

iCall IO-Station

This IO module is connected to the local bus using a 4 wire connection. The IO-module is programmed as one address on the bus, which can contain up to a maximum of 50 addresses. The IO-module contains 5 programmable inputs and 4 programmable outputs. The type of inputs can be normal open or normal closed. Individually and remotely programmable via browser. 24/7 supervised.



General system description

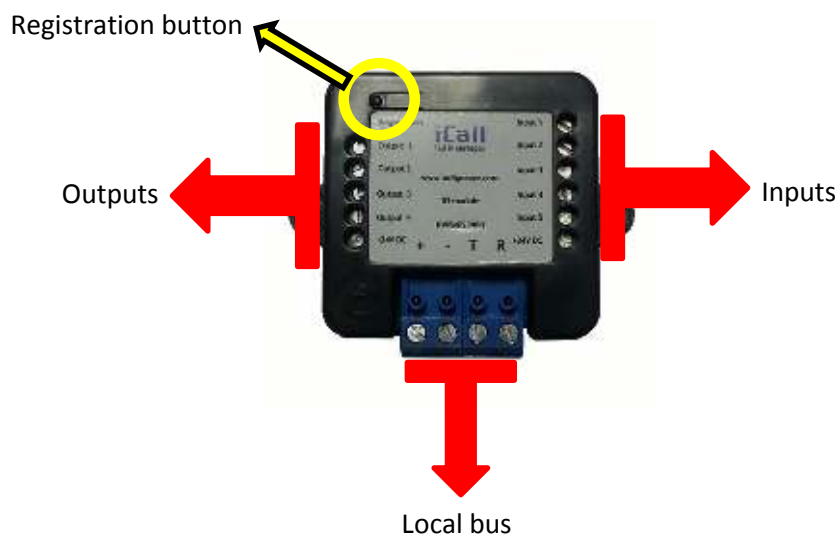
The local bus is a four wire bus that can be connected to any cable structure. Bus topology, star topology or a combination of both can be used. The maximum total cable length between the IP-units and the furthest LB-units on the bus is 1000m or the lowest voltage at the LB-units Tx or Rx wire is 18V DC. The four wire bus is composed of one wire conducting 24V DC, one wire serving as GND, one wire serving as Rx and one wire serving as Tx. The IP-unit can support up to 50 LB-units per bus. If there are more than 50 LB-units an additional IP unit is needed and another bus needs to be created.

Features

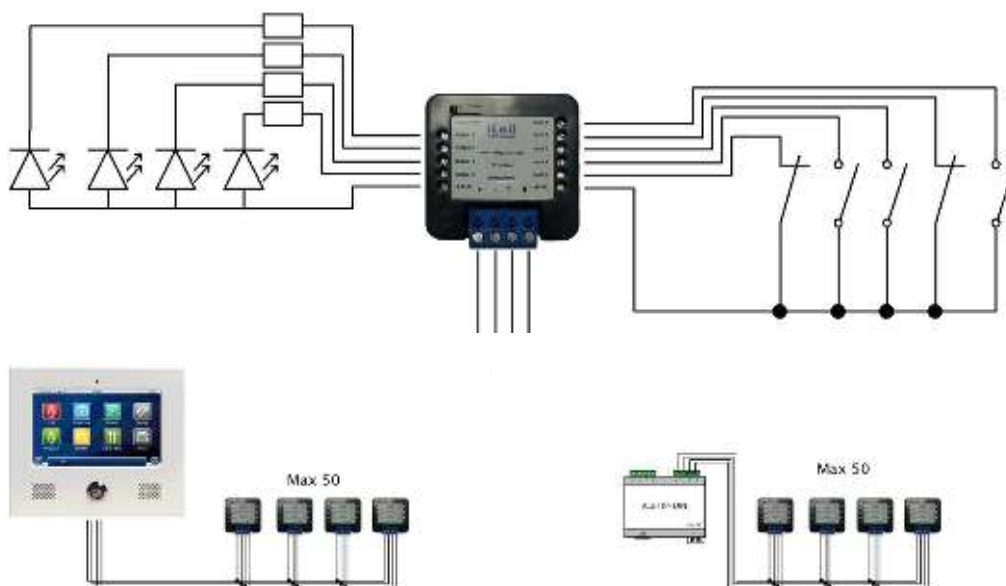
- 4 programmable outputs
 - o Call
 - o Toilet
 - o Present
 - o Buzzer
 - o OUTPUT 1 (activated and deactivated from the Netrix)
 - o OUTPUT 2 (activated and deactivated from the Netrix)
 - o OUTPUT 3 (activated and deactivated from the Netrix)
 - o OUTPUT 4 (activated and deactivated from the Netrix)
- 5 programmable inputs
 - o Call
 - o Toilet
 - o Present
 - o Assistance
 - o Urgence
 - o INPUT 1 (send to the Netrix)
 - o INPUT 2 (send to the Netrix)
 - o INPUT 3 (send to the Netrix)
 - o INPUT 4 (send to the Netrix)
 - o INPUT 5 (send to the Netrix)

- Removable 4 wire local bus connector
- Inputs can be Normal Open or Normal closed type
- Protected outputs
- Wall mountable
- Removable fixing point for use in wall mount boxes
- Integrated registration button in the housing
- Compatible with the EMEA products

Connections



Example connections

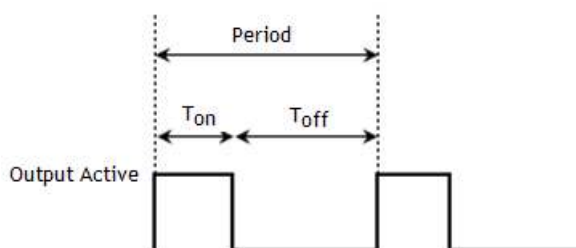


Order information

NWBAES3900 iCall IO-Station (EMEA)

Version		HW: iCall_IO V2.0 SW: iCall_IO V1.0					
iCall IO V2.0							
General Absolute Maximum Ratings !			min	typ	max	unit	
	Supply Voltage	Vcc	18	24	30	V	
	Supply Current forward	If	-	-	18	mA	
	Operating Temperature (ambient)	Tamb	0	-	65	°C	
	Maximum reverse voltage	Vr	-	40	-	V	
	Leakage current (reverse)	Ir	-	-	-	µA	
iCall IO V2.0							
							
Mechanical properties							
	Parameter		min	typ	max	unit	
	Dimensions	L x W x H	metric	-	46 x 45 x 18	-	mm
		L x W x H	non-metric	-	1.81" x 1.77" x 0.71"	-	" (inch)
		L x W x H	non-metric	-	181 x 177 x 71	-	mils
	Weight	Total Assembly	pounds	-	0,0606	-	lbs
			metric	-	0,0275	-	kg
Material	Housing material Reference Doc : .datasheet Polylac PA-707.pdf		Type of material	ABS		-	-
			Tensile Elongation	-	15	-	%
			Tensile Strength	-	500	-	Kg/cm2
			Tensile Strength	-	7090	-	lb/in2
			Vicat Softening Temp	-	105	-	°C
		mpact strength (1/4", 23°C	-	14	-	Kg-cm/cm	
		PCB	Type of material	FR-4, Td>=325°C, T260>=60', T288>=5', CTEz<=3.7%, Tg>=135°C			-
General Electrical properties							
Symbol	Parameter	State	min	typ	max	unit	
Vcc	Operating Voltage		18	24	30	V dc	
If	Forward Supply Current	@18V dc supply (no output active)	-	7,94	-	mA	
		@24V dc supply (no output active)	-	8,02	-	mA	
		@30V dc supply (no output active)	-	8,02	-	mA	
		@24V dc supply - 4 outputs active	-	11,38	-	mA	
Pt	Power Consumption	@18V dc supply	-	143	-	mW	
		@24V dc supply	-	192	-	mW	
		@30V dc supply	-	241	-	mW	
		@24V dc supply - 4 outputs active	-	273	-	mW	
Ta	Operating temperature		-20	-	65	°c	
			-4	-	149	°F	
Input / Output Electrical properties							
Vin	Input voltage I1 -> I5	INPUT	Logical High	3,3	5 ↔ 24	30	V
			logical Low	0	-	2,8	V
If	Input current I1 -> I5		5V applied to input	-	80,4	-	µA
			24V applied to input	-	878,1	-	µA
			30V applied to input	-	1134	-	µA
Ir	Reverse input leakage current	negative voltage applied	-	-	1,3	mA	
Uout app.	Applied open-collector Voltage	OUTPUT (open-collector)	externally applied	5	24	40	V
Ioutput max	Output current limit		Uout app. 5 -> 30V	55	60	65	mA
Idrive	supply current to drive an output		output active	-	1	-	mA
Thermal properties							
Group	Symbol	Parameter	refers to	min	typ	max	unit
Thermal	Tamb	Operating temperature	ambient	0	25	45	°C
				32	77	113	°F
	-	flamability rating UL94	plastic		1/16"HB		-
Regulations							
Parameter			condition	Compliance			
EMC (immunity, radiated , conducted)				OK			
ESD				not yet performed			
FCC				not yet performed			

Output	State	T (on)	T (off)	Duty Cycle
Not configured	-----	0 ms	∞ ms	0%
Toilet	Toilet Call	∞ ms	0 ms	100%
	Toilet Assistance	1000 ms	1000 ms	50%
Call	Call	∞ ms	0 ms	100%
	Assistance	1000 ms	1000 ms	50%
	Urgence	350 ms	350 ms	50%
Present	Present	∞ ms	0 ms	100%
	Assistance	∞ ms	0 ms	100%
Output #	To be determined	∞ ms	0 ms	100%
Buzzer	Call	0 ms	∞ ms	0%
	Present (Call following - Toilet)	1000 ms	17000 ms	5,56%
	Present (Call following - call)	1000 ms	17000 ms	5,56%
	Present (Call following - Ass.)	1000 ms	1000 ms	50%
	Present (Call following - Urg.)	350 ms	350 ms	50%
	Present	0 ms	∞ ms	0%
	Assistance	1000 ms	1000 ms	50%
	Urgence	350 ms	350 ms	50%



$$\text{Period} = 1 / \text{Frequency}$$

$$\text{Period} = T_{\text{on}} + T_{\text{off}}$$

$$\text{Duty Cycle} = T_{\text{on}} / (T_{\text{on}} + T_{\text{off}}) * 100$$