Hall Sensor Selection Matrix

Considering a motor fitted with 3 hall effect sensors for which the configuration is unkown, we want a compact and practical way to chose between each possible arrangement using jumpers. The jumpers must be fitted on at most two rows so they can stand on the edge of a PCB.

I1	O2	I3	O1	≃	I1	O2	I3	O1	Norm
O1	I2	O3	I1		**O1**	I2	O3	I1	

I1	O2	I3	O1	Norm+1
O1	I2	O3	I1	

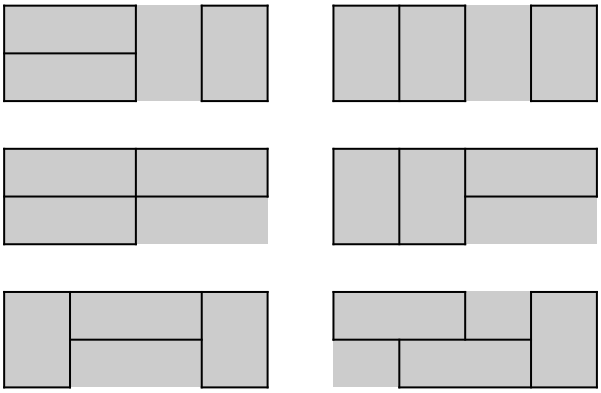
I1	O2	I3	O1	Norm+2
O1	I2	O3	I1	

I1	O2	I3	O1	Rev-2
O1	I2	O3	I1	

I1	O2	I3	O1	Rev-1
O1	I2	O3	I1	

I1	O2	I3	O1	≃	I1	O2	I3	O1	Rev
O1	I2	O3	I1		**O1**	I2	O3	I1	

Illegal positions (using 3 jumpers, symmetries not included)



Pin numbering, 2x04 header

2	4	6	8
1	3	5	7