TRANSIT ULTIMATE✲

quick reference guide

2018-01-12 | v5.03 | 5284651

✲nedap | identification systems

www.nedapidentification.com
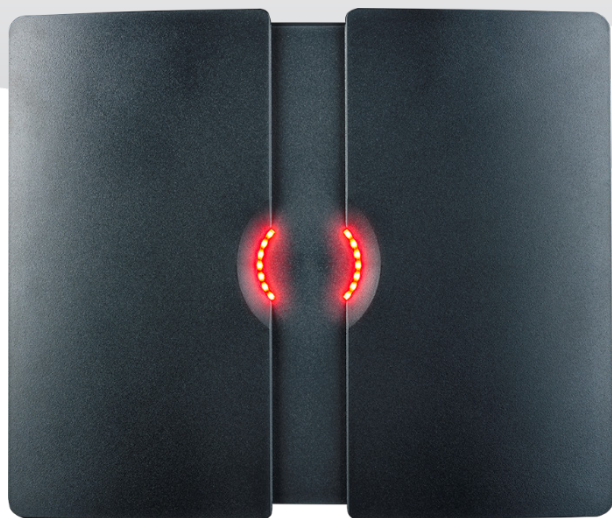
SAFETY PRECAUTIONS

The following safety precautions should be observed during normal use, service and repair:
- The TRANSIT Ultimate shall be connected to safety ground.
- Disconnecting from (mains) power supply before removing any parts.
- The TRANSIT Ultimate shall only be installed and serviced by qualified service personnel.
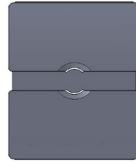- To be sure of safety, do not modify or add anything other indicated by NEDAP N.V.

INSTALLATION

TRANSIT Ultimate is IP66 rated and allow for operating temperatures from -30°C – +60°C.
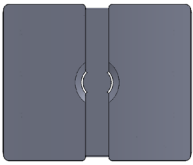
LANDSCAPE

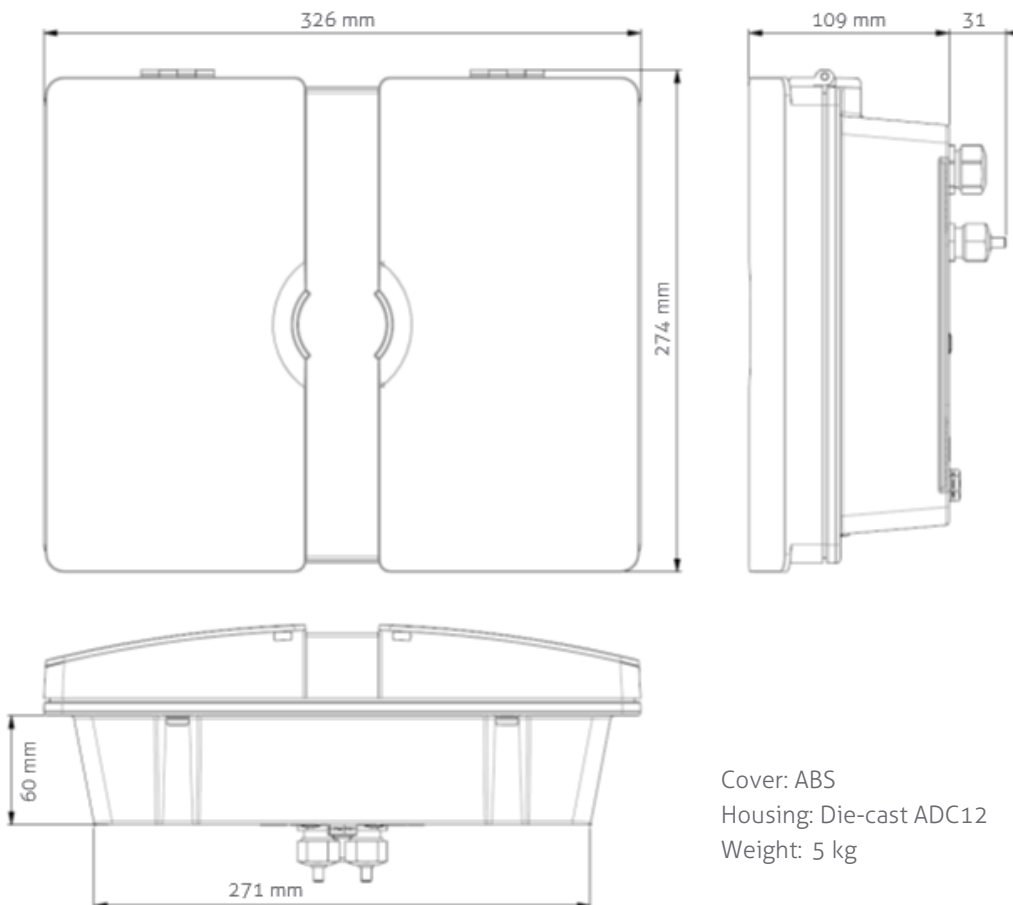Horizontal: beam width 80 degrees, default orientation.

PORTRAIT

Vertical: beam width 40 degrees. Recommended for multilane installations to avoid cross over reads.
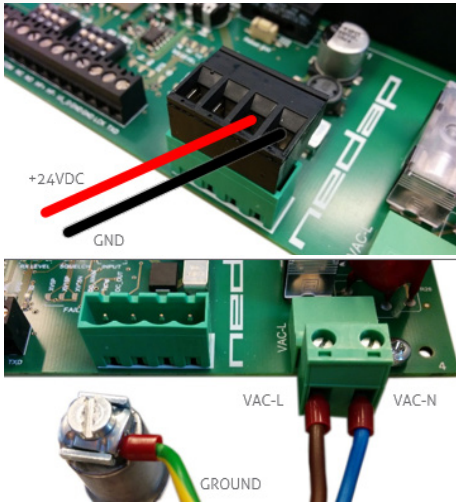
DIMENSIONS

The picture below shows the dimensions of the TRANSIT Ultimate.
All dimensions are in mm.

Cover: ABS
Housing: Die-cast ADC12
Weight: 5 kg

POWER SUPPLY

24 VDC

Power supply*: 24VDC +/- 10%, 700mA.

DC supply shall be capable of delivering a 1 A inrush current.
Cable spec: 2 x 1.5 mm² (2 x 15 AWG).
Max length: according to local regulations.

Mains

100-240VAC +/- 10%, 100 mA, 50/60 Hz
Cable spec: 3 x 0.75 mm² (3 x 18 AWG).
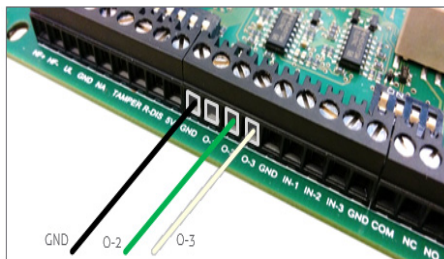Max length: according to local regulations

USB COMMUNICATION

The TRANSIT Ultimate features an USB interface for service and installation purposes. FTDI USB Virtual Com Port driver available.

While the USB interface is in use, the optional communication interface board is disabled.

WIEGAND / MAGSTRIPE / BARCODE

Connections	Wiegand	Magstripe	Barcode
O-1	-	Card Loaded	-
O-2	Data-0 (green)	Clock	-
O-3	Data-1 (white)	Data	Data
GND	Ground (black)	Ground	Ground

Cable specification:
4 x 0.25mm² shielded (4 x24 AWG)
Maximum cable length: 150 meter.

RELAY OUTPUT
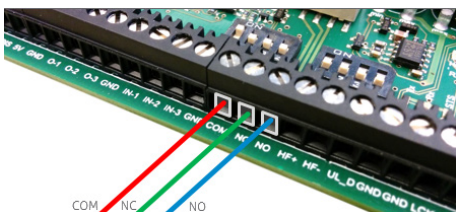
Connections:

NO	Relay contact normally open
NC	Relay contact normally closed
COM	Relay contact common

Contact ratings:

Max. switching current:	2A
Max. switching voltage:	24VDC
Max. switching power:	50W

LED INDICATIONS

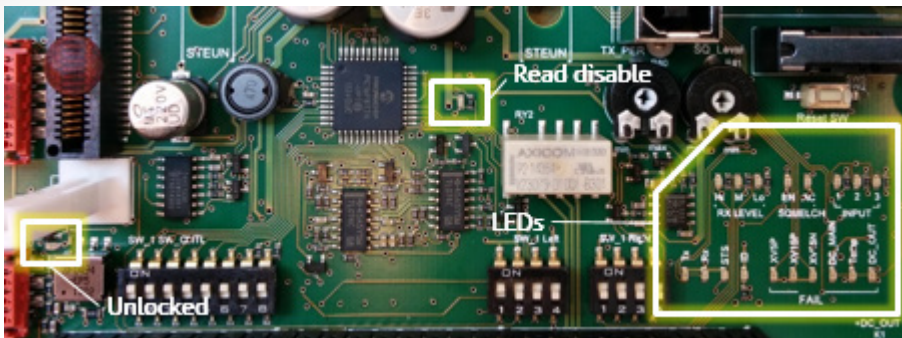| Led	Description
●●● RX_LEVEL	LED bar indicating the received microwave tag signal strength. This LED bar may also indicate the presence of radio interference. In case of interference, try switching to a different frequency
● SQ-EN	Squelch enabled
● SQ-ACT	Squelch active
● INPUT-1 ● INPUT-2 ● INPUT-3	Input 1 status. On when contact is closed Input 2 status. On when contact is closed Input 3 status. On when contact is closed
● Tx ● Rx	Transmit serial data (USB, I/F-board). Receive serial data (USB, I/F-board).
● STS-LED	TRANSIT firmware status LED (PIC) Slow blinking: Heartbeat (0.8s on / 0.8s off) Fast blinking: Boot loader active. Indicated after restart. Twice blinking: Configuration menu active. Off: Abnormal situation
● ID-LED	TRANSIT identification. Blinks fast upon valid tag. When no identification check dip-switches and customer-code.
● FAIL-XV5P ● FAIL-XV15P ● FAIL-XV15N ● FAIL-C_MAIN ● FAIL-Temp ● FAIL-DC_OUT ● Unlocked	Power supply failure +5V Power supply failure +15V. Power supply failure -15V Power supply failure DC-MAIN. Temperature critically high Temperature critically high PLL unlocked. Check flat cables to transceiver board. Try switching to a different frequency.
● Read disable	Read Disable LED. On while reading disabled

FREQUENCY SETTINGS

The TRANSIT Ultimate reader operates in the 2.45GHz ISM frequency band.
When two or more readers are within a range of 15 meters (50 feet), these readers should be set on a different operating frequency. It may also be required to select a different frequency to avoid disturbance between the TRANSIT Ultimate and other 2.45GHz equipment, such as Wi-Fi access points.

| DOWN | DISPLAY | UP | RST |
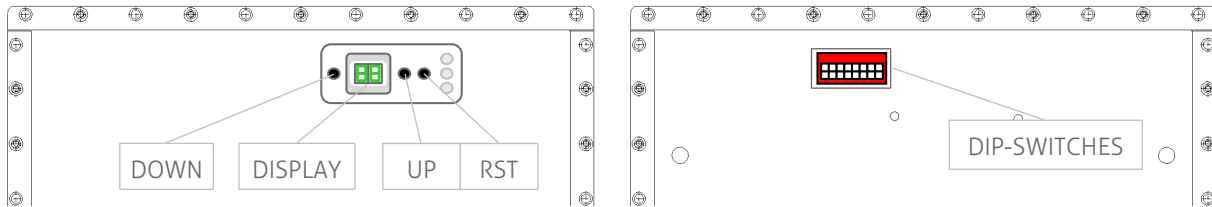
DIP-SWITCHES

The frequency channel is selected on the transceiver board which is located in the front cover of the reader. Select the frequency channel using a display & push-buttons or using dip-switches.

Display value	Frequency (GHz)	S1	S2	S3	S4	S5	Wi-Fi	ETSI	FCC
4C	2.4360	-	-	-	-	-		-	✓
4D	2.4366	-	-	-	-	-		-	✓
4E	2.4372	-	-	-	-	-	CH6	-	✓
4F	2.4378	-	-	-	-	-		-	✓
50	2.4384	ON	ON	ON	ON	ON		-	✓
51	2.4390	OFF	ON	ON	ON	ON		-	✓
52	2.4396	ON	OFF	ON	ON	ON		-	✓
53	2.4402	OFF	OFF	ON	ON	ON		-	✓
54	2.4408	ON	ON	OFF	ON	ON		-	✓
55	2.4414	OFF	ON	OFF	ON	ON		-	✓
56	2.4420	ON	OFF	OFF	ON	ON	CH7	-	✓
57	2.4426	OFF	OFF	OFF	ON	ON		-	✓
58	2.4432	ON	ON	ON	OFF	ON		-	✓
59	2.4438	OFF	ON	ON	OFF	ON		-	✓
5A	2.4444	ON	OFF	ON	OFF	ON		-	✓
5B	2.4450	OFF	OFF	ON	OFF	ON		-	✓
5C	2.4456	ON	ON	OFF	OFF	ON		-	✓
5D	2.4462	OFF	ON	OFF	OFF	ON		✓	✓
5E	2.4468	ON	OFF	OFF	OFF	ON		✓	✓
5F	2.4474	OFF	OFF	OFF	OFF	ON	CH8	✓	✓
60	2.4480	ON	ON	ON	ON	OFF		✓	✓
61	2.4486	OFF	ON	ON	ON	OFF		✓	✓
62	2.4492	ON	OFF	ON	ON	OFF		✓	✓
63	2.4498	OFF	OFF	ON	ON	OFF		✓	✓
64	2.4504	ON	ON	OFF	ON	OFF		✓	✓
65	2.4510	OFF	ON	OFF	ON	OFF		✓	✓
66	2.4516	ON	OFF	OFF	ON	OFF		✓	✓
67	2.4522	OFF	OFF	OFF	ON	OFF	CH9	✓	✓
68	2.4528	ON	ON	ON	OFF	OFF		✓	✓
69	2.4534	OFF	ON	ON	OFF	OFF		✓	✓
6A	2.4540	ON	OFF	ON	OFF	OFF		-	✓
6B	2.4546	OFF	OFF	ON	OFF	OFF		-	✓
6C	2.4552	ON	ON	OFF	OFF	OFF		-	✓
6D	2.4558	OFF	ON	OFF	OFF	OFF		-	✓
6E	2.4564	ON	OFF	OFF	OFF	OFF		-	✓
6F	2.4570	OFF	OFF	OFF	OFF	OFF	CH10	-	✓
70	2.4576	-	-	-	-	-		-	✓
71	2.4582	-	-	-	-	-		-	✓
72	2.4588	-	-	-	-	-		-	✓
73	2.4594	-	-	-	-	-		-	✓
74	2.4600	-	-	-	-	-		-	✓
75	2.4606	-	-	-	-	-		-	✓
76	2.4612	-	-	-	-	-		-	✓

77	2.4618	-	-	-	-	-	CH11	-	✓
78	2.4624	-	-	-	-	-		-	✓
79	2.4630	-	-	-	-	-		-	✓
7A	2.4636	-	-	-	-	-		-	✓
7B	2.4642	-	-	-	-	-		-	✓

The selected frequency has to comply with local radio regulations.
ETSI frequency range from 2.446 to 2.454 GHz.
FCC frequency range from 2.435 to 2.465 GHz.

DIP-SWITCHES
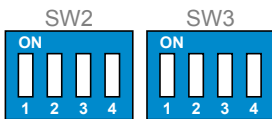
SW2-1 ON = TRANSIT communication (PIC)
SW2-1 OFF = Test communication (TAB)

SW2-2 ON = ULTIMATE-mode
SW2-2 OFF = NORMAL-mode (TAB bypass)

SW2-4 ON = Range beeper ON
SW2-4 OFF = Range beeper OFF

READ RANGE CONTROL

SW3-1 ON = Squelch enable
SW3-1 OFF = Squelch disabled (max. read range)

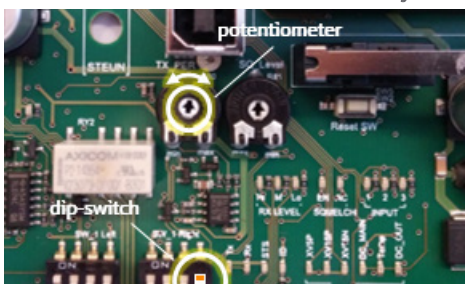SQ-Level potentiometer completely clockwise: Maximum read range.

SQ-Level potentiometer completely counter clockwise: Minimum read range.

TIME SHARING

SW3-4 ON = Microwave time-sharing (periodically on)
SW3-4 OFF = Microwave continuously-on

TX-PER potentiometer completely counter-clockwise: Short off (500 msec).

TX-PER potentiometer completely clockwise: Long off (5000 msec).