



4 - INPUT AND OUTPUT LOGIC SIGNALS

All input and output logic signals are optically insulated among them and from internal power circuits. Positive and negative terminals are separately accessible. For all logic signals in the following we indicate the corresponding numbers of connector C2. An input signal is considered ON when a voltage as indicated in fig. 3a is applied.

- 21(-) and 20(+)** **CURRENT OFF INPUT:** when this signal is ON drive is active. When it is OFF drive is inhibited, thus motor current (and so holding torque) is turned to zero.
- 19(-) and 18(+)** **DIRECTION INPUT:** with this signal ON motor rotation direction is opposite to the one obtained when this input is OFF. This signal has to be valid at least 100 μ sec before STEP signal and has to stay in this status for at least 100 μ sec after last STEP sent to the drive. See also Sd/Cud SWITCH.
- 17(-) and 16(+)** **STEP INPUT:** active transition is the ON-OFF transition of this signal. Suggested duty-cycle 50%. Max frequency: 80 kHz with square wave signal supplied from an output able to produce a voltage between 5 and 15 Volt. See also Sd/Cud SWITCH.
- 23(-) and 22(+)** **STEP x 4:** when this input is ON, pulse sent to STEP INPUT is multiplied by four. It can be used with the operation modes marked with a **x** in Table 5 (chapter 6.4). This signal has to be valid at least 2 milliSec before STEP signal and has to stay in this status for at least 2 milliSec after last STEP sent to the drive.
- 15(-) and 14(+)** **DRIVE FAULT OUTPUT:** when this output is ON, drive is normally working; when it is OFF drive is in no-working state. Drive automatically goes in no-working state when some protection is active and automatically recovers when this protection resets.
- 11** **Sd/Cud SWITCH:** when this input is OPEN drive works in "step and direction" mode. When this input is connected to 12 pin (+5V auxiliary) the drive works in CW and CCW mode, using step and direction pins as CW and CCW step inputs. This presetting must be done when drive is switched off.
In CW/CCW when step is sent to (17- and 16+) input the motor turns in a direction. When step is sent to (19- and 18+) input the motor turns in opposite direction (the real direction depends on the motor wiring). The time between use of one input and the other must be at least 100 μ sec. In both inputs step is performed on ON-OFF transition of this signal. Suggested duty-cycle 50%. Max frequency: 80 kHz with square wave signal supplied from an output able to produce a voltage between 5 and 15 Volt. Contemporary use of these signals is not allowed.
- 13** **NOT CONNECTED.**
- 12** **+5V_{DC} auxiliary:** 5 V_{DC} auxiliary output (12 mAmp. maximum) useful for a possible input or output bias together with GND (24).
- 24** **GND** of internal auxiliary 5 V_{DC} supply.

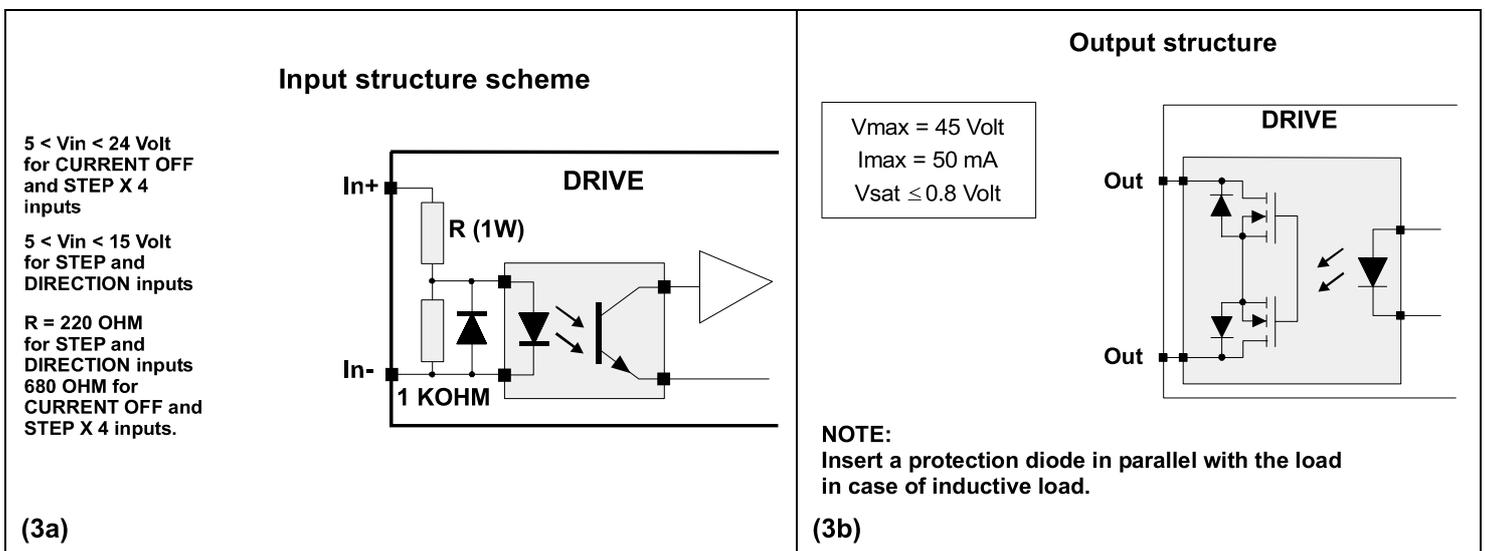


Fig. 3 – Inputs and outputs scheme.