

# AD4404 PROFIBUS Address Map

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## OUT DATA (6 Words), PLC to AD4404

OUT DATA bit15 -- bit0: Parameters  
**1st Word** Output data (Low order word)

OUT DATA bit15 -- bit0: Parameters  
**2nd Word** Output data (High order word)

OUT DATA Command bits  
**3rd Word**  
bit15: Clear totals of all codes  
14: Clear totals of active code  
13: Total print  
12: Pause  
11: Emergency stop  
10: Cancel the last result  
9: \*  
8: Foreign matter detector  
7: Buzzer stop  
6: \*  
5: Stop  
4: Start  
3: Tare clear  
2: Tare  
1: Zero clear  
Bit 0: Zero  
(\*: Do not change (0).Internal reservation.)

OUT DATA Command bits  
**4th Word**  
bit15: \*  
14: \*  
13: \*  
12: \*  
11: \*  
10: \*  
9: \*  
8: \*  
7: Manual print command  
6: Hold  
5: Error reset  
4: \*  
3: \*  
2: Forced target finish  
1: \*  
Bit 0: \*  
(\*: Do not change (0).Internal reservation.)

OUT DATA bit15 -- bit0: Parameters  
**5th Word** READ from AD4404 - Commands 1 to 64 (page 4)

OUT DATA Control bits  
**6th word**  
bit15: \*  
14: \*  
13: \*  
12: \*  
11: \*  
10: \*  
9: \*  
8: \*  
7: \*  
6: \*  
5: \*  
4: \*  
3: \*  
2: \*  
1: Command request flag. 0 = No request 1 = Request  
Bit 0: Flag Read/Write 0 = Write 1 = Read  
(\*: Do not change (0).Internal reservation.)

## IN DATA (10 Words), AD4404 to PLC

IN DATA bit15 -- bit0: Gross  
**1st Word** Weight data (Low order word)

IN DATA bit15 -- bit0: Gross  
**2nd Word** Weight data (High order word)

IN DATA bit15 -- bit0: Net  
**3rd Word** Weight data (Low order word)

IN DATA bit15 -- bit0: Net  
**4th Word** Weight data (High order word)

IN DATA bit15 -- bit0:  
**5th Word** Input data (Low order word)

IN DATA bit15 -- bit0:  
**6th Word** Input data (High order word)

IN DATA Status indicator  
**7th Word** bit15: Managing foreign matter  
14: Busy  
13: Conveyor  
12: During operation  
11: Finish target  
10: NG  
9: Duplication  
8: Foreign matter detection  
7: HiHi  
6: Hi  
5: OK  
4: Lo  
3: LoLo  
2: Full  
1: Zero band  
Bit 0: Stable

IN DATA Status indicator  
**8th Word** bit15: During hold  
14: Net display  
13: Gross display  
12: Center of zero  
11: Tare  
10: Buzzer  
9: Capacity exceeded (Out of range)  
8: Zero error  
7: Alarm 2  
6: Alarm 1  
5: Weighing sequence error  
4: Input acknowledge  
3: \*  
2: Online  
1: \*  
Bit 0: Crush  
(\*: Internal reservation.)

IN DATA bit15 -- bit0:  
**9th Word** Command No. response

-: **Toggleing 00 / 04**

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IN DATA      Control bits
10th Word    bit15: *
              14: *
              13: *           -: Toggle 00 / 09
              12: *
              11: *
              10: *
              9: *
              8: *
              7: *
              6: *
              5: *
              4: *
              3: Slave ready      0 = Not Ready/Off Line      1 = Ready/On line
              2: Slave device status 0/1 Toggle
              1: Command Reply flag  0 = Ready or error      1 = Reply
Bit 0: Reply flag Read/Write        0 = Write                1 = Read
              (*: Internal reservation.)

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## Read Command List - OUT DATA 5<sup>th</sup> WORD - (AD4404 to PLC)

\*: Internal reservation.

Command Name	Decimal Command No.	Hex Command No.
Code name1 (1st to 4th character)	1	1
Code name2 (5th to 8th character)	2	2
Code name3 (9th to 12th character)	3	3
*	*	*
*	*	*
Target	6	6
LoLo	7	7
Lo	8	8
Hi	9	9
HiHi	10	A
*	*	*
Zero band	12	C
Full	13	D
Tare	14	E
Target Count	15	F
Count of total data	16	10
Count of NG	17	11
Count of LoLo data	18	12
Count of Lo data	19	13
Count of OK data	20	14
Count of Hi data	21	15
Count of HiHi data	22	16
Count of foreign matter	23	17
Count of crush	24	18
Maximum value of adequate data	25	19
Minimum value of adequate data	26	1A
Average of adequate data	27	1B
Standard deviation of adequate data	28	1C
Population Standard deviation of adequate data	29	1D
Total weight of adequate data	30	1E
Count of duplication	31	1F
Current code	32	20
Code to store	33	21
*	*	*
*	*	*
Weighing result	36	24
*	*	*
.	.	
.	.	
.	.	
*	*	*
Error information	60	3C
Decimal point	61	3D
*	*	*
*	*	*
Current tare	64	40

## Write Command List (PLC to AD4404)

\*: Internal reservation.

Command Name	Decimal Command No.	Hex Command No.
Code name1 (1st to 4th character)	1	1
Code name2 (5th to 8th character)	2	2
Code name3 (9th to 12th character)	3	2
*	*	*
*	*	*
Target	6	6
LoLo	7	7
Lo	8	8
Hi	9	9
HiHi	10	A
*	*	*
Zero band	12	C
Full	13	D
Tare	14	E
Target Count	15	F
*	*	*
.	.	.
.	.	.
.	.	.
*	*	*
Current code	32	20
Code to store	33	21

## Control Command List

\*: Internal reservation.

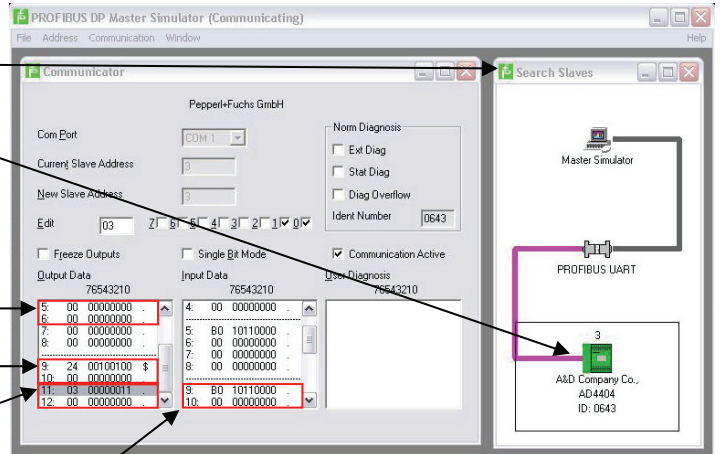
Command Name	OUT DATA, 5th Word Command No.	OUT DATA, 1st Word & 2nd Word Output Data
Zero	0	1
Zero clear	0	2
Tare	0	3
Tare clear	0	4
Start	0	5
Stop	0	6
*	0	*
Buzzer stop	0	8
*	0	*
Foreign matter detector	0	10
*	0	*
Cancel the last result	0	12
Emergency stop	0	13
*	0	*
.		.
.		.
.		.
*	0	*
Pause	0	22
Total print	0	23
Clear totals of active code	0	24
Clear totals of all code	0	25
*	0	*
.		.
.		.
.		.
*	0	*
Forced target finish	0	36
*	0	37
.		.
.		.
.		.
*	0	*
Error reset	0	44
*	0	*
*	0	*
Manual print command	0	47
*	0	*
Net display	0	49
Gross display	0	50

# Profibus DP Master Simulator.

16 Bits = 1 Word, and 8 Bits = 1 Byte.

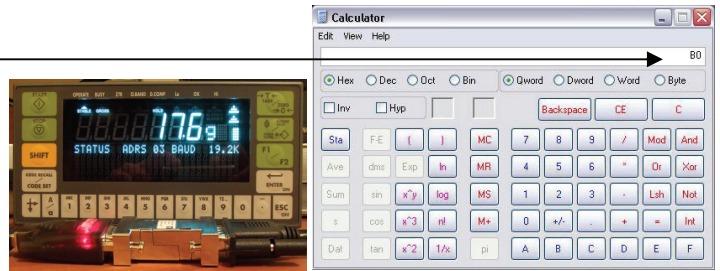
- AD4404:** 6 x Out Data Words, and 10 x In Data Words.  
**DP Simulator:** Each line is only 8 bits, 2 lines.  
 1 x 16 Bit Word = 2 lines Lower and Higher Word.

Automatic Address Search  
 Found A&D GSD ID:0643



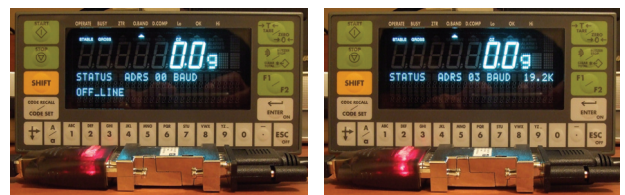
- Out Word - 3<sup>rd</sup> Word Bit "4" Start  
 Out Word - 5<sup>th</sup> Word Read Command 36/24  
 "Weighing Result"  
 Out Word - 6<sup>th</sup> Word Control Bits  
 Bit 0 = 1 Read and Bit 1 = 1 Request

Weighing Result on AD4404 = 17.6g  
 "Decimal = 176, Hex = B0"

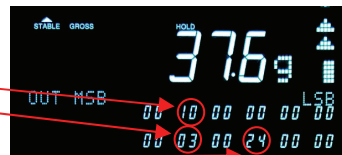


## TESTING & MONITOR:

Display when the AD4404 controller goes online with a Profibus Master.  
 "Check, Monitor, Option, OP-22[PROFI]"



- Display of the 6 x OUT Data words  
 "Check, Monitor, Option, OP-22[PROFI]1"  
 Out Data 3<sup>rd</sup> Word bit 4-Start  
 Out Data 6<sup>th</sup> Word bit 0 = 1 Read  
 bit 1 = 1 Request  
 Out Data 5<sup>th</sup> Word bit 36-Result dec = 24 Hex



- Display of the 12 IN Data Words  
 "Check, Monitor, Option, OP-22[PROFI]1,1"  
 In Data 1<sup>st</sup> and 2<sup>nd</sup> Word = Gross Weight  
 Gross Weight = 376 (376Dec = 0178 Hex)

