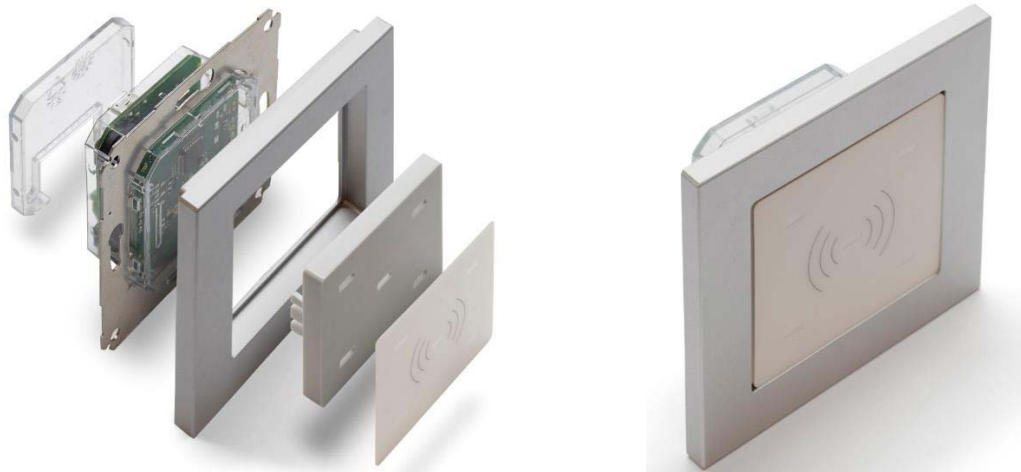# TWN4 PALON COMPACT LEGIC WALL

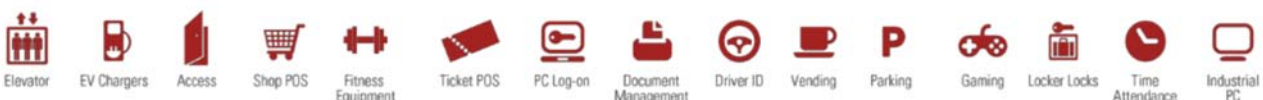## RFID READER/WRITER SUPPORTING LF, HF, NFC AND BLE FOR IN-WALL MOUNT

*The product photo shows an available product variation

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. The new Palon LEGIC Wall 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/134,2 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 onboard 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, Bluetooth® v4.2, upgradable
+ Firmware update in the field possible
+ Powerful SDK for writing apps which are executed directly on the reader
+ Onboard 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

TECHNICAL DATA

FREQUENCY	125 kHz/134,2 kHz (LF) / 13,56 MHz (HF) / 2,4 GHz (BLE)
ANTENNAS	Integrated
HOUSING	Transparent Polycarbonate (PC) housing; rear protection lid; front lid for 55 x 55 mm (2,17 x 2,17 inches) 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 with front lid and white standard frame: 80,5 mm x 80,5 mm x 36,5 mm (3,17 inches x 3,17 inches x 1,44 inches) TWN4 Palon Compact Wall with front lid and without frame 71 mm x 71 mm x 32,9 mm (2,80 inches x 2,80 inches x 1,30 inches) TWN4 Palon Compact Wall without front lid and without frame 71 mm x 71 mm x 30,8 mm (2,80 inches x 2,80 inches x 1,22 inches)
POWER SUPPLY	9.0 V - 30 V via connector X1; 4.3 V - 5.5 V via micro USB Limited power source according to IEC60950-1 or PS2 classified IEC62368-1, 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 +167 °F)
RELATIVE HUMIDITY	IP54 protected housing (frontside, when mounted) 5% to 95% non-condensing (electronic components)
READ- / WRITE DISTANCE	Up to 100 mm (3,9 inch), depending on transponder and OEM environment
PERIPHERAL INTERFACES	RS-485; OSDP[8] protocol optionally; RS-232 (RX/TX)[8], Output 5V: Wiegand (D0/D1), or Clock/Data; USB
BLUETOOTH® LOW ENERGY	Bluetooth® v4.2, upgradable; standards as GAP, SM, L2CAP, ATT; predefined GATT structure; AES128 supported
OPERATING MODES (USB)	USB keyboard emulation – USB virtual COM port – CCID / PC/SC 2.01
MTBF	500.000 hours
WEIGHT	61,2 g (2,16 oz)
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
SABOTAGE DETECTION	Infrared tamper detector, front facing
SIGNALING	5 RGB LEDs, each individually programmable using the on-board Intelligent Peripheral Controller (IPE), for enhanced dynamic light concepts; acoustic loudspeaker
DIP SWITCH	8 position DIP switch for RS-485: addressing, speed settings, line termination
SUPPORTED TRANSPONDERS (STANDARD) 13,56 MHz	ISO14443A: LEGIC Advant, MIFARE Classic EV1[1], MIFARE Classic, MIFARE Mini, MIFARE DESFire EV1[1], MIFARE DESFire EV2[11], MIFARE DESFire Light[11], MIFARE Plus S, X, MIFARE Pro X[2], MIFARE Smart MX[2], MIFARE Ultralight, MIFARE Ultralight C, MIFARE Ultralight EV1, NTAG2xx, SLE44R35, SLE66Rxx (my-move)[2], HID iClass SEOS[1] ISO14443B: Calypso[2], CEPAS[2], HID iCLASS[1], Moneo[2], PicoPass[3] ISO18092 ECMA-340: NFC Peer-to-Peer, Sony FeliCa[4], NFC Active and passive communication mode, Passive peer-to-peer mode - initiator, NFC Tag 2, 3, 4, 5 ISO15693: EM4x33[8], EM4x35[2], HID iCLASS[1], HID iCLASS SE/SR[1], ICODE SLI, LEGIC Advant, M24LR16/64, SRF55Vxx (my-d vicinity)[2], Tag-it, PicoPass[3] LEGIC Prime: LEGIC Prime
SUPPORTED TRANSPONDERS (STANDARD) 125kHz[12], 134,2 kHz[12]	AWID, Cardax, CASI-RUSCO, Deister[5], EM4100, 4102, 4200[6], EM4050, 4150, 4450, 4550, EM4305[7], FDX-B, EM4105, HITAG 1[8], HITAG 2[8], HITAG S[8], ICT[7], IDTECK, Isonas, Keri, Miro, Nedap[5], PAC, Pyramid, Q5, T5557, T5567, T5577, TIRIS/HDX, TITAN (EM4050), UNIQUE, ZODIAC
SUPPORTED TRANSPONDERS (OPTION P)	All standard transponders, Cotag, G-Prox[5], HID DuoProx II, HID ISO Prox II, HID Micro Prox, HID ProxKey III, HID Prox, HID Prox II, Indala, ioProx, Nexwatch

OS SUPPORT	Windows XP, Vista, Embedded CE[8], 7 (32-/64-bit), 8, 8.1, 10, Linux, Android[8], iOS[8], MAC OS X[8]
TRANSMISSION SPEED	RS-485: up to 38.400 baud; RS-232 up to 115.200 baud; USB Full speed (12 Mbit/s); HF Air: up to 848 kbit/s, BT Air: up to 100 kbit/s
EXTENSION SLOT	One SAM socket for ID-000 cards or modules
CERTIFICATION NAME	TWN4 Palon Compact LEGIC
CERTIFICATION(S)	CE, RoHS-II 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, P Option *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] UID only [2] r/w enhanced security features on request [3] r/w in direct chip command mode [4] UID only, read/write on request [5] UID + r/w public area [6] Hash value only
[7] Only emulation of 4100, 4102 [8] On request [9] Without encryption [10] UID + PAC (CSN & Facility Code), r/w on request [11] In preparation
[12] 125/134,2kHz 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

DRAWING / CONNECTOR ASSIGNMENT

(All measures in mm)

Front view with housing   Side view   Front view without housing   Side view
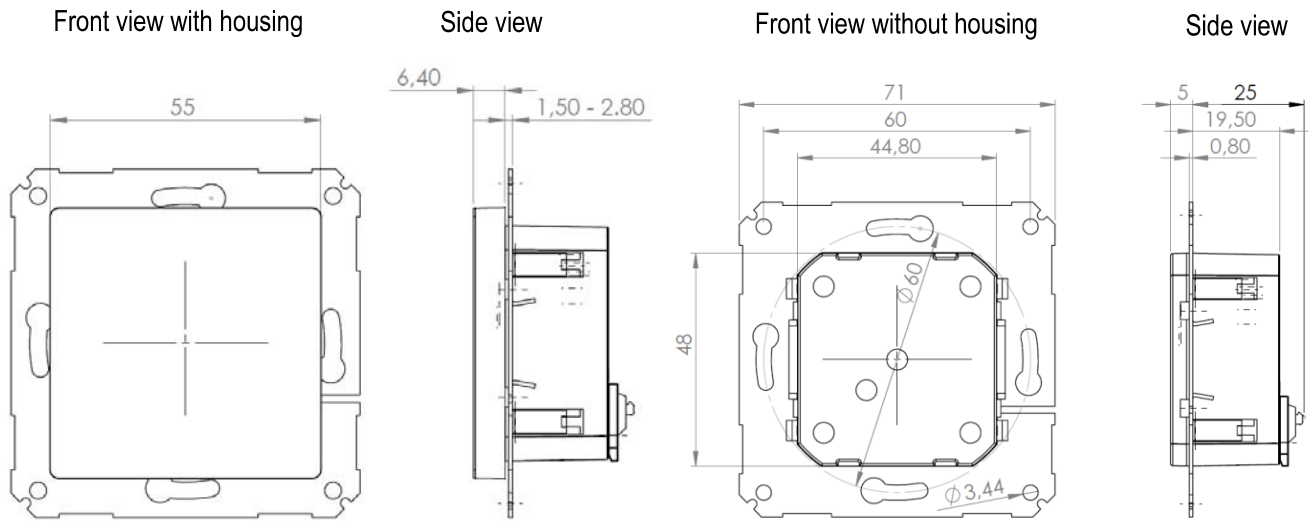
DIP	ASSIGNMENT
1	RS-485 address 0 LSB
2	RS-485 address 1
3	RS-485 address 2
4	RS-485 address 3 MSB
5	RS-485 BIAS on/off
6	RS-485 speed 0
7	RS-485 speed 1
8	RS-485 termination 120 Ohm on/off

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
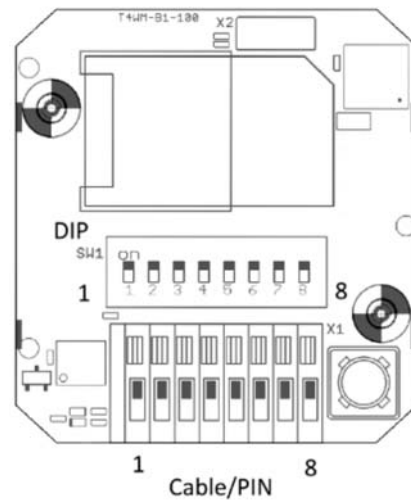
Drawing / rear view PCB

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.