

PERFORMANCE  
MADE  
SMARTER

# Wiring manual **7908/7916**

## ***ABB wiring manual and I/O card reference list***



TEMPERATURE | I.S. INTERFACES | COMMUNICATION INTERFACES | MULTIFUNCTIONAL | ISOLATION | DISPLAY

System 9000 Backplane  
No. 7900AWM102-UK

**PR**  
electronics

# 6 Product Pillars

## *to meet your every need*

### Individually outstanding, unrivalled in combination

With our innovative, patented technologies, we make signal conditioning smarter and simpler. Our portfolio is composed of six product areas, where we offer a wide range of analog and digital devices covering over a thousand applications in industrial and factory automation. All our products comply with or surpass the highest industry standards, ensuring reliability in even the harshest of environments and have a 5-year warranty for greater peace of mind.



Temperature

Our range of temperature transmitters and sensors provides the highest level of signal integrity from the measurement point to your control system. You can convert industrial process temperature signals to analog, bus or digital communications using a highly reliable point-to-point solution with a fast response time, automatic self-calibration, sensor error detection, low drift, and top EMC performance in any environment.



I.S. Interface

We deliver the safest signals by validating our products against the toughest safety standards. Through our commitment to innovation, we have made pioneering achievements in developing I.S. interfaces with SIL 2 Full Assessment that are both efficient and cost-effective. Our comprehensive range of analog and digital intrinsically safe isolation barriers offers multifunctional inputs and outputs, making PR an easy-to-implement site standard. Our backplanes further simplify large installations and provide seamless integration to standard DCS systems.



Communication

We provide inexpensive, easy-to-use, future-ready communication interfaces that can access your PR installed base of products. All the interfaces are detachable, have a built-in display for readout of process values and diagnostics, and can be configured via push-buttons. Product specific functionality includes communication via Modbus and Bluetooth and remote access using our PR Process Supervisor (PPS) application, available for iOS and Android.



Multifunction

Our unique range of single devices covering multiple applications is easily deployable as your site standard. Having one variant that applies to a broad range of applications can reduce your installation time and training, and greatly simplify spare parts management at your facilities. Our devices are designed for long-term signal accuracy, low power consumption, immunity to electrical noise and simple programming.



Isolation

Our compact, fast, high-quality 6 mm isolators are based on microprocessor technology to provide exceptional performance and EMC-immunity for dedicated applications at a very low total cost of ownership. They can be stacked both vertically and horizontally with no air gap separation between units required.



Display

Our display range is characterized by its flexibility and stability. The devices meet nearly every demand for display readout of process signals and have universal input and power supply capabilities. They provide a real-time measurement of your process value no matter the industry and are engineered to provide a user-friendly and reliable relay of information, even in demanding environments.

# System 9000 Backplane ABB wiring manual and I/O card reference list

## Table of contents

Intro.....	4
Supported ABB S800 DCS systems & I/O cards .....	4
Supply and status relay connections and ABB system cable connectors .....	5
Backplane to ABB S800 I/O card wiring .....	6
AI810, AI815, AI845 and AI880 cards, 8 modules - 16 x AI, PR 9106 2 ch. ....	7
AI810, AI815, AI845 and AI880 cards, 8 modules - 16 x AI, PR 9113 2 ch. ....	8
AI810, AI815, AI845 and AI880 cards, 8 modules - 8 x AI, PR 9106 1 ch.....	9
AI810, AI815, AI845 and AI880 cards, 8 modules - 8 x AI, PR 9113 1 ch.....	10
AI810, AI815, AI845 and AI880 cards, 16 modules - 16 x AI, PR 9106 1 ch. ....	11
AI810, AI815, AI845 and AI880 cards, 16 modules - 16 x AI, PR 9113 1 ch. ....	13
AO810, AO815 and AO845 cards, 8 modules - 8 x AO, PR 9107 1 ch. ....	15
DI810, DI814, DI830, DI840 and DI880 cards, 8 modules - 16 x DI, PR 9202 2 ch. ....	16
DI810, DI814, DI830, DI840 and DI880 cards, 16 modules - 16 x DI, PR 9202 1 ch. ....	19
DO810, DO840 and DO880 cards, 16 modules - 16 x DO, PR 9203 1 ch. ....	21
Appendix .....	23
System cables for abb backplanes .....	24
9106 AI I.S. or non-I.S. isolation barrier - wiring connections .....	25
9107 AO I.S. or non-I.S. isolation barrier - wiring connections .....	26
9113 AI I.S. or non-I.S. isolation barrier - wiring connections .....	27
9202 AO I.S. or non-I.S. isolation barrier - wiring connections .....	28
9203 AI I.S. or non-I.S. isolation barrier - wiring connections .....	29
Document history .....	30

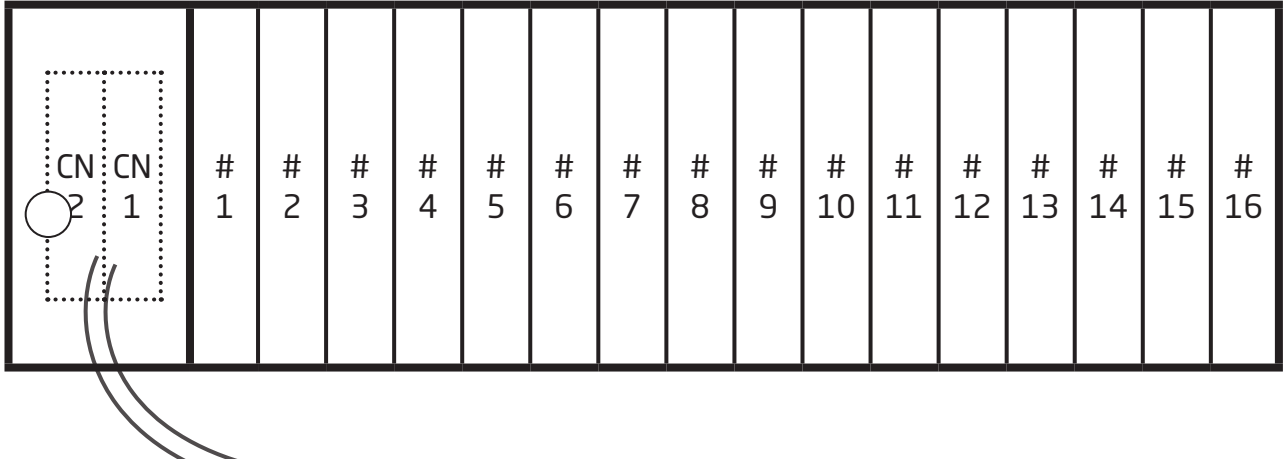
## Supported ABB S800 DCS systems & I/O cards

DCS System	I/O card reference	I/O type	PR System 9000 device	# Slot	PR Ordering references
S800	2 x AI810 2 x AI815 2 x AI845 2 x AI880	16 x AI	8 x 9106xxB	1...8	7908-ABBS8-A1B
	8 x 9113xB				
	1 x AI810 1 x AI815 1 x AI845 1 x AI880	8 x AI	8 x 9106xxA	1...8	7908-ABBS8-A1A
	8 x 9113xA				
	2 x AI810 2 x AI815 2 x AI845 2 x AI880	16 x AI	16 x 9106xxA	1...16	7916-ABBS8-A1A
	16 x 9113xA				
	1 x AO810 1 x AO815 1 x AO845	8 x AO	8 x 9107xA	1...8	7908-ABBS8-B1C
	1 x DI810 1 x DI814 1 x DI830 1 x DI840 1 x DI880	16 x DI	8 x 9202xxB	1...8	7908-ABBS8-C1H
2 x DI810 2 x DI814 2 x DI830 2 x DI840 2 x DI880	32 x DI	16 x 9202xxB	1...16	7916-ABBS8-C1H	
1 x DI810 1 x DI814 1 x DI830 1 x DI840 1 x DI880	16 x DI	16 x 9202xxA	1...16	7916-ABBS8-C1G	
1 x DO810 1 x DO840 1 x DO880	16 x DO	16 x 9203xxAx	1...16	7916-ABBS8-D1I*	

\* Only available upon inquiry. Please contact us for further information.

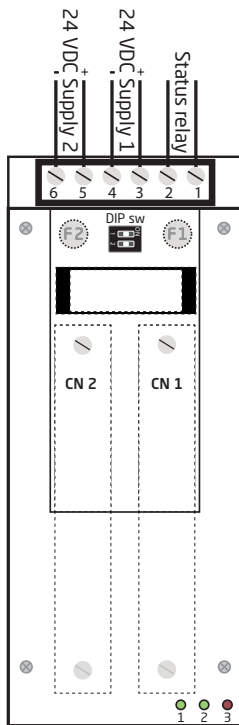
!! Do not mix I.S. and non-I.S. devices on the same backplane

# Supply and status relay connections and ABB S800 system cable connectors

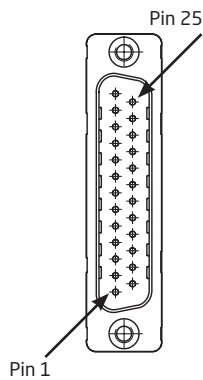


Shielded round cable, assembled with two SUB-D 25 female connectors pin to pin.

## Backplane Dual connectors



## CN 1 and CN 2 SUB-D 25 male



## **Backplane to ABB S800 I/O card wiring**

# 7908-ABBS8-A1B

## AI810, AI815, AI845 and AI880 card wiring via 2 x TU812

### 16 x AI - PR 9106xxB 2 channels

9106xxB Field equipment terminals				DCS 1 connection TU812 CN1 SUB-D 25
Unit	Ch.	2-w Tx mA-signal	Active mA-signal	Signal name / Pin number
#1	1	44 (+)	41 (-)	Ch1 Input / 16
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
	2	54 (+)	51 (-)	Ch2 Input / 17
		53 (-)	52 (+)	0 V ref. / 2, 12, 15, 25
#2	1	44 (+)	41 (-)	Ch3 Input / 18
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
	2	54 (+)	51 (-)	Ch4 Input / 19
		53 (-)	52 (+)	0 V ref. / 2, 12, 15, 25
#3	1	44 (+)	41 (-)	Ch5 Input / 20
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
	2	54 (+)	51 (-)	Ch6 Input / 21
		53 (-)	52 (+)	0 V ref. / 2, 12, 15, 25
#4	1	44 (+)	41 (-)	Ch7 Input / 22
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
	2	54 (+)	51 (-)	Ch8 Input / 23
		53 (-)	52 (+)	0 V ref. / 2, 12, 15, 25
				DCS 2 connection TU812 CN2 SUB-D 25
#5	1	44 (+)	41 (-)	Ch1 Input / 16
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
	2	54 (+)	51 (-)	Ch2 Input / 17
		53 (-)	52 (+)	0 V ref. / 2, 12, 15, 25
#6	1	44 (+)	41 (-)	Ch3 Input / 18
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
	2	54 (+)	51 (-)	Ch4 Input / 19
		53 (-)	52 (+)	0 V ref. / 2, 12, 15, 25
#7	1	44 (+)	41 (-)	Ch5 Input / 20
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
	2	54 (+)	51 (-)	Ch6 Input / 21
		53 (-)	52 (+)	0 V ref. / 2, 12, 15, 25
#8	1	44 (+)	41 (-)	Ch7 Input / 22
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
	2	54 (+)	51 (-)	Ch8 Input / 23
		53 (-)	52 (+)	0 V ref. / 2, 12, 15, 25

# 7908-ABBS8-A1B

## AI810, AI815, AI845 and AI880 card wiring via 2 x TU812

### 16 x AI - PR 9113xB 2 channels

9113xB Field equipment terminals					DCS 1 connection TU812 CN1 SUB-D 25
Unit	Ch.	RTD, 2- / 3- / 4-wire	TC	Current	Signal name / Pin number
#1	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch1 Input / 16
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
	2	53 or 53/51 or 53/51/54 (*)	51 (+)	53 (+)	Ch2 Input / 17
		52	52 (-)	52 (-)	0 V ref. / 2, 12, 15, 25
#2	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch3 Input / 18
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
	2	53 or 53/51 or 53/51/54 (*)	51 (+)	53 (+)	Ch4 Input / 19
		52	52 (-)	52 (-)	0 V ref. / 2, 12, 15, 25
#3	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch5 Input / 20
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
	2	53 or 53/51 or 53/51/54 (*)	51 (+)	53 (+)	Ch6 Input / 21
		52	52 (-)	52 (-)	0 V ref. / 2, 12, 15, 25
#4	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch7 Input / 22
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
	2	53 or 53/51 or 53/51/54 (*)	51 (+)	53 (+)	Ch8 Input / 23
		52	52 (-)	52 (-)	0 V ref. / 2, 12, 15, 25
					<b>DCS 2 connection TU812 CN2 SUB-D 25</b>
#5	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch1 Input / 16
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
	2	53 or 53/51 or 53/51/54 (*)	51 (+)	53 (+)	Ch2 Input / 17
		52	52 (-)	52 (-)	0 V ref. / 2, 12, 15, 25
#6	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch3 Input / 18
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
	2	53 or 53/51 or 53/51/54 (*)	51 (+)	53 (+)	Ch4 Input / 19
		52	52 (-)	52 (-)	0 V ref. / 2, 12, 15, 25
#7	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch5 Input / 20
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
	2	53 or 53/51 or 53/51/54 (*)	51 (+)	53 (+)	Ch6 Input / 21
		52	52 (-)	52 (-)	0 V ref. / 2, 12, 15, 25
#8	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch7 Input / 22
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
	2	53 or 53/51 or 53/51/54 (*)	51 (+)	53 (+)	Ch8 Input / 23
		52	52 (-)	52 (-)	0 V ref. / 2, 12, 15, 25

**Please note:**

(\*) Check 9113 manual for correct contact input wiring.



# 7908-ABBS8-A1A

## AI810, AI815, AI845 and AI880 card wiring via TU812

### 8 x AI - PR 9106xxA 1 channel

9106xxA Field equipment terminals				DCS connection TU812 CN1 SUB-D 25
Unit	Ch.	2-w Tx mA-signal	Active mA-signal	Signal name / Pin number
#1	1	44 (+)	41 (-)	Ch1 Input / 16
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#2	1	44 (+)	41 (-)	Ch2 Input / 17
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#3	1	44 (+)	41 (-)	Ch3 Input / 18
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#4	1	44 (+)	41 (-)	Ch4 Input / 19
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#5	1	44 (+)	41 (-)	Ch5 Input / 20
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#6	1	44 (+)	41 (-)	Ch6 Input / 21
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#7	1	44 (+)	41 (-)	Ch7 Input / 22
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#8	1	44 (+)	41 (-)	Ch8 Input / 23
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25

# 7908-ABBS8-A1A

## AI810, AI815, AI845 and AI880 card wiring via TU812

### 8 x AI - PR 9113xA 1 channel

9113xA Field equipment terminals					DCS connection TU812 CN1 SUB-D 25
Unit	Ch.	RTD, 2- / 3- / 4-wire	TC	Current	Signal name / Pin number
#1	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch1 Input / 16
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#2	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch2 Input / 17
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#3	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch3 Input / 18
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#4	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch4 Input / 19
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#5	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch5 Input / 20
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#6	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch6 Input / 21
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#7	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch7 Input / 22
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#8	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch8 Input / 23
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25

**Please note:**

(\*) Check 9113 manual for correct contact input wiring.

# 7916-ABBS8-A1A

## AI810, AI815, AI845 and AI880 card wiring via 2 x TU812

### 16 x AI - PR 9106xxA 1 channel

9106xxA Field equipment terminals				DCS 1 connection TU812 CN1 SUB-D 25
Unit	Ch.	2-w Tx mA-signal	Active mA-signal	Signal name / Pin number
#1	1	44 (+)	41 (-)	Ch1 Input / 16
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#2	1	44 (+)	41 (-)	Ch2 Input / 17
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#3	1	44 (+)	41 (-)	Ch3 Input / 18
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#4	1	44 (+)	41 (-)	Ch4 Input / 19
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#5	1	44 (+)	41 (-)	Ch5 Input / 20
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#6	1	44 (+)	41 (-)	Ch6 Input / 21
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#7	1	44 (+)	41 (-)	Ch7 Input / 22
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#8	1	44 (+)	41 (-)	Ch8 Input / 23
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25

9106xxA Field equipment terminals				DCS 2 connection TU812 CN2 SUB-D 25
Unit	Ch.	2-w Tx mA-signal	Active mA-signal	Signal name / Pin number
#9	1	44 (+)	41 (-)	Ch1 Input / 16
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#10	1	44 (+)	41 (-)	Ch2 Input / 17
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#11	1	44 (+)	41 (-)	Ch3 Input / 18
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#12	1	44 (+)	41 (-)	Ch4 Input / 19
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#13	1	44 (+)	41 (-)	Ch5 Input / 20
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#14	1	44 (+)	41 (-)	Ch6 Input / 21
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#15	1	44 (+)	41 (-)	Ch7 Input / 22
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25
#16	1	44 (+)	41 (-)	Ch8 Input / 23
		43 (-)	42 (+)	0 V ref. / 2, 12, 15, 25

# 7916-ABBS8-A1A

## AI810, AI815, AI845 and AI880 card wiring via 2 x TU812

### 16 x AI - PR 9113xA 1 channel

9113xA Field equipment terminals					DCS 1 connection TU812 CN1 SUB-D 25
Unit	Ch.	RTD, 2- / 3- / 4-wire	TC	Current	Signal name / Pin number
#1	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch1 Input / 16
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#2	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch2 Input / 17
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#3	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch3 Input / 18
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#4	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch4 Input / 19
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#5	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch5 Input / 20
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#6	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch6 Input / 21
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#7	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch7 Input / 22
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#8	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch8 Input / 23
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25

**Please note:**

(\*) Check 9113 manual for correct contact input wiring.

9113xA Field equipment terminals					DCS 2 connection TU812 CN2 SUB-D 25
Unit	Ch.	RTD, 2- / 3- / 4-wire	TC	Current	Signal name / Pin number
#9	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch1 Input / 16
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#10	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch2 Input / 17
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#11	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch3 Input / 18
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#12	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch4 Input / 19
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#13	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch5 Input / 20
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#14	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch6 Input / 21
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#15	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch7 Input / 22
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25
#16	1	43 or 43/41 or 43/41/44 (*)	41 (+)	43 (+)	Ch8 Input / 23
		42	42 (-)	42 (-)	0 V ref. / 2, 12, 15, 25

**Please note:**

(\*) Check 9113 manual for correct contact input wiring.

# 7908-ABBS8-B1C

## A0810, A0815 and A0845 card wiring via 1 x TU812

### 8 x AO - PR 9107xA 1 channel

9107xA Field equipment terminals				DCS connection TU812 CN1 SUB-D 25
Unit	Ch.		Active mA-signal	Signal name / Pin number
#1	1		42 (+)	Ch1 Output / 3
			41 (-)	0 V ref. / 2, 12, 15, 25
#2	1		42 (+)	Ch2 Output / 4
			41 (-)	0 V ref. / 2, 12, 15, 25
#3	1		42 (+)	Ch3 Output / 5
			41 (-)	0 V ref. / 2, 12, 15, 25
#4	1		42 (+)	Ch4 Input / 6
			41 (-)	0 V ref. / 2, 12, 15, 25
#5	1		42 (+)	Ch5 Output / 7
			41 (-)	0 V ref. / 2, 12, 15, 25
#6	1		42 (+)	Ch6 Output / 8
			41 (-)	0 V ref. / 2, 12, 15, 25
#7	1		42 (+)	Ch7 Output / 9
			41 (-)	0 V ref. / 2, 12, 15, 25
#8	1		42 (+)	Ch8 Input / 10
			41 (-)	0 V ref. / 2, 12, 15, 25

# 7908-ABBS8-C1H

## DI810, DI814, DI830, DI840 and DI880 card wiring via 1 x TU812

### 16 x DI - PR 9202xxB 2 channels

9202xxB Field equipment terminals				DCS connection TU812 CN1 SUB-D 25
Unit	Ch.	NAMUR sensor	Contact signal	Signal name / Pin number
#1	1	44 (+)	44 or 43 or 43/41 (*)	Ch1 Input / 3
		42 (-)	42	0 V ref (**)/ 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch2 Input / 16
		52 (-)	52	0 V ref (**)/ 2, 12, 15, 25
#2	1	44 (+)	44 or 43 or 43/41 (*)	Ch3 Input / 4
		42 (-)	42	0 V ref (**)/ 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch4 Input / 17
		52 (-)	52	0 V ref (**)/ 2, 12, 15, 25
#3	1	44 (+)	44 or 43 or 43/41 (*)	Ch5 Input / 5
		42 (-)	42	0 V ref (**)/ 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch6 Input / 18
		52 (-)	52	0 V ref (**)/ 2, 12, 15, 25
#4	1	44 (+)	44 or 43 or 43/41 (*)	Ch7 Input / 6
		42 (-)	42	0 V ref (**)/ 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch8 Input / 19
		52 (-)	52	0 V ref (**)/ 2, 12, 15, 25
#5	1	44 (+)	44 or 43 or 43/41 (*)	Ch9 Input / 7
		42 (-)	42	0 V ref (**)/ 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch10 Input / 20
		52 (-)	52	0 V ref (**)/ 2, 12, 15, 25
#6	1	44 (+)	44 or 43 or 43/41 (*)	Ch11 Input / 8
		42 (-)	42	0 V ref (**)/ 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch12 Input / 21
		52 (-)	52	0 V ref (**)/ 2, 12, 15, 25
#7	1	44 (+)	44 or 43 or 43/41 (*)	Ch13 Input / 9
		42 (-)	42	0 V ref (**)/ 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch14 Input / 22
		52 (-)	52	0 V ref (**)/ 2, 12, 15, 25
#8	1	44 (+)	44 or 43 or 43/41 (*)	Ch15 Input / 10
		42 (-)	42	0 V ref (**)/ 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch16 Input / 23
		52 (-)	52	0 V ref (**)/ 2, 12, 15, 25

**Please note:**

(\*) Check 9202 manual for correct contact input wiring.

(\*\*) 0 V ref. / 2, 12, 15, 25 are shorted internally on the backplane.



# 7916-ABBS8-C1H

## DI810, DI814, DI830, DI840 and DI880 card wiring via 2 x TU812

### 32 x DI - PR 9202xxB 2 channels

9202xxB Field equipment terminals				DCS 1 connection TU812 CN1 SUB-D 25
Unit	Ch.	NAMUR sensor	Contact signal	Signal name / Pin number
#1	1	44 (+)	44 or 43 or 43/41 (*)	Ch1 Input / 3
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch2 Input / 16
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#2	1	44 (+)	44 or 43 or 43/41 (*)	Ch3 Input / 4
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch4 Input / 17
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#3	1	44 (+)	44 or 43 or 43/41 (*)	Ch5 Input / 5
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch6 Input / 18
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#4	1	44 (+)	44 or 43 or 43/41 (*)	Ch7 Input / 6
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch8 Input / 19
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#5	1	44 (+)	44 or 43 or 43/41 (*)	Ch9 Input / 7
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch10 Input / 20
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#6	1	44 (+)	44 or 43 or 43/41 (*)	Ch11 Input / 8
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch12 Input / 21
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#7	1	44 (+)	44 or 43 or 43/41 (*)	Ch13 Input / 9
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch14 Input / 22
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#8	1	44 (+)	44 or 43 or 43/41 (*)	Ch15 Input / 10
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch16 Input / 23
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25

**Please note:**

(\*) Check 9202 manual for correct contact input wiring.

(\*\*) 0 V ref. / 2, 12, 15, 25 are shorted internally on the backplane.

9202xxB Field equipment terminals				DCS 2 connection TU812 CN2 SUB-D 25
Unit	Ch.	NAMUR sensor	Contact signal	Signal name / Pin number
#9	1	44 (+)	44 or 43 or 43/41 (*)	Ch1 Input / 3
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch2 Input / 16
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#10	1	44 (+)	44 or 43 or 43/41 (*)	Ch3 Input / 4
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch4 Input / 17
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#11	1	44 (+)	44 or 43 or 43/41 (*)	Ch5 Input / 5
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch6 Input / 18
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#12	1	44 (+)	44 or 43 or 43/41 (*)	Ch7 Input / 6
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch8 Input / 19
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#13	1	44 (+)	44 or 43 or 43/41 (*)	Ch9 Input / 7
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch10 Input / 20
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#14	1	44 (+)	44 or 43 or 43/41 (*)	Ch11 Input / 8
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch12 Input / 21
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#15	1	44 (+)	44 or 43 or 43/41 (*)	Ch13 Input / 9
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch14 Input / 22
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25
#16	1	44 (+)	44 or 43 or 43/41 (*)	Ch15 Input / 10
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
	2	54 (+)	54 or 53 or 53/51 (*)	Ch16 Input / 23
		52 (-)	52	0 V ref (**) / 2, 12, 15, 25

**Please note:**

(\*) Check 9202 manual for correct contact input wiring.

(\*\*) 0 V ref. / 2, 12, 15, 25 are shorted internally on the backplane.

## 7916-ABBS8-C1G

### DI810, DI814, DI830, DI840 and DI880 card wiring via 1 x TU812

#### 16 x DI - PR 9202xxA 1 channel

9202xxA Field equipment terminals				DCS 1 connection TU812 CN1 SUB-D 25
Unit	Ch.	NAMUR sensor	Contact signal	Signal name / Pin number
#1	1	44 (+)	44 or 43 or 43/41 (*)	Ch1 Input / 3
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#2	1	44 (+)	44 or 43 or 43/41 (*)	Ch2 Input / 16
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#3	1	44 (+)	44 or 43 or 43/41 (*)	Ch3 Input / 4
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#4	1	44 (+)	44 or 43 or 43/41 (*)	Ch4 Input / 17
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#5	1	44 (+)	44 or 43 or 43/41 (*)	Ch5 Input / 5
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#6	1	44 (+)	44 or 43 or 43/41 (*)	Ch6 Input / 18
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#7	1	44 (+)	44 or 43 or 43/41 (*)	Ch7 Input / 6
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#8	1	44 (+)	44 or 43 or 43/41 (*)	Ch8 Input / 19
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25

**Please note:**

(\*) Check 9202 manual for correct contact input wiring.

(\*\*) 0 V ref. / 2, 12, 15, 25 are shorted internally on the backplane.

9202xxA Field equipment terminals				DCS 2 connection TU812 CN2 SUB-D 25
Unit	Ch.	NAMUR sensor	Contact signal	Signal name / Pin number
#9	1	44 (+)	44 or 43 or 43/41 (*)	Ch9 Input / 7
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#10	1	44 (+)	44 or 43 or 43/41 (*)	Ch10 Input / 20
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#11	1	44 (+)	44 or 43 or 43/41 (*)	Ch11 Input / 8
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#12	1	44 (+)	44 or 43 or 43/41 (*)	Ch12 Input / 21
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#13	1	44 (+)	44 or 43 or 43/41 (*)	Ch13 Input / 9
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#14	1	44 (+)	44 or 43 or 43/41 (*)	Ch14 Input / 22
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#15	1	44 (+)	44 or 43 or 43/41 (*)	Ch15 Input / 10
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25
#16	1	44 (+)	44 or 43 or 43/41 (*)	Ch16 Input / 23
		42 (-)	42	0 V ref (**) / 2, 12, 15, 25

**Please note:**

(\*) Check 9202 manual for correct contact input wiring.

(\*\*) 0 V ref. / 2, 12, 15, 25 are shorted internally on the backplane.

# 7916-ABBS8-D1I\*\*\*

## D0810, D0840 and D0880 card wiring via 1 x TU812

### 16 x DO - PR 9203xxAx 1 channels

9203xxAx Field equipment terminals				DCS connection TU812 CN1 SUB-D 25
Unit	Ch.	Output (+) signal	Return (-) signal	Signal name / Pin number
#1	1	42, 43, 44 (*)	41	Ch1 Output / 3
				+24 V COM (**)/ 1, 11, 14, 24
#2	1	42, 43, 44 (*)	41	Ch2 Output / 16
				+24 V COM (**)/ 1, 11, 14, 24
#3	1	42, 43, 44 (*)	41	Ch3 Output / 4
				+24 V COM (**)/ 1, 11, 14, 24
#4	1	42, 43, 44 (*)	41	Ch4 Output / 17
				+24 V COM (**)/ 1, 11, 14, 24
#5	1	42, 43, 44 (*)	41	Ch5 Output / 5
				+24 V COM (**)/ 1, 11, 14, 24
#6	1	42, 43, 44 (*)	41	Ch6 Output /18
				+24 V COM (**)/ 1, 11, 14, 24
#7	1	42, 43, 44 (*)	41	Ch7 Output / 6
				+24 V COM (**)/ 1, 11, 14, 24
#8	1	42, 43, 44 (*)	41	Ch8 Output / 19
				+24 V COM (**)/ 1, 11, 14, 24

**Please note:**

(\*) Check 9203 manual for correct output signal wiring.

(\*\*) +24 V COM / 1, 11, 14, 24 are shorted internally on the backplane.

(\*\*\*) Only available upon inquiry. Please contact us for further information.

9203xxAx Field equipment terminals				DCS connection TU812 CN1 SUB-D 25
Unit	Ch.	Output (+) signal	Return (-) signal	Signal name / Pin number
#9	1	42, 43, 44 (*)	41	Ch9 Output / 7
				+24 V COM (**)/ 1, 11, 14, 24
#10	1	42, 43, 44 (*)	41	Ch10 Output / 20
				+24 V COM (**)/ 1, 11, 14, 24
#11	1	42, 43, 44 (*)	41	Ch11 Output / 8
				+24 V COM (**)/ 1, 11, 14, 24
#12	1	42, 43, 44 (*)	41	Ch12 Output / 21
				+24 V COM (**)/ 1, 11, 14, 24
#13	1	42, 43, 44 (*)	41	Ch13 Output / 9
				+24 V COM (**)/ 1, 11, 14, 24
#14	1	42, 43, 44 (*)	41	Ch14 Output / 22
				+24 V COM (**)/ 1, 11, 14, 24
#15	1	42, 43, 44 (*)	41	Ch15 Output / 10
				+24 V COM (**)/ 1, 11, 14, 24
#16	1	42, 43, 44 (*)	41	Ch16 Output / 23
				+24 V COM (**)/ 1, 11, 14, 24

**Please note:**

(\*) Check 9203 manual for correct output signal wiring.

(\*\*) +24 V COM / 1, 11, 14, 24 are shorted internally on the backplane.

# Appendix

**Backplane to I/O card cable references  
&  
9106, 9107, 9113, 9202, 9203  
wiring connection**

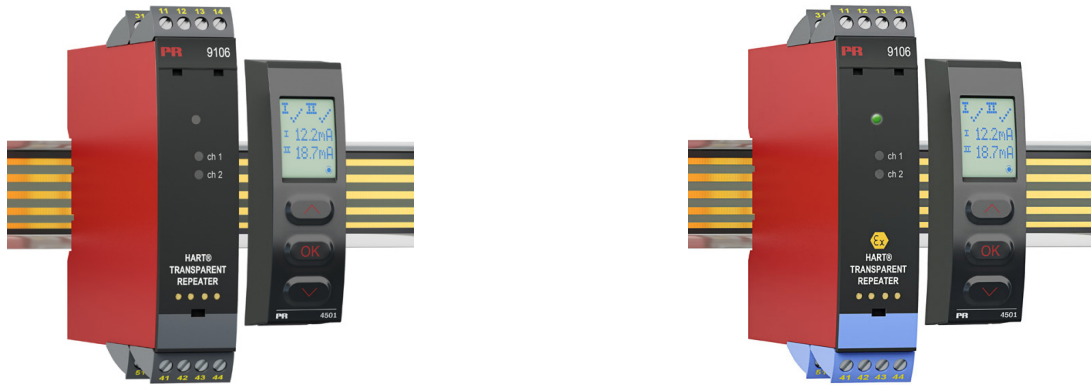
# System cables for ABB backplanes

## Description

- Shielded round cable, assembled with two SUB-D 25 female connectors pin to pin.
- Cable length: Variable.
- The following I/O cards can be connected:
  - AI810, AI815, AI845, AI880
  - A0810, A0815, A0845
  - DI810, DI814, DI830, DI840, DI880
  - DO810, DO840, DO880



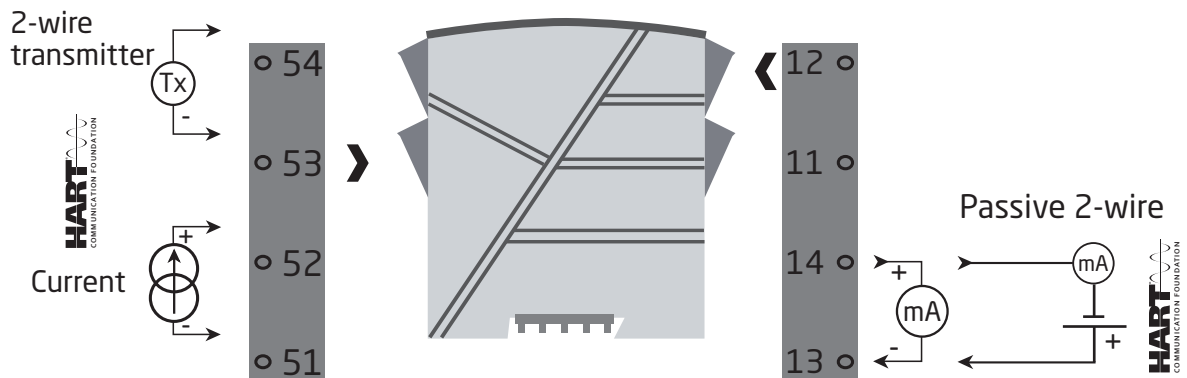
# 9106 HART transparent repeater



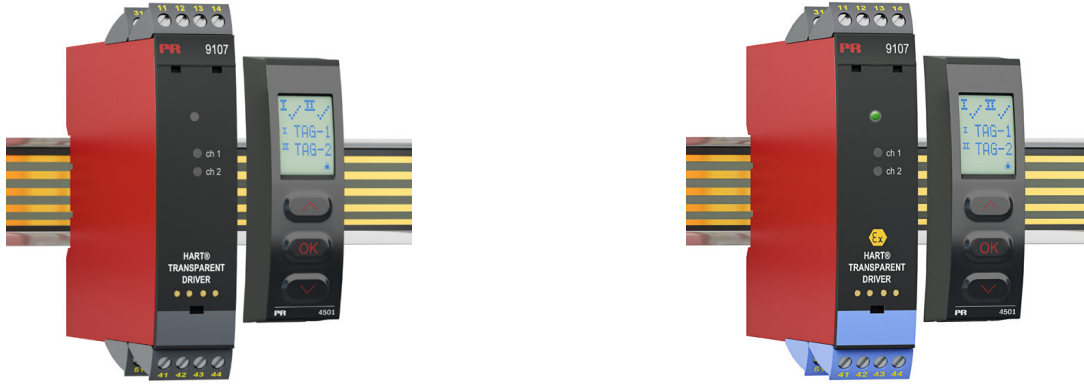
Channel 1



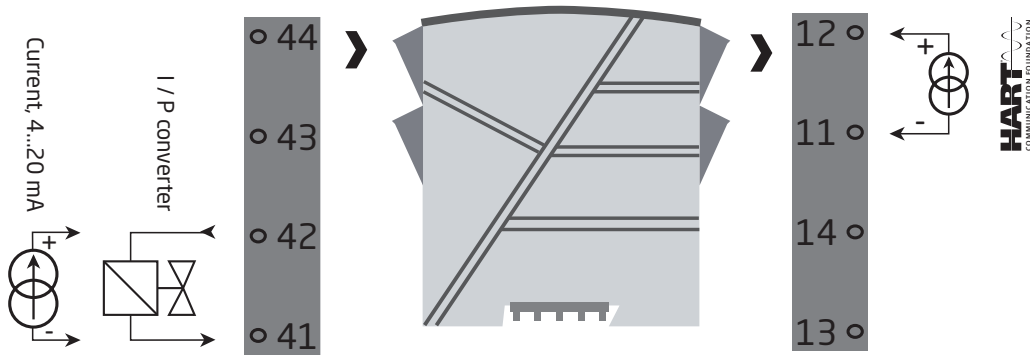
Channel 2



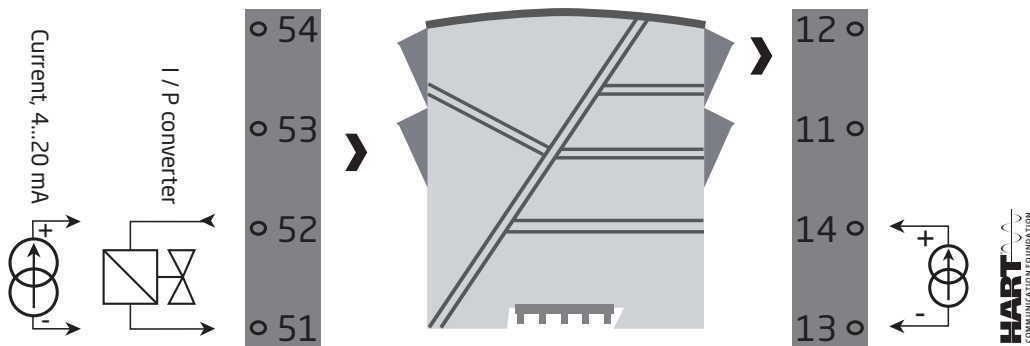
# 9107 HART transparent driver



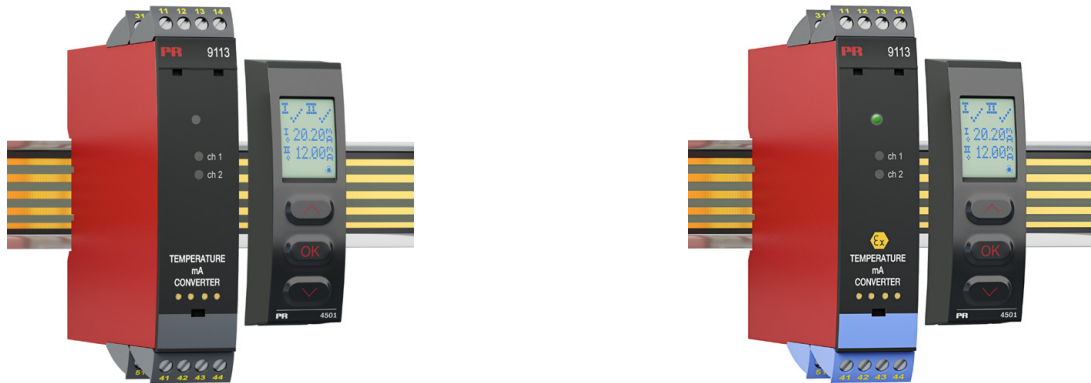
Channel 1



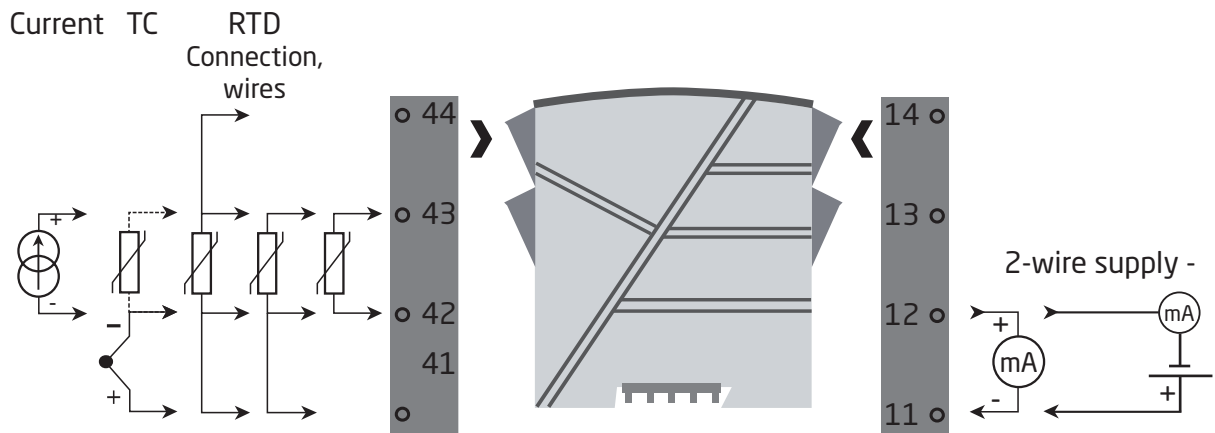
Channel 2



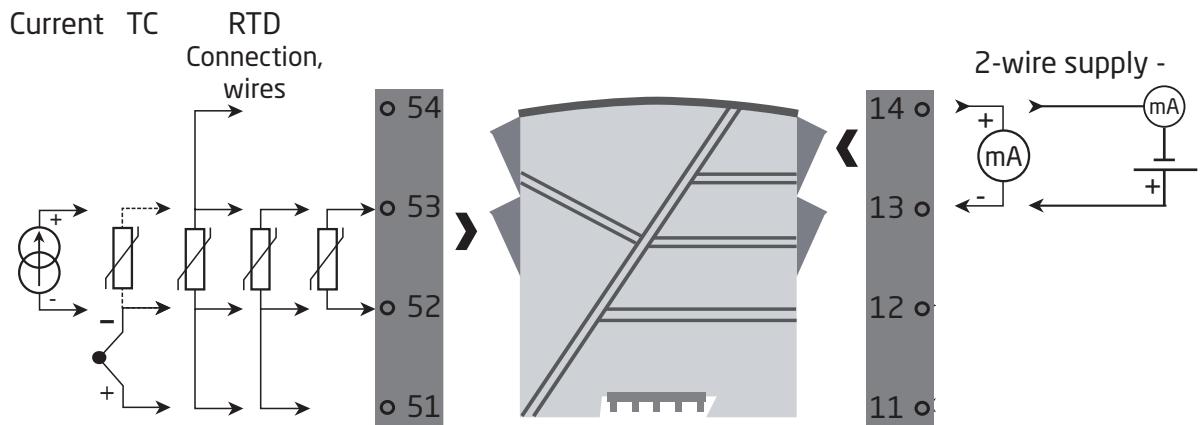
# 9113 Temperature / mA converter



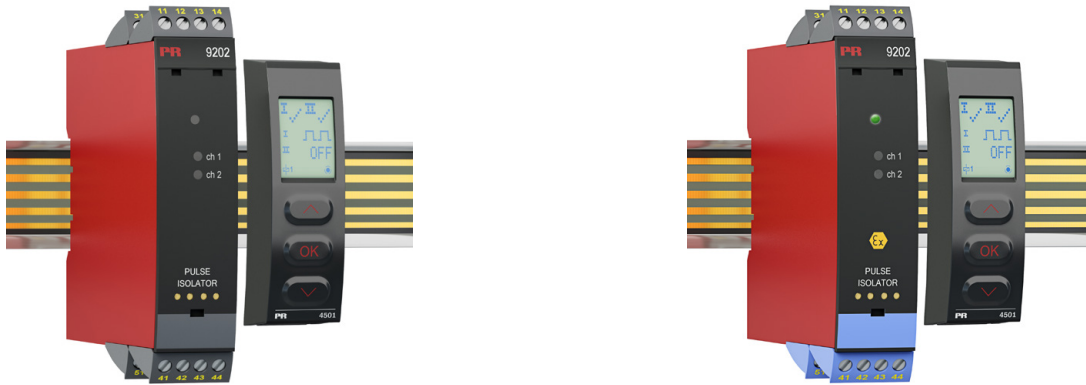
Channel 1:



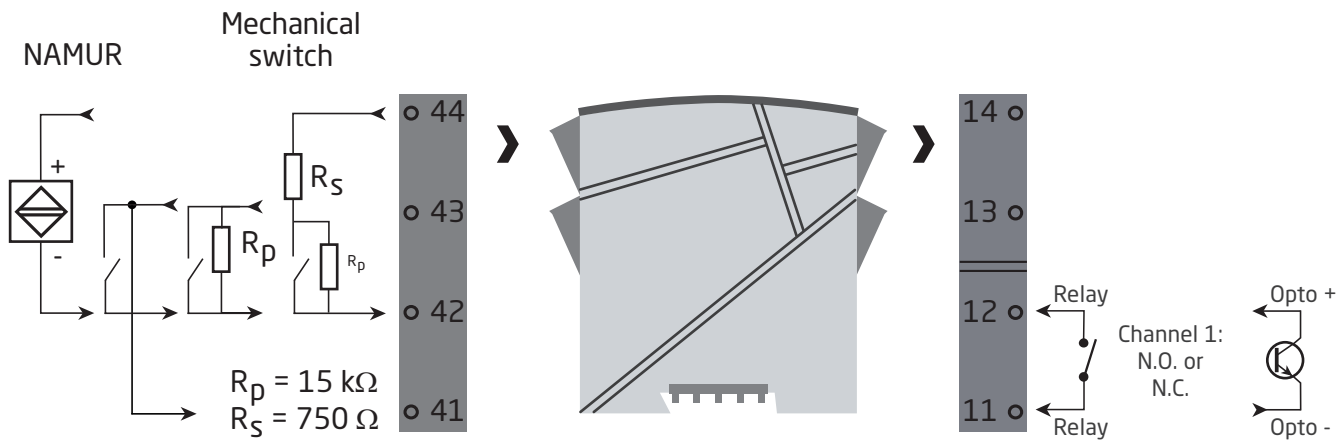
Channel 2:



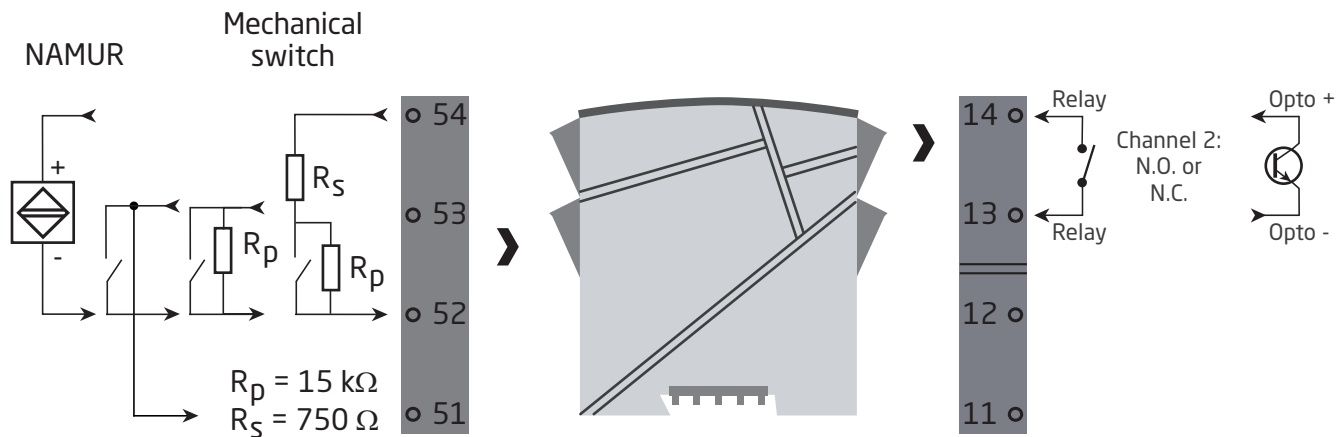
# 9202 Pulse isolator



Channel 1:

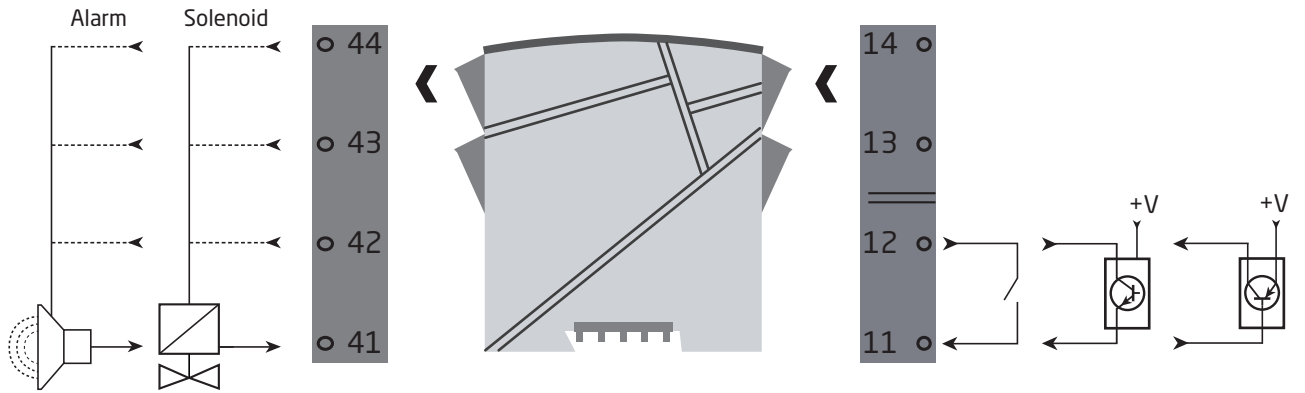


Channel 2:

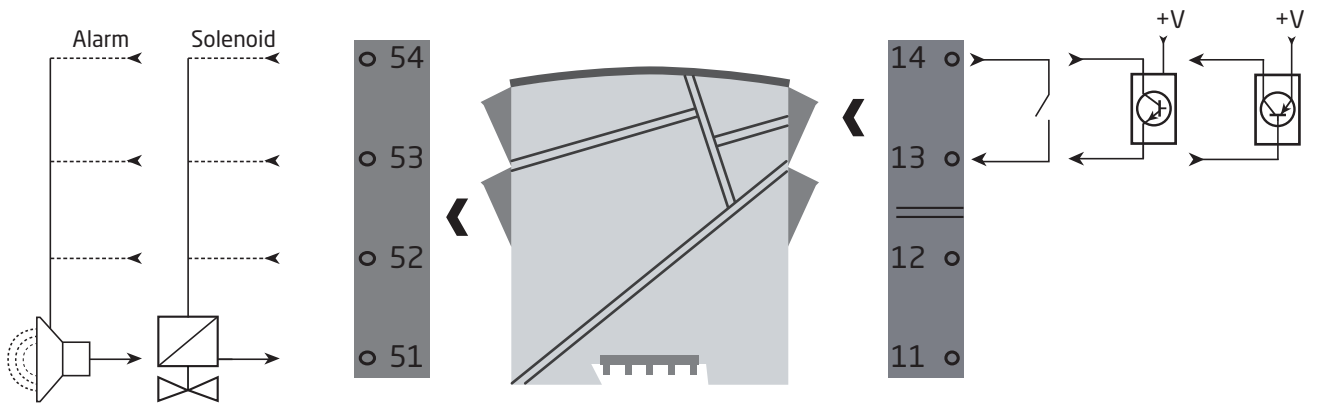


# 9203 Solenoid / alarm driver

### Channel 1



### Channel 2



## Document history

The following list provides notes concerning revisions of this document.

<b>Rev. ID</b>	<b>Date</b>	<b>Notes</b>
100	1803	initial release of the product.
101	2011	A1880 added to 79xx-ABBS8-A1x.
102	2146	4 variants discontinued (7908-xx-B1D, 7916-xx-B1C, 7908-**-D1J and 7916-xx-D1J).

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