

Train Headlight Control / DenshaBekutoru_v0.2 BOM – Sourcing – Shipping

Source: 0004-DenshaBekutoru_v0.2.kicad_sch
Date: 2026-08-02T15:00:00

	per Part/Set		Project / Summary Costs 5 Sets
PCB Only Eurocircuit:	17,28 €	min Purchase 5 PCBs:	86,39 €
PCB & Parts EuroCircuit:	42,36 €	min Purchase 5 PCBs, 5 part sets:	211,78 €

BOM:

Component Count:									Pricing [Aug 2026]	
Ref	Qty	Value	Cmp name	Footprint	Description	Vendor	Parts-ID	Link	Single [EUR]	Summary [EUR]
A1	1	1 Arduino_Pro_Mini_Socket_NoSPH_V2	Arduino_Pro_Mini_Socket_NoSPH_V2	arduino-library:Arduino_Pro_Mini_Socket_NoSPH_V2	Arduino Pro Mini	Mouser	474-DEV-11113	https://mou.sr/3REnAWO	9,84 €	9,84 €
A1-1	1				Arduino Pro Mini Programming Cable					0,00 €
C4	1	4.7µF	C_Polarized	Capacitor_THT:CP_Axial_L10.0mm_D6.0mm_P15.00mm_Horizontal	Polarized capacitor	Mouser	598-475TTA050M	https://mou.sr/4xdg2D5	0,65 €	0,65 €
C5	1	100nF	C_Small	Capacitor_THT:C_Disc_D3.0mm_W1.6mm_P2.50mm	Unpolarized capacitor, small symbol	Mouser	594-K104K15X7RF53L2	https://mou.sr/4wpdJ3m	0,20 €	0,20 €
D1, D2	2	1N4148	1N4148	Diode_THT:D_DO-35_SOD27_P7.62mm_Horizontal	100V 0.15A standard switching diode, DO-35	Mouser	637-1N4148	https://mou.sr/45zm8By	0,09 €	0,17 €
D3	1	1N5819	1N5819	Diode_THT:D_DO-41_SOD81_P10.16mm_Horizontal	40V 1A Schottky Barrier Rectifier Diode, DO-41	Mouser	637-1N5819	https://mou.sr/3TtIAjN	0,25 €	0,25 €
D4	1	1 LED Green	LED	LED_THT:LED_D3.0mm	Light emitting diode	Mouser	78-TLHG4201	https://mou.sr/4tC9kX	0,99 €	0,99 €
D5	1	1 LED Yellow	LED	LED_THT:LED_D3.0mm	Light emitting diode	Mouser	78-TLHY4205	https://mou.sr/3Trq9wa	0,41 €	0,41 €
D10, D11, D12, D13	4	4 LED: HL_A.1 / A.2 / B.1 / B.2	LED	LED_THT:LED_D5.0mm_Clear	Light emitting diode (Test Adapter)	Mouser	78-VLHW5100	https://mou.sr/4gYtA7g	0,54 €	2,17 €
J1	1	1 from Lego – PCB	Conn_01x04_Pin	Connector_PinHeader_2.54mm:PinHeader_1x04_P2.54mm_Vertical	Generic connector, single row, 01x04	Mouser	571-826936-4	https://mou.sr/4pT589O	0,53 €	0,53 €
J1-1	1	1 to Lego – opposite to J1	Conn_01x04_Socket	Connector_PinSocket_2.54mm:PinSocket_1x04_P2.54mm_Vertical	Generic connector, single row, 01x04	Mouser	437-8018700410001101	https://mou.sr/4pPNHgy	0,61 €	0,61 €
J4	1	1 Headlight Test – PCB opposite to J3	Conn_01x05_Pin	Connector_PinHeader_2.54mm:PinHeader_1x05_P2.54mm_Horizontal	Generic connector, single row, 01x05	Mouser	649-68015-405HLF	https://mou.sr/4xm2xl1	0,12 €	0,12 €
J5	0	0 I2C	Conn_01x03_Pin	Connector_PinHeader_2.54mm:PinHeader_1x03_P2.54mm_Vertical	Generic connector, single row, 01x03	tbd	tbd	tbd	0,00 €	0,00 €
J6	0	0 TX/RX	Conn_01x03_Pin	Connector_PinHeader_2.54mm:PinHeader_1x03_P2.54mm_Vertical	Generic connector, single row, 01x03	tbd	tbd	tbd	0,00 €	0,00 €
A1-1	1	1 Arduino Pri Mini Programming Pin	Conn_01x06_Pin	Connector_PinHeader_2.54mm:PinHeader_1x06_P2.54mm_Vertical	Generic connector, single row, 01x06	Mouser	649-54101-T0606LF	https://mou.sr/4bmawMD	0,17 €	0,17 €
J2	1	1 Headlight GND – PCB	Conn_01x04_Socket	Connector_PinSocket_2.54mm:PinSocket_1x04_P2.54mm_Vertical	Generic connector, single row, 01x04	Mouser	437-8018700410001101	https://mou.sr/4pPNHgy	0,61 €	0,61 €
J2-1	1	1 Headlight GND – opposite to J2	Conn_01x04_Pin	Connector_PinHeader_2.54mm:PinHeader_1x04_P2.54mm_Vertical	Generic connector, single row, 01x04	Mouser	571-826936-4	https://mou.sr/4pT589O	0,53 €	0,53 €
J3	1	1 Headlight GND; A1,2/B1,2 – PCB	Conn_01x05_Socket	Connector_PinSocket_2.54mm:PinSocket_1x05_P2.54mm_Vertical	Generic connector, single row, 01x05	Mouser	437-8018700510001101	https://mou.sr/4yUhw9E	0,77 €	0,77 €
J3-1	1	1 Headlight GND; A1,2/B1,2 – opposite to J3	Conn_01x05_Pin	Connector_PinHeader_2.54mm:PinHeader_1x05_P2.54mm_Vertical	Generic connector, single row, 01x05	Mouser	649-69190-405HLF	https://mou.sr/3TxFpro	0,16 €	0,16 €
J7	0	0 Add. Lights – PCB	Conn_01x04_Socket	Connector_PinSocket_2.54mm:PinSocket_1x04_P2.54mm_Vertical	Generic connector, single row, 01x04	tbd	tbd	tbd	0,00 €	0,00 €
J7-1	0	0 Add. Lights – opposite to J7	Conn_01x04_Pin							
J8	0	0 LDR (~1MOhm) Option – PCB	Conn_01x02_Socket	Connector_PinSocket_2.54mm:PinHeader_1x02_P2.54mm_Vertical	Generic connector, single row, 01x02	tbd	tbd	tbd	0,00 €	0,00 €
J8-1	0	0 LDR (~1MOhm) Option – opposite to J8	Conn_01x02_Pin							
R1, R2	2	2 1.5k	R	Resistor_THT:R_Axial_DIN0204_L3.6mm_D1.6mm_P5.08mm_Horizontal	Resistor	Mouser	588-OJ1525E-R52	https://mou.sr/4h9Y3zn	0,09 €	0,17 €
R3, R4, R5, R6, R7, R8	6		220 R	Resistor_THT:R_Axial_DIN0204_L3.6mm_D1.6mm_P5.08mm_Horizontal	Resistor	Mouser	603-CFR-12JB-52-220R	https://mou.sr/4ySxDIz	0,09 €	0,52 €
R9	0	0 10k	R	Resistor_THT:R_Axial_DIN0204_L3.6mm_D1.6mm_P5.08mm_Horizontal	Resistor, only used for light adjust function @ I-O board					0,00 €
RV1	0	0 1MOhm	R_Potentiometer	Potentiometer_THT:Potentiometer_Piher_PT-10-V10_Vertical	Potentiometer, only used for light adjust function @ I-O board					0,00 €
U1, U2	2	2 PC817	PC817	Package_DIP:DIP-4_W7.62mm	DC Optocoupler, Vce 35V, CTR 50-300%, DIP-4	Mouser	852-PC817X3NSZW	https://mou.sr/3S2JB1N	0,60 €	1,20 €
Shipping	0,2					Mouser	FedEx International Priority		25,00 €	5,00 €
										25,08 €

PCB

PCB Eurocircuit	0,2 0004-DenshaBekutoru_v0.2	DenshaBekutoru_v0.2	PCB 1 von 5	PCB 1/5 Batch PCBs	Eurocircuit	Order: F017139	86,39 €	17,28 €
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