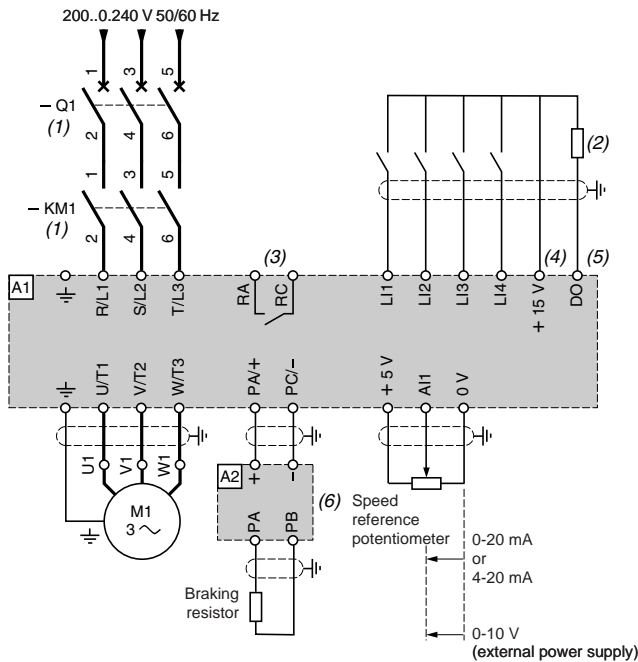
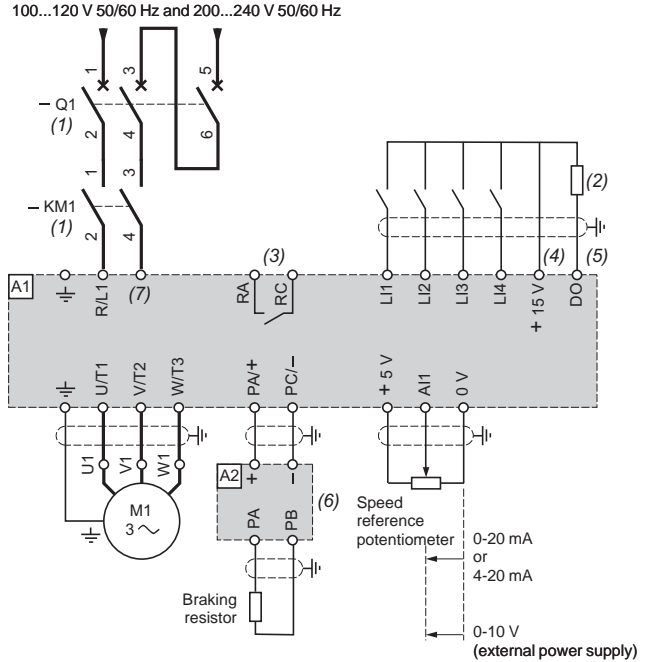


### Schemes with contactor

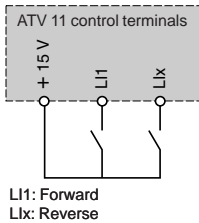
#### Three phase power supply ATV 11●●●●M3●



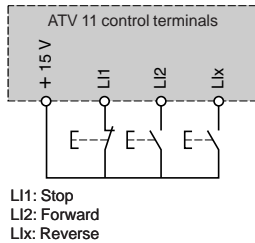
#### Single phase power supply ATV 11●●●●F1● and ATV 11●●●●M2●



#### 2-wire control

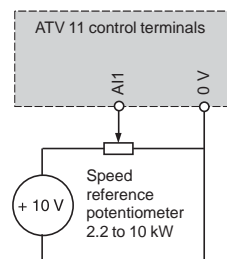


#### 3-wire control



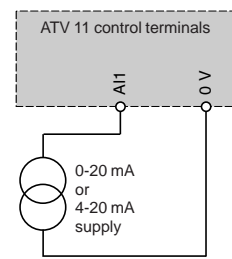
#### Analog voltage input

External 10 V



#### Analog current input

0-20 mA or 4-20 mA



**Note:** Install interference suppressors on all inductive circuits near the drive or connected to the same circuit, such as relays, contactors, solenoid valves, fluorescent lighting, etc.

(1) For combinations of KM1 and Q1 components, see the table on page 60251/5.

(2) Galvanometer or low level relay.

(3) Fault relay contact: for remote signalling of drive status

(4) Internal +15 V. If an external +24 V supply is used, connect the 0 V on the external supply to the COM terminal, do not use the + 15 terminal on the drive, and connect the common of the LI inputs to the +24 V of the external supply.

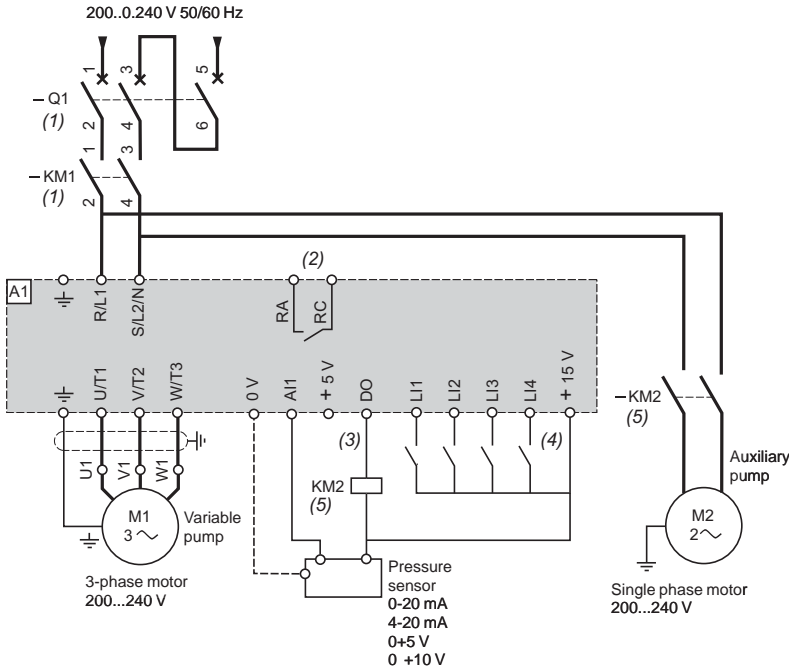
(5) DO output: can be configured as analog or logic output. Internal voltage +15 V or external +24 V.

(6) Braking unit VW3 A11701, if braking resistor VW3 A587●● is used.

(7) N for ATV 11●●●●F1●, S/L2 for ATV 11●●●●M2●.

### ATV11 pump range schemes

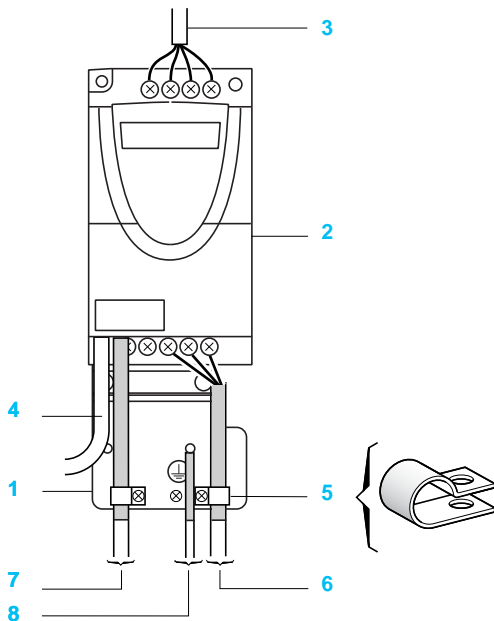
#### Single phase power supply ATV 11 ●U●M2E347 for single variable pump with auxiliary pump



**Note:** Install interference suppressors on all inductive circuits near the drive or connected on the same circuit, such as relays, contactors, solenoid valves, fluorescent lighting.

- (1) For combinations of KM1 and Q1 components, see the table on page 60251/5.
- (2) Fault relay contact: for remote signalling of drive status
- (3) DO output: can be configured as analog or logic output. Internal voltage +15 V or external +24 V.
- (4) Internal +15 V. If an external +24 V supply is used, connect the 0 V on the external supply to the COM terminal, do not use the +15 V terminal on the drive, and connect the common of the LI inputs to the +24 V of the external supply.
- (5) KM2: contactor **ABS 2SA01MB**, please consult our "Interfaces, I/O splitter boxes and power supplies" catalogue.

### Electromagnetic compatibility: Connections to meet the requirements of EMC standards



The following principles must be observed:

- Earths between the drive, motor and cable shielding must have "high frequency" equipotentiality.
- Use shielded cables with shielding connected to earth throughout 360° at both ends for the motor cable, and if necessary the braking resistor, braking unit and control-signal cables. Conduit or metal ducting can be used for part of the shielding length provided that there is no break in continuity.
- Ensure maximum separation between the power supply cable (line supply) and the motor cable.

- 1 Plate VW3 A11831 to be mounted on the drive
- 2 Altivar 11
- 3 Unshielded power supply cable
- 4 Unshielded cable for fault relay contacts output
- 5 Fix and earth the shielding of cables 6 and 7 as close as possible to the drive:
  - Strip the shielding
  - Use cable clamps of an appropriate size on the parts from which the shielding has been stripped, to attach them to the plate
  - The shielding must be clamped tightly enough to the plate to ensure good contact
  - Types of clamp: non-oxidizing metal
- 6 Shielded cable (1) for connecting the motor
- 7 Shielded cable (1) for connecting the control/signalling system. For applications requiring several conductors, use cables with a small cross-section (0.5 mm<sup>2</sup>).
- 8 PE cable (green-yellow)

**Note:** If using an additional EMC input filter, it should be mounted beneath the drive and connected directly to the line supply via an unshielded cable. Link 3 on the drive is then via the filter output cable. The HF equipotential earth connection between the drive, motor and cable shielding does not remove the need to connect the PE conductors (green-yellow) to the appropriate terminals on each unit.

- (1) The shielding of cables 6 and 7 must be connected to earth at both ends. The shielding must be continuous and if intermediate terminals are used, they must be in EMC metal boxes.