# TWN4 PALON COMPACT WALL LIGHT

## RFID READER/WRITER SUPPORTING LF, HF AND NFC FOR IN-WALL MOUNT



(exemplary illustration)

TWN4 Palon Compact Wall Light is a versatile in-wall mount reader for integration into wall flush mount installation boxes. It supports enhanced interfaces, especially RS-485, and inherits all advantages and integrated tool support of the ELATEC TWN4 family. The IP54 protected housing is easy to install. The standard electric frame design elements make a unique look and feel.

TWN4 Palon Compact Wall Light is a multi-technology reader/writer family supporting almost all 125 kHz and 13.56 MHz contactless technologies, including NFC. Integrated antennas for HF and LF allow excellent contactless performance.

Special features:

+ Optimized housing design for easy and fast installation
+ Flexible adoption to 3rd party design frames with 55x55 mm opening, easy to customize
+ Integrated LF and HF antennas
+ One on-board SAM socket (Secure Access Module)
+ Interfaces: RS-485, Wiegand or Clock/Data. OSDP protocol optionally, USB
+ Supports quick (re)configuration over network and over wireless interface with TWN4 CONFIG Card
+ Direct chip-commands support
+ Firmware update in the field possible
+ Powerful SDK for writing apps which are executed directly on the reader
+ On-board 18 kB flash storage, e.g. for storing user accessible non-volatile data
+ TWN4 Upgrade Card for P and PI options available on request
+ 3D construction data (STEP) available on request
+ Individual kits on request
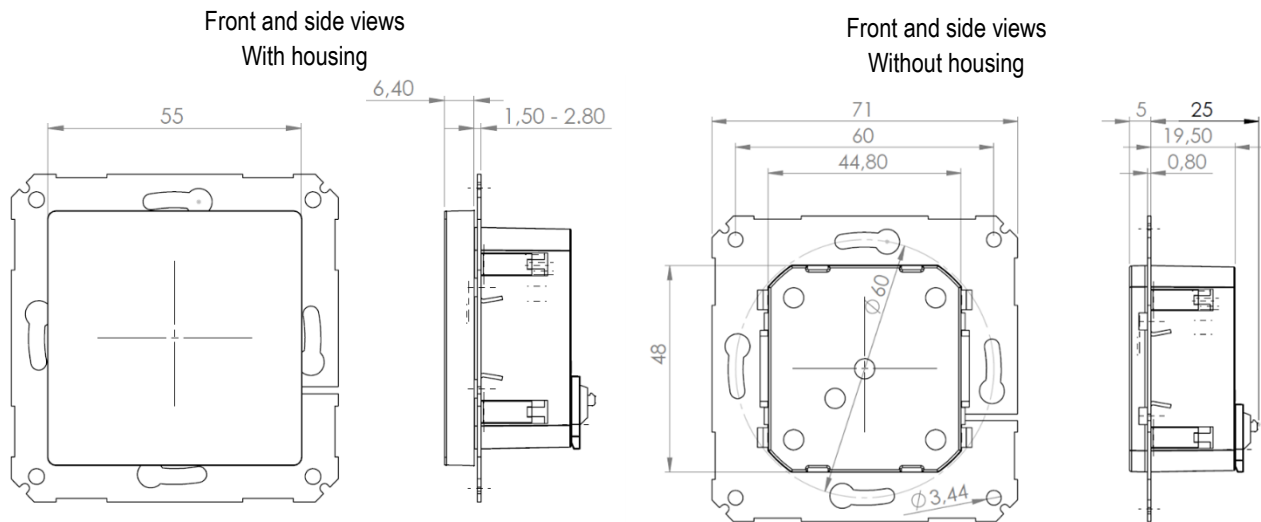
TECHNICAL DATA

| | |
|---|---|
| FREQUENCY | 125 kHz (LF) / 13.56 MHz (HF) |
| ANTENNA(S) | Integrated |
| HOUSING | Transparent Polycarbonate (PC) housing; rear protection lid; front lid for 55 x 55 mm (2.17 x 2.17 inch) design frames (3rd party), including standard inlay white or black, core unit IP54 protected; mounting ring for DIN 49073 flush mount wall boxes |
| DIMENSIONS (L X W X H) | TWN4 Palon Compact Wall Light with front lid and white standard frame: 80.5 mm x 80.5 mm x 36.5 mm (3.17 inch x 3.17 inch x 1.44 inch) TWN4 Palon Compact Wall Light with front lid and without frame 71 mm x 71 mm x 32.9 mm (2.80 inch x 2.80 inch x 1.30 inch) TWN4 Palon Compact Wall Light without front lid and without frame 71 mm x 71 mm x 30.8 mm (2.80 inch x 2.80 inch x 1.22 inch) |
| POWER SUPPLY | 9.0 V - 30 V via connector X1; 4.3 V - 5.5 V via micro USB Limited power source according to the safety norms listed in the respective declaration of conformity, short-circuit current < 8 A |
| CURRENT CONSUMPTION | Operating: typ. 160 mA @12 V; Idle: typ. 50 mA @12 V; Peak typ. 250 mA @12 V |
| TEMPERATURE RANGE | Operating: -25 °C up to +70 °C (-13 °F up to +158 °F) Storage: -40 °C up to +85 °C (-40 °F up to +185 °F) |
| RELATIVE HUMIDITY | IP54 protected housing (frontside, when mounted) 5% to 95% non-condensing (electronic components) |
| READ- / WRITE DISTANCE | Up to 100 mm / 4 inch, depending on OEM environment and transponder |
| OPERATING MODES (USB) | USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01 |
| MTBF | 500,000 hours |
| WEIGHT | Approx. 61.2 g / 2.16 oz |
| SABOTAGE DETECTION | Infrared tamper detector, front facing |
| WIRE CONNECTOR | PCB terminal block, 8 positions, push-in spring connection for wires 0.2 to 0.5 mm² / AWG 24 to 20, tool-free cable wiring |
| DIP SWITCH | 8 position DIP switch for RS-485: addressing, speed settings, line termination |
| SIGNALING | Center RGB LED; acoustic loudspeaker |
| SUPPORTED TRANSPONDERS (STANDARD) 13.56 MHZ | ISO14443A: LEGIC Advant[1], MIFARE Classic EV1[2], MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2[3], MIFARE DESFire Light[4], MIFARE Plus S, X, MIFARE Pro X[5], MIFARE Smart MX[5], MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1[2], NTAG2xx, SLE44R35[5], SLE66Rxx (my-d move)[5], Topaz ISO18092 ECMA-340: NFC Forum Tag 1-5, NFC Peer-to-Peer, Sony FeliCa[6], NFC Active and passive communication mode ISO14443B: Calypso[5], Calypso Innovatron protocol[5], CEPAS[5], HID iCLASS[1], Moneo[5], Pico Pass[7], SRI4K, SRIX4K, SRI512, SRT512 ISO15693: EM4x33[5], EM4x35[5], HID iCLASS[1], HID iCLASS SE/SR[1], ICODE SLI, LEGIC Advant[1], M24LR16/64, MB89R118/119, SRF55Vxx (my-d vicinity)[5], Tag-it, PicoPass[7] |
| SUPPORTED TRANSPONDERS (STANDARD) 125 KHZ[8] | AWID, Cardax, CASI-RUSCO, Deister[9], EM4100, 4102, 4200[10], EM4050, 4150, 4450, 4550, EM4305[11], FDX-B[12], EM4105[12], UltraProx[12], HITAG 1[13], HITAG 2[13], HITAG S[13], ICT[4], IDTECK, Isonas, Keri, Miro, Nedap[9], PAC[4], Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX[12], TITAN (EM4050), UNIQUE, ZODIAC |
| SUPPORTED TRANSPONDERS (OPTION P) | All Standard Transponders, Cotag, G-Prox[9], HID DuoProx II, HID ISO Prox II, HID Micro Prox, HID ProxKey III, HID Prox, HID Prox II, Indala, ioProx, Nexwatch |
| SUPPORTED TRANSPONDERS (OPTION PI) | Requires TWN4 SIO Card, All Standard Transponders, All Option P Transponders, HID iCLASS, HID iCLASS SE/SR/Elite, HID iCLASS SEOS (Facility Code/PAC)[14] |
| OS SUPPORT | Windows Embedded CE[4], 7 (32-/64-bit), 8, 8.1, 10, Linux, Android[4], iOS[4], MAC OS X[4] |
| PERIPHERAL INTERFACES | USB, RS-485, OSDP[4], Output 5V: Wiegand (D0/D1), or Clock/Data |

| | |
|---|---|
| TRANSMISSION SPEED | HF Air: up to 848 kbit/s, USB Full speed (12 Mbit/s), Host RS-485: up to 38,400 baud |
| EXTENSION SLOT | One SAM socket for ID-000 cards or modules |
| CERTIFICATION NAME | TWN4 Palon Compact Wall Light |
| CERTIFICATION(S) | CE/RED, FCC, IC, REACH and RoHS-III compliant |
| ORDER CODE(S) | Box kit:<br>TWN4 Palon Compact Wall Light reader in transparent housing, rear protection lid, white standard frame, white front lid, white inlay standard inlay, installation instruction, mounting screws, cardboard box<br><br>T4WK-F01EU6        TWN4 Palon Compact Wall Light kit, as described<br>T4WK-F01EU6-P    same, option P<br>T4WK-F01EU6-PI   same, option PI<br><br>*Individual kits available on request |
| ACCESSORIES | MECH-DFW21     Palon Wall design frame white<br>MECH-DFW22     Palon Wall design frame anthracite<br>MECH-DFW23     Palon Wall design frame silver<br>HOWL-YC1TR      Palon Wall transparent housing<br>HOWL-RL1TR      Palon Wall rear lid<br>MECH-MRW1EU  Palon Wall EU mounting ring<br>HOWL-FL1BL       Palon Wall front lid black<br>HOWL-FL1WH      Palon Wall front lid white<br>CAB-B9              USB A / USB micro cable |

[1]UID only [2]r/w enhanced security features on request [3]EV2/EV3 supported as part of the EV1 downward compatibility [4]On request [5]r/w in direct chip command mode [6]UID + r/w public area [7]UID only, read/write on request [8]125 kHz technology requires a Russian local test and import license from the ministry of Trade and Industry (MINPROMTORC). This license has to be in place before Elatec can accept any order to be shipped to Russia [9]Hash value only [10]Only emulation of 4100, 4102 [11]From FW V4.05 [12]134.2 kHz only [13]Without encryption [14]UID + PAC (Facility Code), r/w on request
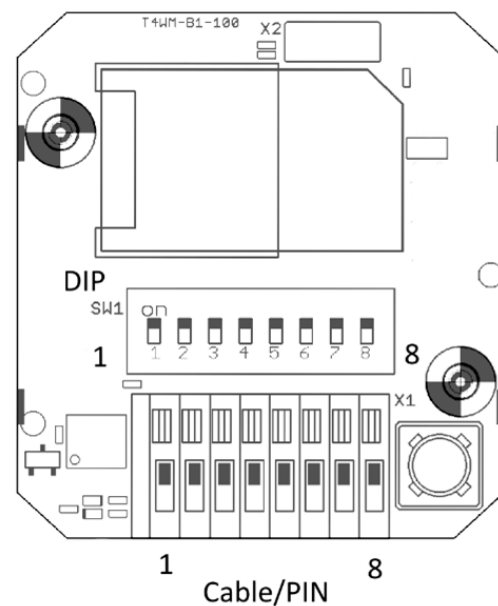
# DRAWING / CONNECTOR ASSIGNMENT

### Front and side views
### With housing

### Front and side views
### Without housing



(All measures in mm)

| DIP | ASSIGNMENT |
|-----|------------|
| 1 | RS-485 address 0 LSB |
| 2 | RS-485 address 1 |
| 3 | RS-485 address 2 |
| 4 | RS-485 address 3 MSB |
| 5 | RS-485 BIAS on/off |
| 6 | RS-485 speed 0 |
| 7 | RS-485 speed 1 |
| 8 | RS-485 termination 120 Ohm on/off |

| PIN | ASSIGNMENT |
|-----|------------|
| 1 | (unused) |
| 2 | (unused) |
| 3 | RS-485 A |
| 4 | RS-485 B |
| 5 | TTL Wiegand D0 or DATA |
| 6 | TTL Wiegand D1 or CLOCK |
| 7 | VIN 9 – 30 Volt |
| 8 | GND |



Drawing / rear view PCB

Firmware may change the assignment of the DIP switch. Please refer to the TWN4 Palon manual.
For Wiegand, Clock/Data the DIP switch is not used.