

Option215

Option215 serves as an extension for all special applications that require parallel signals.

The option can be used for the devices DIVA2/3 Base or any LeX. A maximum of 2 options can be plugged on a DIVA2/3 Base in any order.

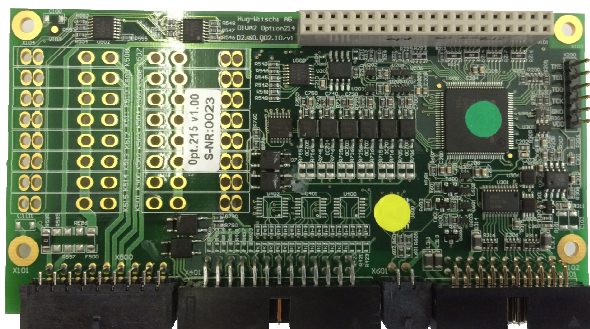
Typical applications of this board are:

Any machine with parallel interface like output units with max. 4 products, laundry machines or reverse vending machines.

Furthermore, turnstiles can be connected to charge a fixed price for entry or exit.

In addition to the DIVA2 receipt function, a push button can be connected to request the receipt manually.

The ccTalk interface is used to connect up to 4 hoppers for various payout applications.



FEATURES

- 6 isolated, bipolar digital inputs
- 4 isolated, bipolar digital outputs
- Parallel port for 2x16 or 2x20 Display
- Serial interface ccTalk

APPLICATIONS

- 4 price vending machines (see AN164), Bottle return machines (see AN192)
- Barrier systems (see AN140)
- On-demand receipt printing (see AN154)
- Happy hour switching (see AN184)
- Hoppers via ccTalk (AN203)
- Door opening detection (see AN185), Fridge (Coffee Corner)

order coordinates:

art.no.: D2.63.000.03
details: Option215 for DIVA



HUG-WITSCHI AG
ELECTRONIC ENGINEERING

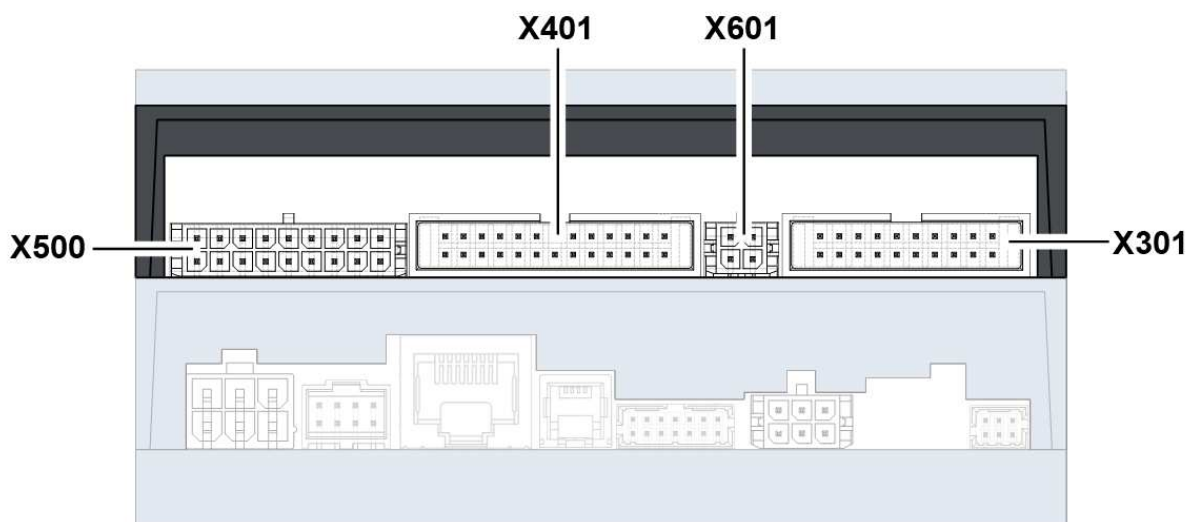
Auriedstrasse 10 - CH-3178 Bödingen
phone +41 (0) 31 740 44 44 - fax +41 (0) 31 740 44 45
info@hugwi.ch - www.payment-technology.com

ELECTRICAL CHARACTERISTICS

General characteristics of the inputs and outputs

	PARAMETER	MIN	TYP	MAX	UNIT
GND	System ground O215				V
V _{IN}	Input voltage			42	V _{DC}
				26.4	V _{AC}
V _{INth}	Thereshold Voltage ON-state	4.5	-	-	V
I _{IN}	Max Input current(average)			50	mA
V _{OUT}	Output voltage	21.6		42	V
I _{OUT}	Output current per SSR-channel			0.5	A
I _{OUT tot}	Total Output current			1.0	A
V _{DISP}	Display output voltage	4.5		5.5	V
I _{DISP}	Display output current incl backlight			200	mA
V _{ROUT DC}	Relay output voltage dc	-	24	42	V
V _{ROUT AC}	Relay output voltage ac	-	24	26.4	V _{rms}
I _{ROUT}	Relay output current ac/dc	-	-	2.0	A
I _{ROUTC}	Relay common current (total current) ac/dc	-	-	2.0	A
V _{ccTalk}	Data voltage ccTalk (pulled up 10k)	4.5	5	5.5	V

CONNECTORS



order coordinates:

art.no.: D2.63.000.03
 details: Option215 for DIVA2



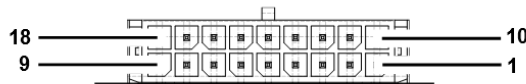
HUG-WITSCHI AG
 ELECTRONIC ENGINEERING

Auriedstrasse 10 - CH-3178 Böisingen
 phone +41 (0) 31 740 44 44 - fax +41 (0) 31 740 44 45
 info@hugwi.ch - www.payment-technology.com

NAME	DESCRIPTION
X500	Connector for 16 high current SSR-Outputs. A single common Pin is used for all 16 outputs. ¹
X401	Connector for 6 isolated Opto-Inputs and 4 Isolated SSR-Outputs
X601	ccTalk serial port, for payment systems with ccTalk Interface (coin acceptors, hoppers).
X301	Parallel display 2x16 char

TERMINAL FUNCTIONS

X500



TERMINAL		DESCRIPTION
NAME	PIN	
COMMON	9	Common-Port for OUT0...OUT15
OUT0	1	SSR Output 0, for AC/DC loads
OUT1	10	SSR Output 1, for AC/DC loads
OUT2	2	SSR Output 2, for AC/DC loads
OUT3	11	SSR Output 3, for AC/DC loads
OUT4	3	SSR Output 4, for AC/DC loads
OUT5	12	SSR Output 5, for AC/DC loads
OUT6	4	SSR Output 6, for AC/DC loads
OUT7	13	SSR Output 7, for AC/DC loads
OUT8	5	SSR Output 8, for AC/DC loads
OUT9	14	SSR Output 9, for AC/DC loads
OUT10	6	SSR Output 10, for AC/DC loads
OUT11	15	SSR Output 11, for AC/DC loads
OUT12	7	SSR Output 12, for AC/DC loads
OUT13	16	SSR Output 13, for AC/DC loads
OUT14	8	SSR Output 14, for AC/DC loads
OUT15	17	SSR Output 15, for AC/DC loads
N.C.	18	

¹ Assembling prepared for future use, variant on demand

order coordinates:

art.no.: D2.63.000.03
 details: Option215 for DIVA2

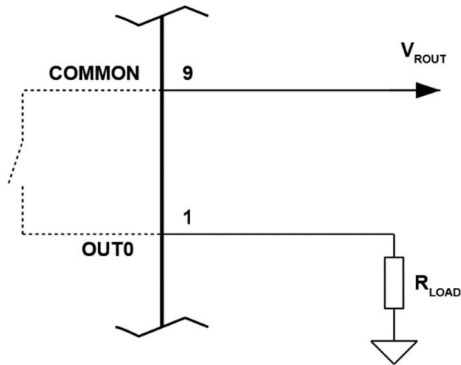


HUG-WITSCHI AG
 ELECTRONIC ENGINEERING

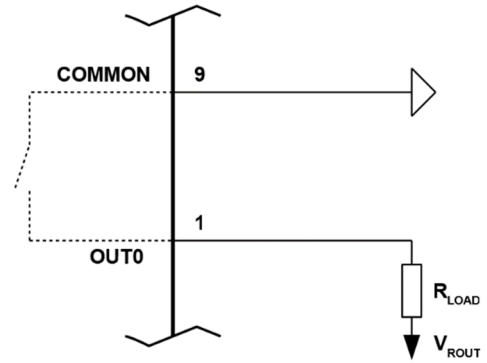
Auriedstrasse 10 - CH-3178 Bödingen
 phone +41 (0) 31 740 44 44 - fax +41 (0) 31 740 44 45
 info@hugwi.ch - www.payment-technology.com



Recommended X500 wiring:
High-side switch



Low-side switch



Where "R_{LOAD}" is the load driven by the relay output. It could be any possible actuator. Please observe the maximum allowed current "I_{ROUT}" into the relay.

order coordinates:

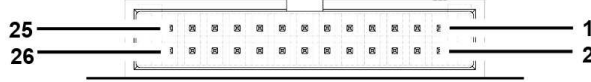
art.no.: D2.63.000.03
details: Option215 for DIVA2



HUG-WITSCHI AG
ELECTRONIC ENGINEERING

Auriedstrasse 10 - CH-3178 Bödingen
phone +41 (0) 31 740 44 44 - fax +41 (0) 31 740 44 45
info@hugwi.ch - www.payment-technology.com

X401



TERMINAL		DESCRIPTION
NAME	PIN	
IN0 _{+/-}	1	AC-Optocoupler input 0
IN0 _{+/-}	2	
IN1 _{+/-}	3	AC-Optocoupler input 1
IN1 _{+/-}	4	
IN2 _{+/-}	5	AC-Optocoupler input 2
IN2 _{+/-}	6	
IN3 _{+/-}	7	AC-Optocoupler input 3
IN3 _{+/-}	8	
IN4 _{+/-}	9	AC-Optocoupler input 4
IN4 _{+/-}	10	
IN5 _{+/-}	11	AC-Optocoupler input 5
IN5 _{+/-}	12	
OUT0 _{+/-}	13	SSR-output 0, AC/DC
OUT0 _{+/-}	14	
OUT1 _{+/-}	15	SSR-output 1, AC/DC
OUT1 _{+/-}	16	
OUT2 _{+/-}	17	SSR-output 2, AC/DC
OUT2 _{+/-}	18	
OUT3 _{+/-}	19	SSR-output 3, AC/DC
OUT3 _{+/-}	21	
GND	20, 22	System ground O215
V _{OUT}	23, 24	Supply voltage output
COM _{EXT+}	25	reserved for future use
COM _{EXT-}	26	reserved for future use

order coordinates:

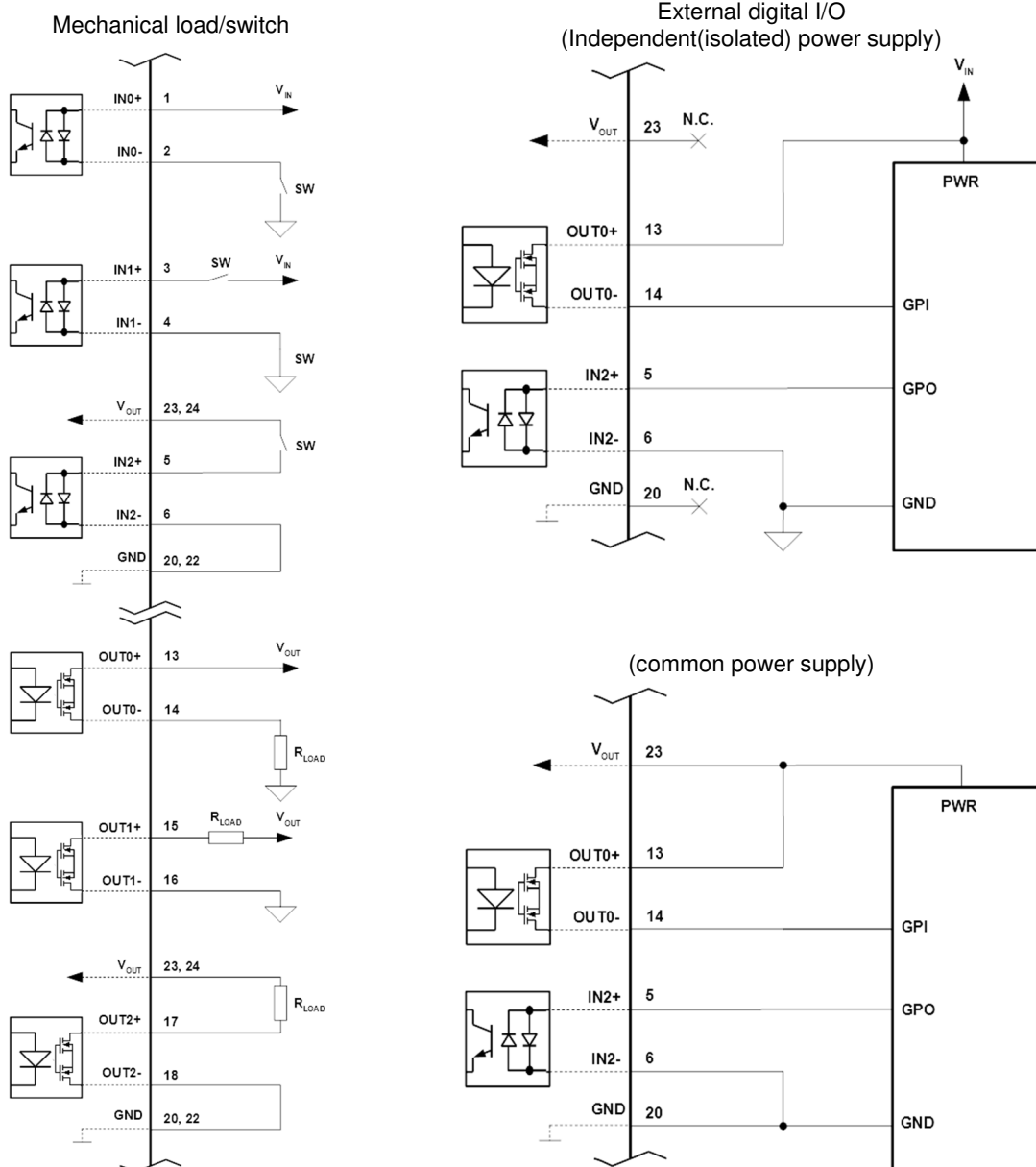
art.no.: D2.63.000.03
 details: Option215 for DIVA2



HUG-WITSCHI AG
 ELECTRONIC ENGINEERING

Auriedstrasse 10 - CH-3178 Bösingen
 phone +41 (0) 31 740 44 44 - fax +41 (0) 31 740 44 45
 info@hugwi.ch - www.payment-technology.com

Recommended X401 I/O wiring:



order coordinates:

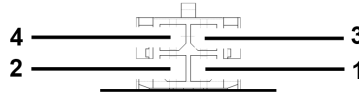
art.no.: D2.63.000.03
 details: Option215 for DIVA2



HUG-WITSCHI AG
 ELECTRONIC ENGINEERING

Auriedstrasse 10 - CH-3178 Bödingen
 phone +41 (0) 31 740 44 44 - fax +41 (0) 31 740 44 45
 info@hugwi.ch - www.payment-technology.com

X601



TERMINAL		DESCRIPTION
NAME	PIN	
V _{OUT}	1	output supply voltage for ccTalk device
DATA _{IN}	2	prepared for future use as Serial RS232 input ²
GND	3	System-GND O215
DATA _{OUT}	4	ccTalk serial data, prepared for future use as serial RS232 output

Recommended power wiring:

- Small power ccTalk-devices $I_{POWR} < 500\text{mA}$ and V_{OUT} complies the device supply voltage specification:
Device can be supplied direct from common power supply on X601. In this case supply-pins are outputs only.
Supply feedback to V_{OUT} and GND from DIVA-supply or another external supply is not allowed.
- Larger power ccTalk-devices $I_{POWR} > 500\text{mA}$ or V_{OUT} doesn't meet the device supply voltage specification:
Device must be supplied from an independent(isolated) power supply. GND from O215 must be connected to GND from the external power supply and to GND(s) from ccTalk-device(s)

order coordinates:

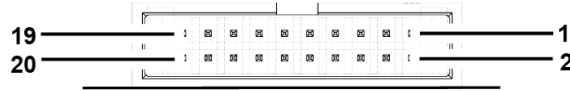
art.no.: D2.63.000.03
details: Option215 for DIVA2



HUG-WITSCHI AG
ELECTRONIC ENGINEERING

Auriedstrasse 10 - CH-3178 Bödingen
phone +41 (0) 31 740 44 44 - fax +41 (0) 31 740 44 45
info@hugwi.ch - www.payment-technology.com

X301



TERMINAL		DESCRIPTION
NAME	PIN	
V_DISP	1	Power Supply voltage for Display logic, +5V
GND	2	Ground, 0V
RS	3	Data/Instruction select
V0	4	Contrast adjustment
E	5	Enable signal
R/W	6	Read/write select
DB1	7	Data bus, bidirectional, 5V CMOS
DB0	8	Data bus, bidirectional, 5V CMOS
DB3	9	Data bus, bidirectional, 5V CMOS
DB2	10	Data bus, bidirectional, 5V CMOS
DB5	11	Data bus, bidirectional, 5V CMOS
DB4	12	Data bus, bidirectional, 5V CMOS
DB6	13	Data bus, bidirectional, 5V CMOS
DB5	14	Data bus, bidirectional, 5V CMOS
BL-	15	Backlight power supply voltage, switchable 0V (BL-LED cathode)
BL+	16	Backlight power supply voltage, permanent +5V fix (BL-LED anode)
NC	17	Not connected
NC	18	Not connected
NC	19	Not connected
NC	20	Not connected

order coordinates:

art.no.: D2.63.000.03
 details: Option215 for DIVA2



HUG-WITSCHI AG
 ELECTRONIC ENGINEERING

Auriedstrasse 10 - CH-3178 Bödingen
 phone +41 (0) 31 740 44 44 - fax +41 (0) 31 740 44 45
 info@hugwi.ch - www.payment-technology.com