

Reversing unit

Instruction manual

SPRINT* / *Electric

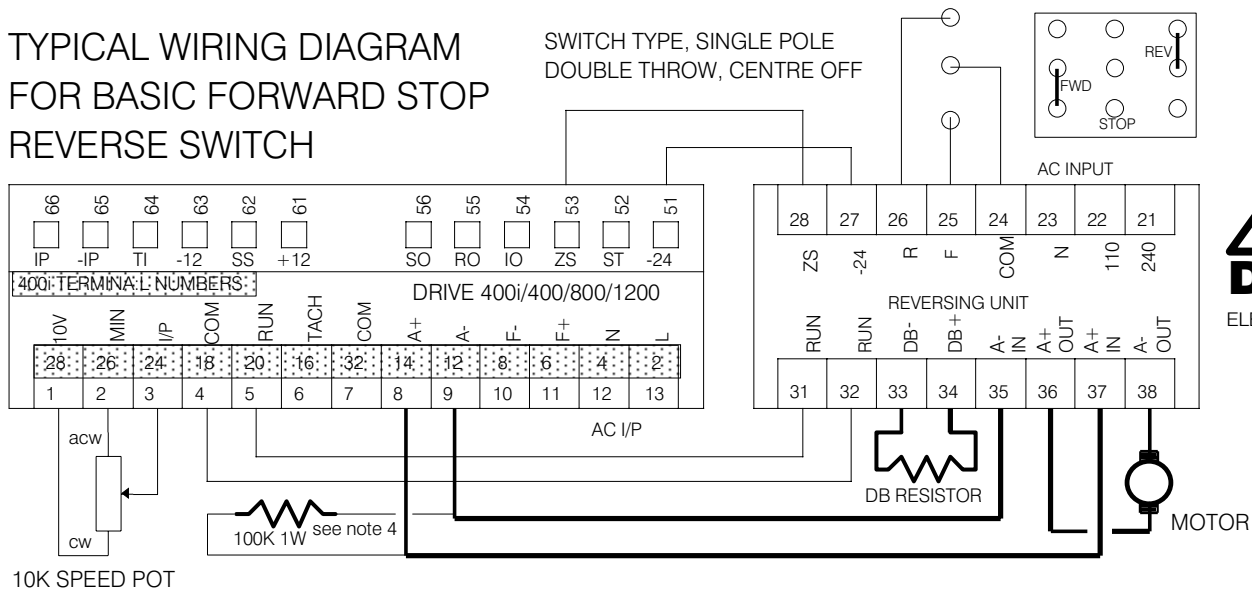
Instruction manual

Reversing unit

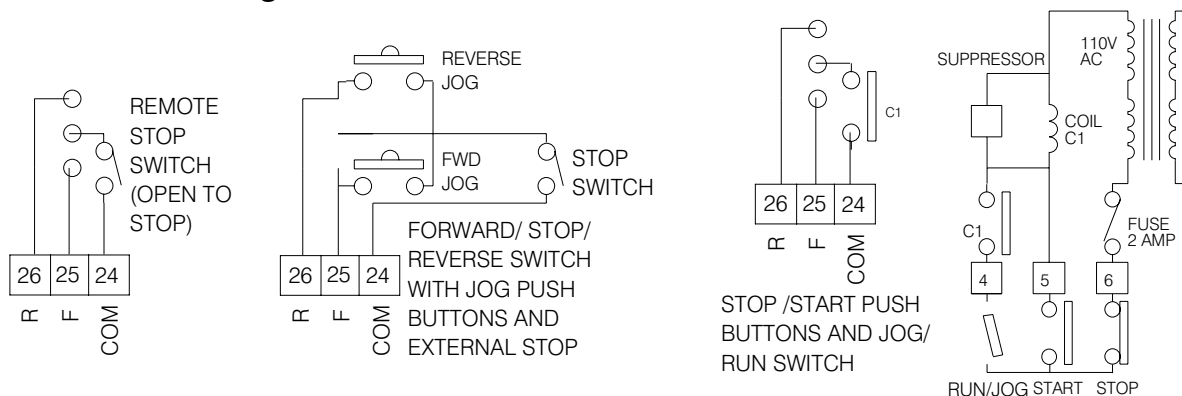
The REVERSING UNIT is a complex component only for professional assemblers. The unit is CE marked according to LVD 73/23/EEC amended 93/68/EEC. Follow these installation guidelines for EMC compatability. Further measures may be necessary. Installers must have a level of technical competence to correctly install. The EMC behaviour is the responsibility of the manufacturer of the system or installation using this component.

<p>Used with 400/800/1200 DC. drive units</p> <p>FEATURES</p> <ul style="list-style-type: none"> Safe reversing with zero speed interlock Connections for dynamic brake resistor Includes all power contacts 110 or 240V AC power supply Minimises wiring Versatile control options Very compact 12 AMP current rating Switch terminals are isolated May be interfaced with logic controller 	<p>SPECIFICATION</p> <ul style="list-style-type: none"> supply voltage: 110 or 240 volts AC current rating: 12 AMPS max. form factor: 1.5 switch requirement: single pole 2 way centre off ambient temp: 0 to 40C control action: automatic zero speed interlock dimensions: W 50 mm, H 130 mm, D 40 mm
---	---

TYPICAL WIRING DIAGRAM FOR BASIC FORWARD STOP REVERSE SWITCH



Alternative configurations of the FWD STOP REVERSE control section



Dynamic braking resistor

Provision is made on the reversing unit to fit a dynamic braking resistor if required. The resistor value and wattage depends on various factors.

The formulae below allows useful parameters to be calculated according to the motor rating.

- 1) Braking resistance $RB = \left[PT/I_{an} + PT/I_{bm} - U_{an} \right] \times 1/I_{an}$
- 2) Max. braking torque $Ma = Mn \times I_{bm} / I_{an}$
- 3) Average dissipation = average braking current X average braking voltage
- 4) Peak dissipation = $(I_{an})^2 \times RB$

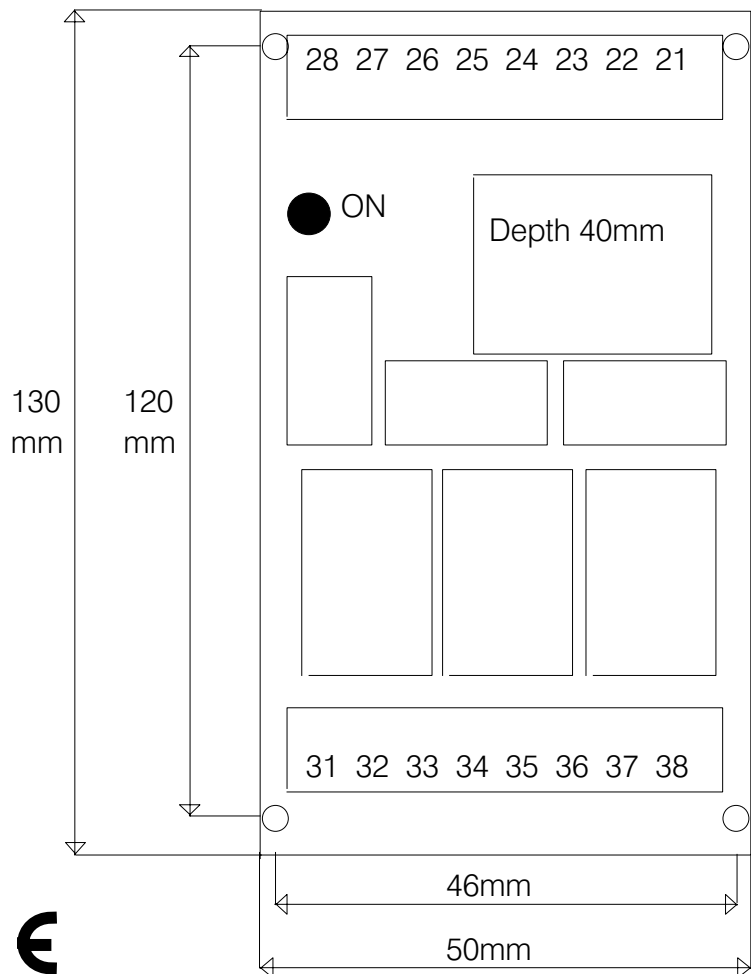
RB =braking resistance in OHMS
 PT =nameplate power of the motor
 Uan =nominal armature volts
 Mn =nominal torque of the motor in Nm

Ian =nominal armature current
 Ibm =maximum braking current in Amps
 Ibm should not exceed 3 times Ian
 Ma =braking torque in Nm

NOTES

- 1) The unit is designed to be used with models 400/800/1200 and 400i
- 2) The unit is the same length as the drive and the terminals are located close to the appropriate drive terminal.
- 3) For EMC installation guidelines refer to the drive manual. The unit must be in the same enclosure as the drive. The noise generated by the unit itself is minimal, due to the use of interlocking relay logic.
- 4) Some installations may require a resistor of 100K Ohms 1 Watt fitted across the DRIVE armature terminals to prevent the drive zero detector being triggered by cable induced noise

Fixings are by rear access No. 6 self tapping screws



HEALTH AND SAFETY AT WORK. ELECTRICAL DEVICES CONSTITUTE A SAFETY HAZARD. IT IS THE RESPONSIBILITY OF THE USER TO ENSURE COMPLIANCE WITH ANY ACTS OR BYLAWS IN FORCE. ONLY SKILLED PERSONS SHOULD INSTALL THIS EQUIPMENT.



SPRINT ELECTRIC LTD. DOES NOT ACCEPT ANY LIABILITY WHATSOEVER FOR THE INSTALLATION, FITNESS FOR PURPOSE OR APPLICATION OF ITS PRODUCTS. IT IS THE USERS RESPONSIBILITY TO ENSURE THE UNIT IS CORRECTLY USED AND INSTALLED.



WORLD CLASS IN DESIGN



WORLD BEATING IN FUNCTION

SPRINT* / *Electric

HEAD OFFICE

Ford

Arundel

West Sussex

Great Britain

Email sales@sprint-electric.com

Web site www.sprint-electric.com