TWN4 PALON COMPACT LEGIC WALL

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

(exemplary illustration)

TWN4 Palon Compact LEGIC Wall 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 LEGIC Wall 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.

An integrated Bluetooth Low Energy (BLE) module supports a broad range of mobile ID and authentication solutions as well.

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, RS-232 and 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
+ Integrated BLE module 2.4 GHz for data communication and authentication, BLE v4.2, upgradable
+ 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 option available on request
+ 3D construction data (STEP) available on request
+ Individual kits on request

Elevator EV Chargers Access Shop POS Fitness Equipment Ticket POS PC Log-on Document Management Driver ID Vending Parking Gaming Locker Locks Time Attendance Industrial PC
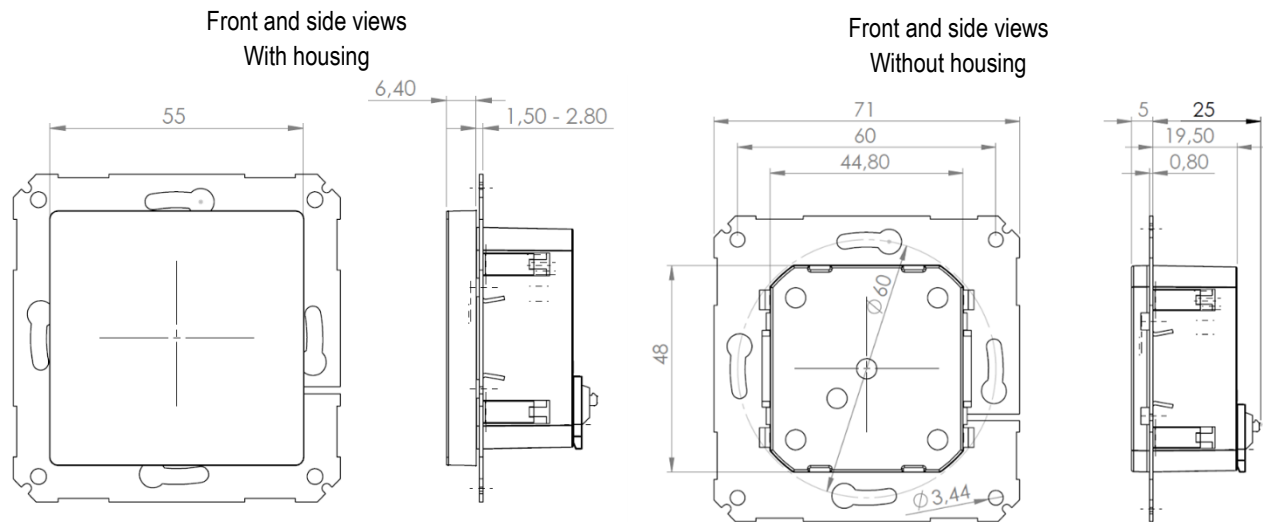
TECHNICAL DATA

FREQUENCY	125 kHz (LF) / 13.56 MHz (HF) / 2.4 GHz (BLE)
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 LEGIC Wall 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 LEGIC Wall 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 LEGIC Wall 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
BLUETOOTH LOW ENERGY	Bluetooth v4.2, software upgradable; standards as GAP, SM, L2CAP, ATT; predefined GATT structure; AES128 supported
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	5 RGB LEDs, each individually programmable using the on-board Intelligent Peripheral Controller (IPE), for enhanced dynamic light concepts; acoustic loudspeaker
SUPPORTED TRANSPONDERS (STANDARD) 13.56 MHZ	ISO14443A: LEGIC Advant, MIFARE Classic EV1[1], MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1, MIFARE DESFire EV2[2], MIFARE DESFire Light[3], MIFARE Plus S, X, MIFARE Pro X[4], MIFARE Smart MX[4], MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1[1], NTAG2xx, SLE44R35[4], SLE66Rxx (my-d move)[4] ISO18092 ECMA-340: NFC Forum Tag 1-5[5], Sony FeliCa[6], NFC Active and passive communication mode, Passive peer-to-peer mode - initiator, NFC Tag 2, 3, 4 ISO14443B: Calypso[4], CEPAS[4], HID iCLASS[7], Moneo[4], Pico Pass[7] ISO15693: EM4x33[4], EM4x35[4], HID iCLASS[7], HID iCLASS SE/SR[7], ICODE SLI, LEGIC Advant, M24LR16/64, SRF55Vxx (my-d vicinity)[4], Tag-it, PicoPass[7] LEGIC Prime: LEGIC Prime
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[3], IDTECK, Isonas, Keri, Miro, Nedap[9], PAC[3], 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

OS SUPPORT	Windows Embedded CE[3], 7 (32-/64-bit), 8, 8.1, 10, Linux, Android[3], iOS[3], MAC OS X[3]
PERIPHERAL INTERFACES	USB, RS-485, OSDP[3], RS-232 (RX/TX), Output 5V: Wiegand (D0/D1), or Clock/Data
TRANSMISSION SPEED	USB Full speed (12 Mbit/s), RS-232: up to 115,200 baud, HF Air: up to 848 kbit/s, BT Air: up to 100 kbit/s, RS-485: up to 38,400 baud
EXTENSION SLOT	One SAM socket for ID-000 cards or modules
CERTIFICATION NAME	TWN4 Palon Compact LEGIC Wall
CERTIFICATION(S)	CE/RED, FCC, IC, REACH and RoHS-III compliant
ORDER CODE(S)	Box kit: TWN4 Palon Compact LEGIC Wall reader in transparent housing, rear protection lid, white standard frame, white front lid, white inlay standard inlay, installation instruction, mounting screws, cardboard box T4WK-B01EU7 TWN4 Palon Compact LEGIC Wall kit, as described T4WK-B01EU7-P same, option P *Individual kits available on request
ACCESSORIES	MECH-DFW21 Palon Wall design frame white MECH-DFW22 Palon Wall design frame anthracite MECH-DFW23 Palon Wall design frame silver HOWL-YC1TR Palon Wall transparent housing HOWL-RL1TR Palon Wall rear lid MECH-MRW1EU Palon Wall EU mounting ring HOWL-FL1BL Palon Wall front lid black HOWL-FL1WH Palon Wall front lid white CAB-B9 USB A / USB micro cable

[1]r/w enhanced security features on request [2]EV2/EV3 supported as part of the EV1 downward compatibility [3]On request [4]r/w in direct chip command mode [5]NFC Forum Tag 1 not supported [6]UID + r/w public area [7]UID only [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
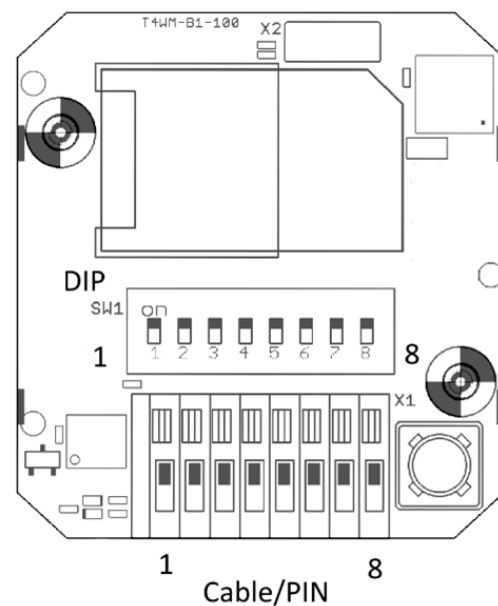
DRAWING / CONNECTOR ASSIGNMENT

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	RS-232 RX
2	RS-232 TX
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 RS-232, Wiegand, Clock/Data the DIP switch is not used.