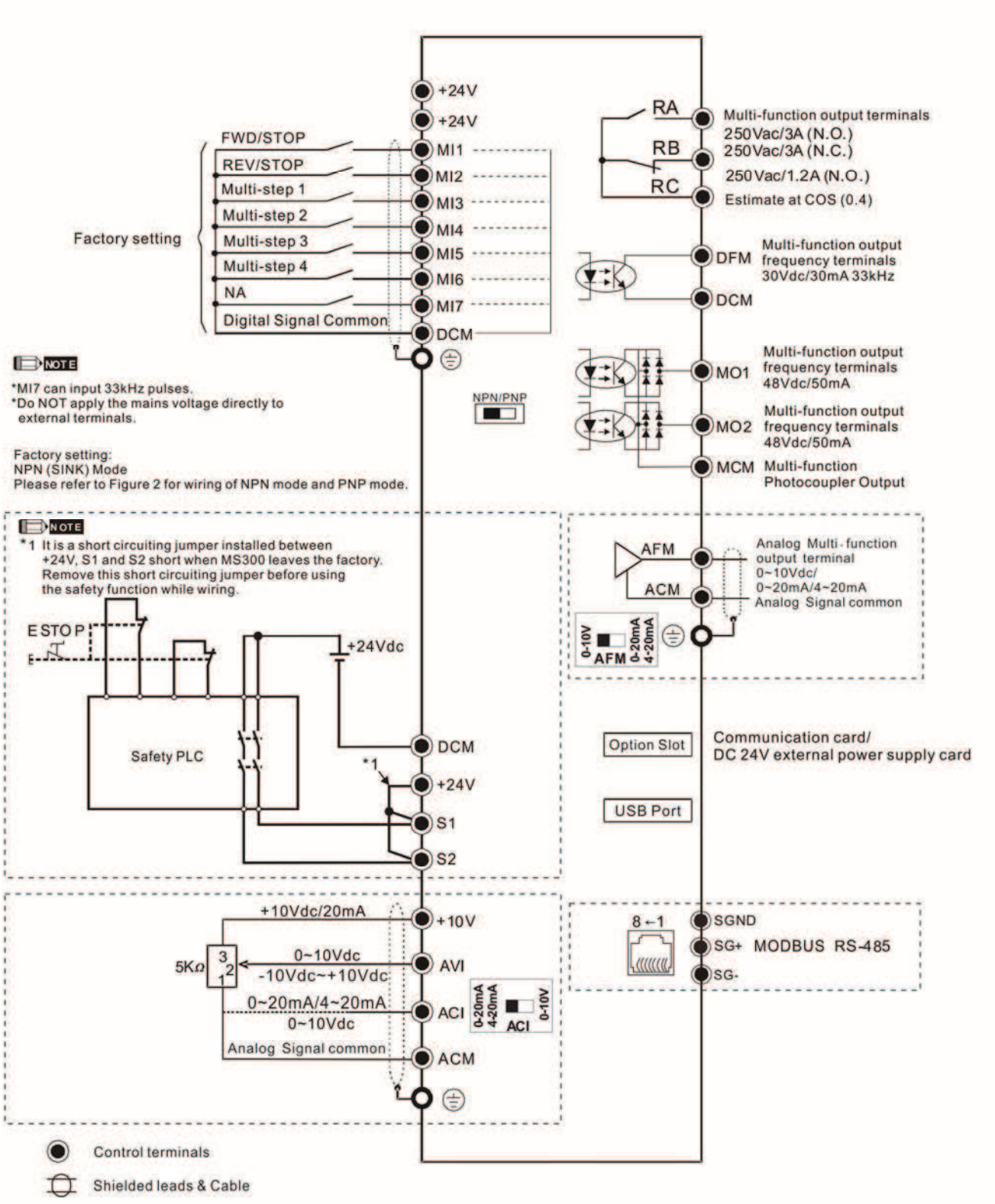
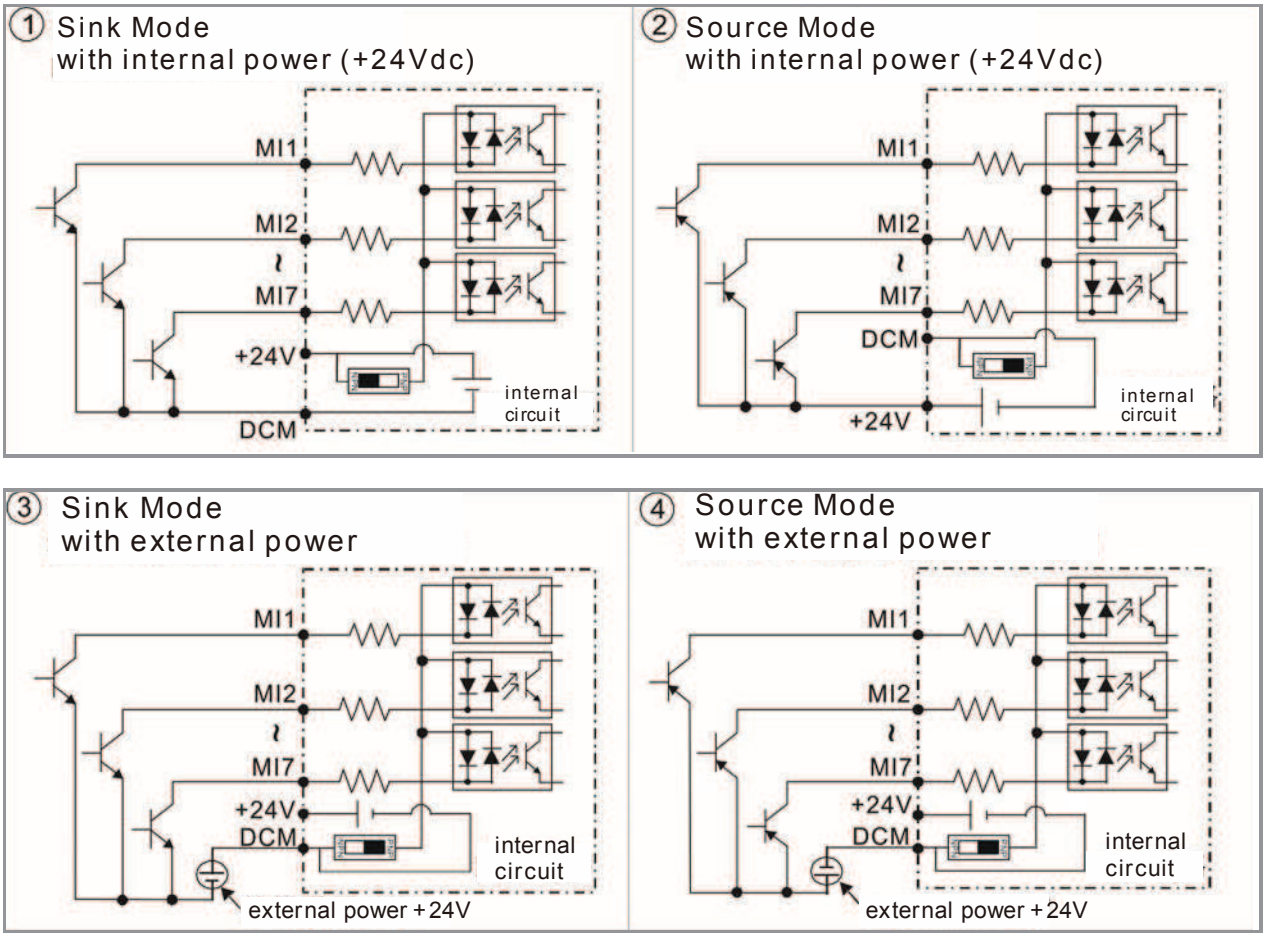
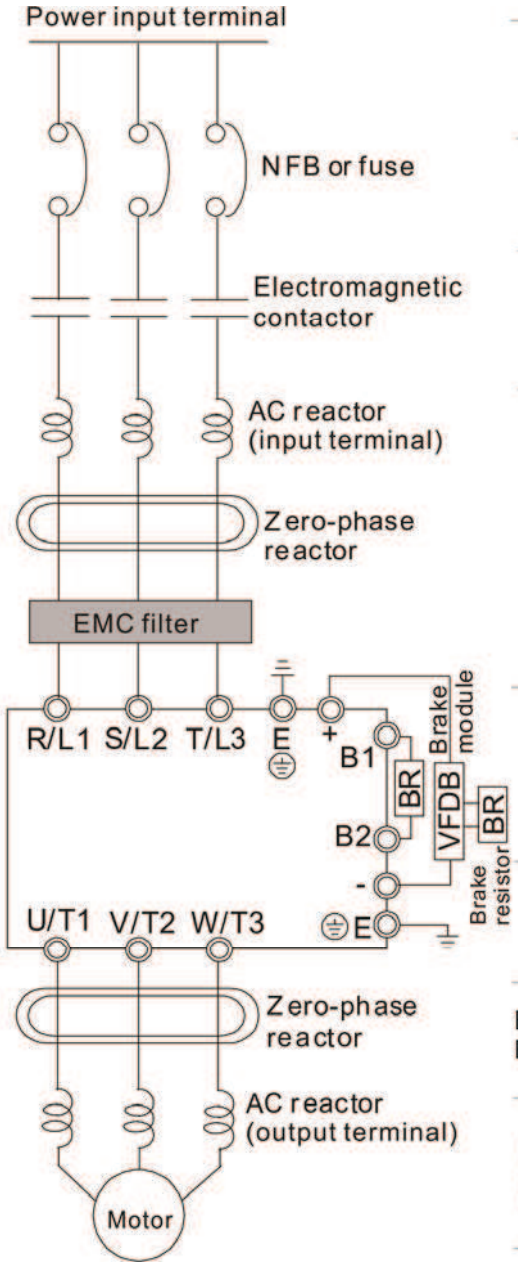

+24V
+24V
FWD/STOP
REV/STOP
Multi-step 1
Multi-step 2
Multi-step 3
Multi-step 4
NA
Digital Signal Common
Factory setting
MI1
MI2
MI3
MI4
MI5
MI6
MI7
DCM
NOTE
*MI7 can input 33kHz pulses.
*Do NOT apply the mains voltage directly to external terminals.
Factory setting:
NPN (SINK) Mode
Please refer to Figure 2 for wiring of NPN mode and PNP mode.
NPN/PNP
RA
RB
RC
Multi-function output terminals
250Vac/3A (N.O.)
250Vac/3A (N.C.)
250Vac/1.2A (N.O.)
Estimate at COS (0.4)
DFM
DCM
Multi-function output frequency terminals
30Vdc/30mA 33kHz
MO1
MO2
MCM
Multi-function output frequency terminals
48Vdc/50mA
Multi-function output frequency terminals
48Vdc/50mA
Multi-function Photocoupler Output
NOTE
*1 It is a short circuiting jumper installed between +24V, S1 and S2 short when MS300 leaves the factory. Remove this short circuiting jumper before using the safety function while wiring.
ESTOP
+24Vdc
Safety PLC
*1
DCM
+24V
S1
S2
AFM
ACM
Analog Multi-function output terminal
0~10Vdc/
0~20mA/4~20mA
Analog Signal common
0-10V
AFM
0-20mA
4-20mA
Option Slot
Communication card/
DC 24V external power supply card
USB Port
+10Vdc/20mA
5KΩ
0~10Vdc
-10Vdc~+10Vdc
0~20mA/4~20mA
0~10Vdc
Analog Signal common
+10V
AVI
ACI
ACM
0-20mA
4-20mA
ACI
0-10V
8←1
SGND
SG+
SG-
MODBUS RS-485
Control terminals
Shielded leads & Cable

Figure 2

SINK (NPN) / SOURCE (PNP) Mode



4-2 System Wiring Diagram



Power input terminal	Please refer to Chapter 9 Specification Table in user manual for detail
NFB or fuse	There may be a large inrush current during power on. Refer to 7-2 NFB to select a suitable NFB or 7-3 Fuse Specification Chart.
Electromagnetic contactor	Switching the power ON/OFF before the magnetic contactor more than 1xper hour can cause damage to the drive.
AC reactor (input terminal)	When the mains power capacity is > 500kVA or when the drive is preceded by a capacitor bank, instantaneous peaks voltages and current may destroy the drive. In that case it is recommended to install an AC input reactor which will also improve the power factor and harmonics. The cable between reactor and drive should be < 10m. Please refer to Chapter 7-4.
Zero-phase reactor	Used to reduce radiated emission, especially in environments with audio devices, and reduce input and output side interference. The effective range is AM band to 10MHz. Please refer to Chapter 7-5.
EMC filter	Can be used to reduce electromagnetic interference. Please refer to Chapter 7-6.
Brake module & Brake resistor(BR)	Used to shorten the deceleration time of the motor. Please refer to Chapter 7-1.
AC reactor (output terminal)	The motor cable length will affect switching current peaks. It is recommended to install an AC output reactor when the motor cable length exceeds the value in Chapter 7-4.