



KNORR-BREMSE Systeme für Schienenfahrzeuge GmbH

Project: RZW160 TVER PROTOKOLLAUSTAUSCH

Contractor: OAO Tverskoy Vagonostr.

Operator RZD

Date of issue: 07.01.10 Drawn: 07.01.10 Huthmacher

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				R/LSS2	Date	Name	Suitable for:			KNORR-BREMSE Systeme für Schienenfahrzeuge GmbH	RZW160 TVER PROTOKOLLAUSTAUSCH MGS2	header							
				Creat.	07.01.10	HuthmacR	OAO Tverskoy Vagonos												
05	s.history	07.01.10	Huthmac	Check.	07.01.10	Oswald	0750360A												
	Change	Date	Name	Rel.	07.01.10	Oswald	Origin:	Supers.:	Sup. by:		Circuit Diagram	Edit.			ELCAD	T A334 74 / 230	EN	Sheet 1	15 Sh.
												Date							

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Dotted lines are proposals for the wiring, and are showing required electrical connections not supplied by KNORR-Bremse SfS.

X_train (*) is the terminal board used to connect the KNORR-Bremse SfS supplied wiring to the vehicle wiring.

Installation directives please refer to Knorr-Bremse SFS document
PK-IB20-114 " EMI-Instructions for the Installation of Knorr-System-Components".

Specification for relay outputs:
Protection measures must be foreseen if used with inductive load.
max. allowed load per output relay: max. current 1A ohmic load, max. allowed switching load 20W

The binary inputs (BI) are optical inputs and require a minimum current of 0,6mA haben. If connected to contactors or switches an appropriate contact material must be choosen (for instance gold).

The minimum bending radius of every cable is 10 times of the cable diameter.

Attention!

During the dump valve testrun, which can be started by pressing S2-button the pneumatic brake is applying and releasing.

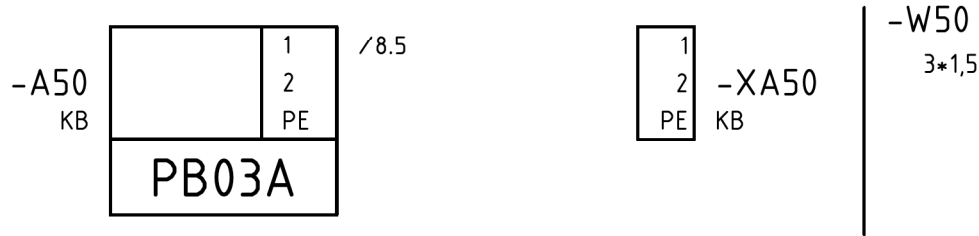
The doors of the car may close automatically if the S4-button is pressed to start the test run for door control signals.
Doors which are closed already will be locked for approx. 1 min.

(*) = Not Known Supply

			R/LSS2	Date	Name	Suitable for:	 KNORR-BREMSE Systeme für Schienenfahrzeuge GmbH	RZW160 TVER PROTOKOLLAUSTAUSCH MG52 legend							
			Creat.	07.01.10	HuthmacR	OAO Tverskoy Vagonos									
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										Date					EN

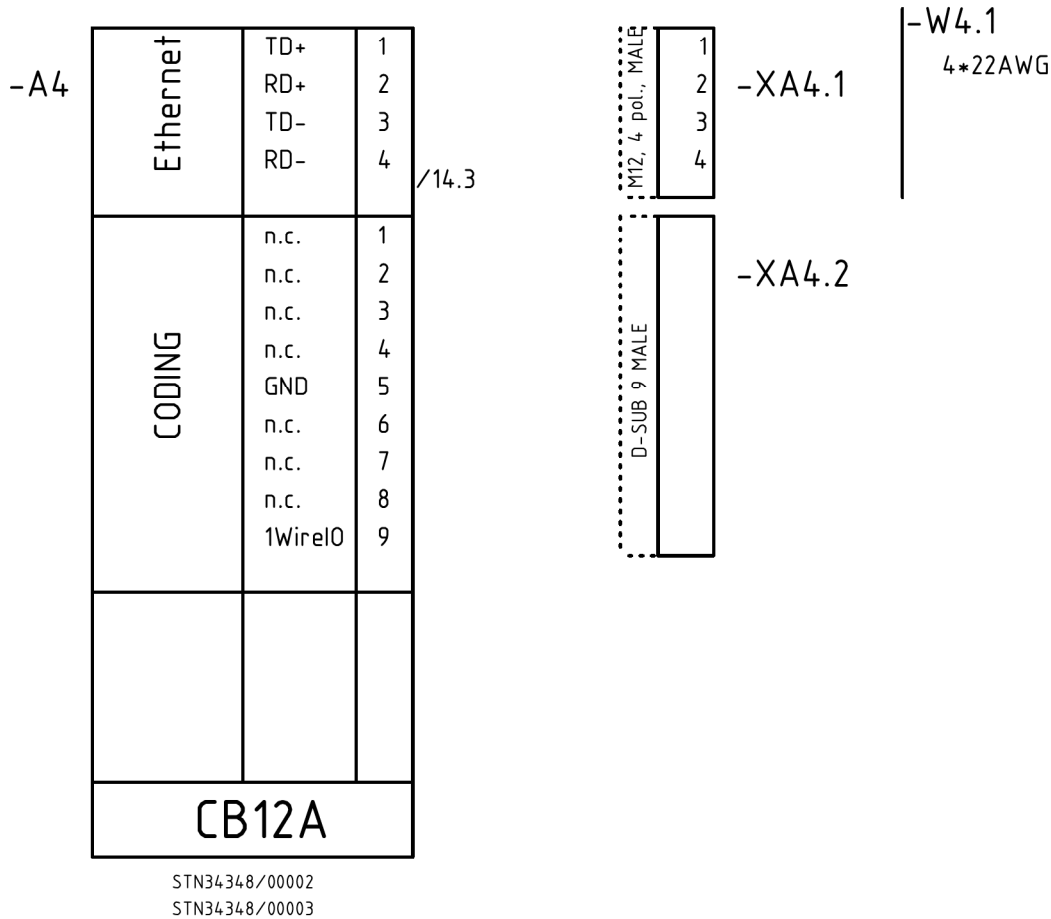
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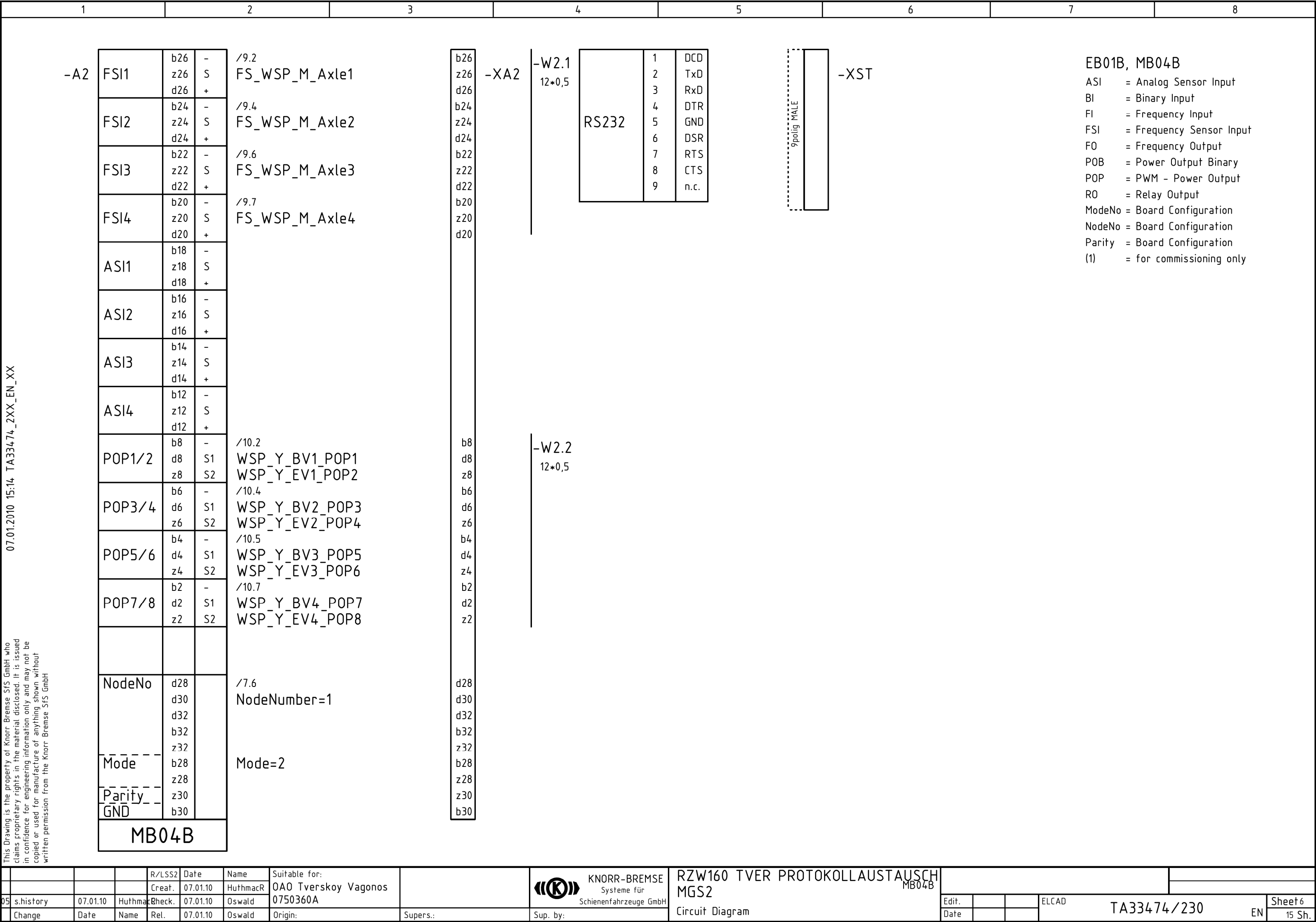


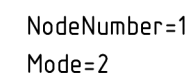
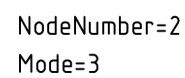
1				2				3				4				5				6				7				8			
-A3				BI1/2	b26 z26 d26	- S1 S2	/11.2 WSP_C_PowerOn	-XA3				b26 z26 d26	-W3.1 39*0,5				EB01B, MB04B ASI = Analog Sensor Input BI = Binary Input FI = Frequency Input FSI = Frequency Sensor Input FO = Frequency Output POB = Power Output Binary POP = PWM - Power Output RO = Relay Output ModeNo = Board Configuration NodeNo = Board Configuration Parity = Board Configuration (1) = for commissioning only														
				BI3/4	b24 z24 d24	- S1 S2	/11.5 WSP_C_CPressAx2 WSP_C_CPressAx3					b24 z24 d24																			
				BI5/6	b22 z22 d22	- S1 S2																									
				FI1	b20 z20	- f																									
				FI2	d20 d18	- f																									
				R01	b18 z18		/12.2 (spare)					b18 z18																			
				R02	b16 z16		/12.4 (spare)					b16 z16																			
				R03	b14 z14		/12.5 WSP_S_Threshold1					b14 z14																			
				R04	d16 d14		/12.7 WSP_C_DoorCtrlV45					d16 d14																			
				R05	b12 z12 d12		/13.2 WSP_C_DoorCtrlVgr5					b12 z12 d12																			
				R06	b10 z10 d10		/13.3 WSP_C_DoorCtrlVlo5					b10 z10 d10																			
				R07	b8 z8 d8		/13.5 WSP_S_GroupFaultSign					b8 z8 d8																			
				R08	b6 z6 d6		/13.7 WSP_S_Ready					b6 z6 d6																			
				F01	b4 z4 d4	- f +	(WSP_M_Vref (1))																								
				F02	b2 z2 d2	- f +																									
				NodeNo	d28 d30 d32 b32 z32		/7.2 NodeNumber=2					d28 d30 d32 b32 z32																			
				Mode	b28 z28		Mode=3					b28 z28																			
				Parity	z30							z30																			
				GND	b30							b30																			
EB01B																															

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				R/LSS2	Date	Name	Suitable for:		KNORR-BREMSE Systeme für Schienenfahrzeuge GmbH	RZW160 TVER PROTOKOLLAUSTAUSCH MGS2 EB01B								
05	s.history	07.01.10	Huthmac	Check.	07.01.10	Oswald	0750360A											
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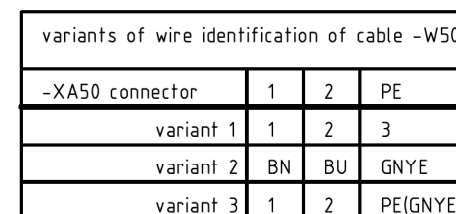




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			R/LSS2	Date	Name	Suitable for:		 KNORR-BREMSE Systeme für Schienenfahrzeuge GmbH	RZW160 TVER PROTOKOLLAUSTAUSCH MGS2 configuration Circuit Diagram							
			Creat.	07.01.10	HuthmacR	0A0 Tverskoy Vagonos										
05	s.history	07.01.10	HuthmacR	Check.	07.01.10	Oswald	0750360A									
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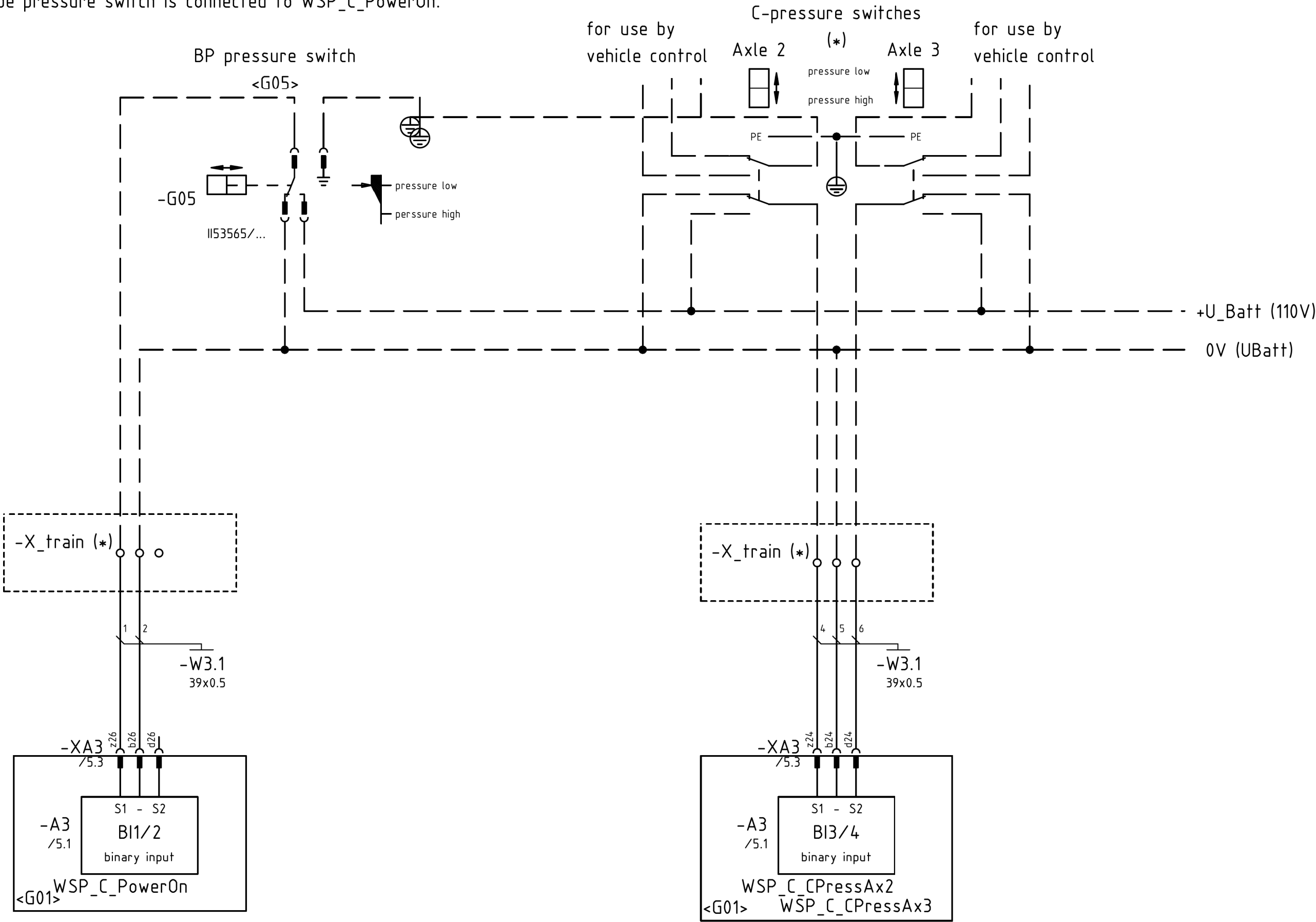
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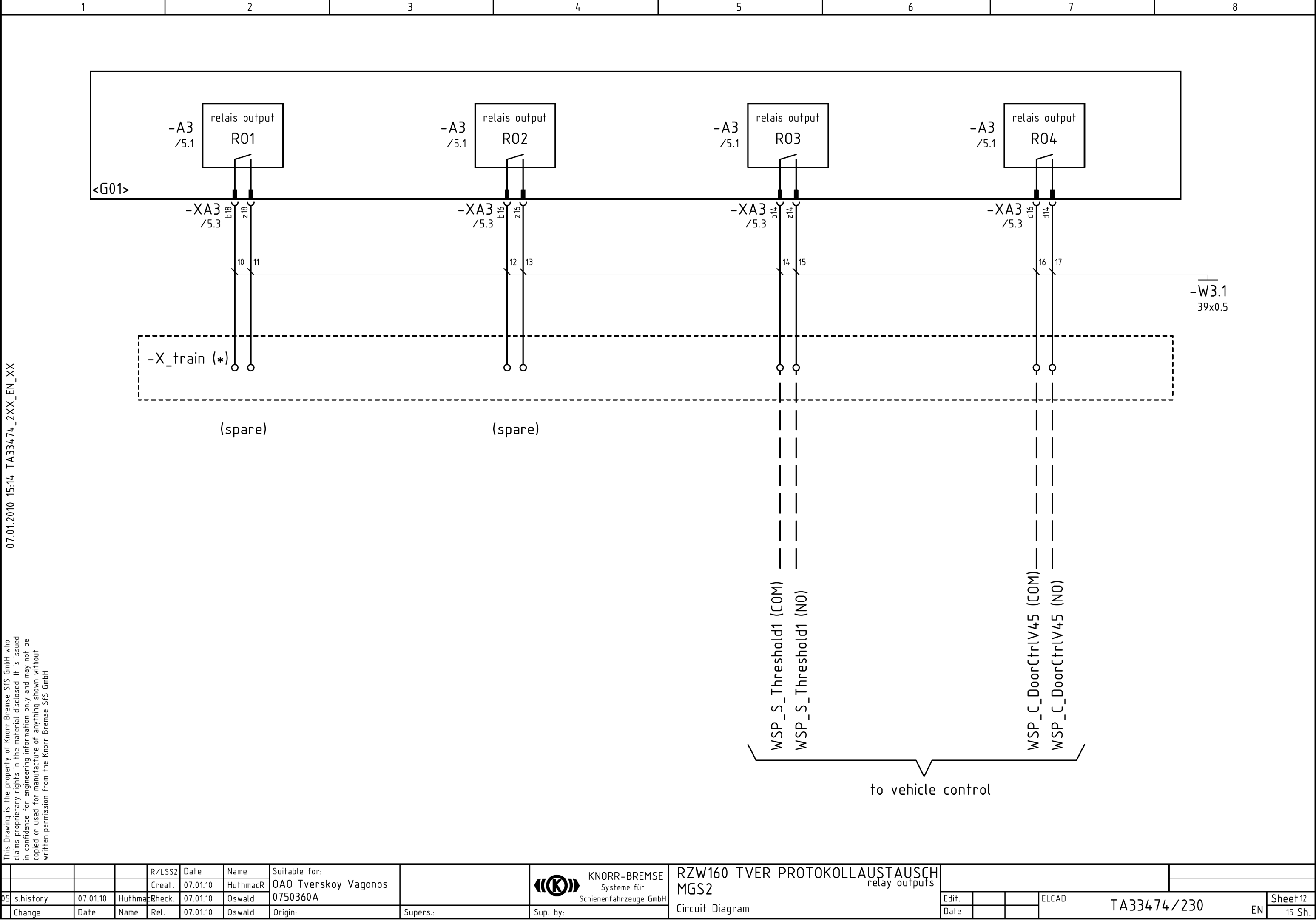
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Note: The Input BI1 must be connected to +UBatt (110V) if no brake pipe pressure switch is connected to WSP_C_PowerOn.



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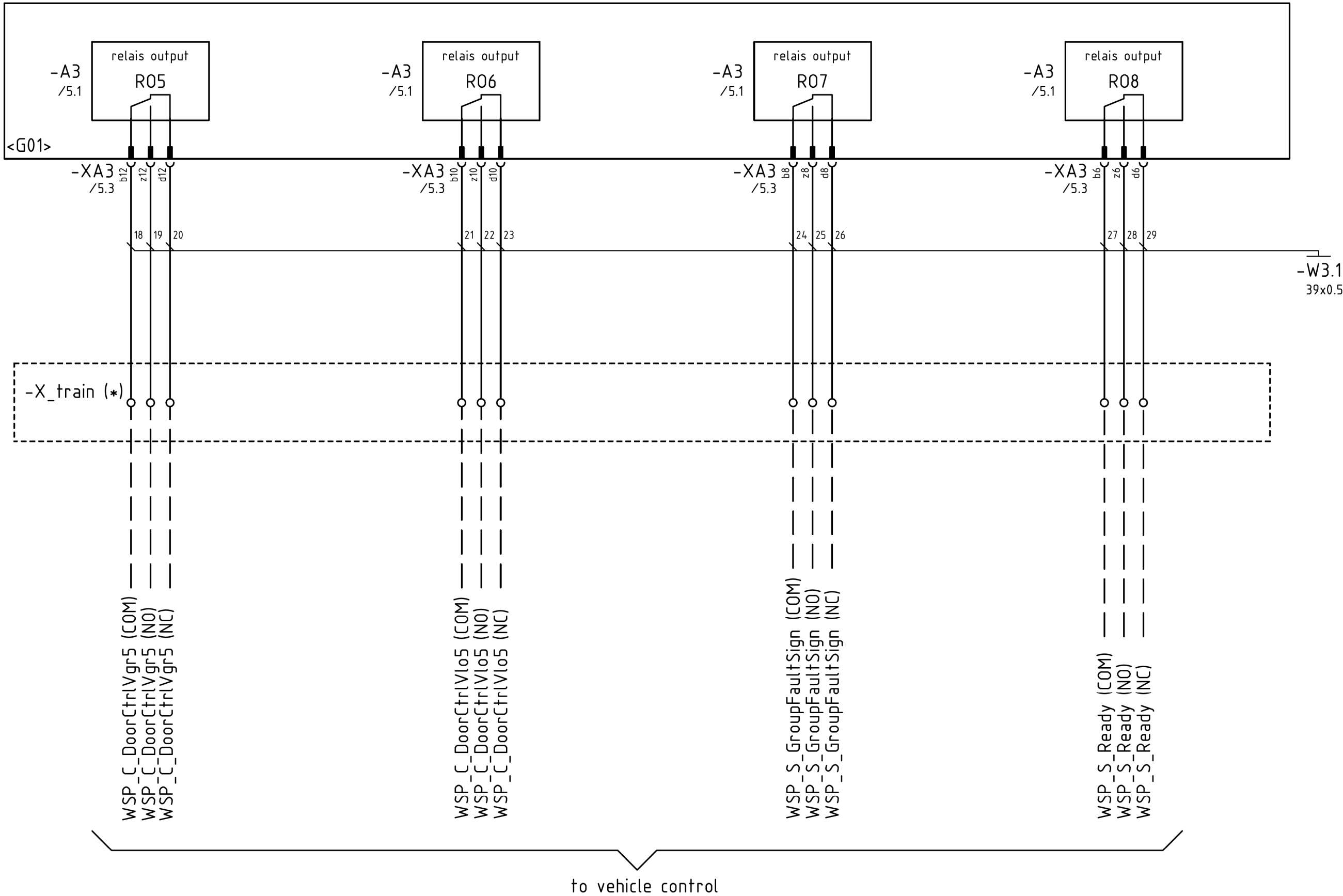


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KNORR-BREMSE Systeme für Schienenfahrzeuge GmbH				RZW160 TVER PROTOKOLLAUSTAUSCH MGS2 Circuit Diagram				Edit. Date				ELCAD TA33474/230 EN				Sheet 12 15 Sh.	
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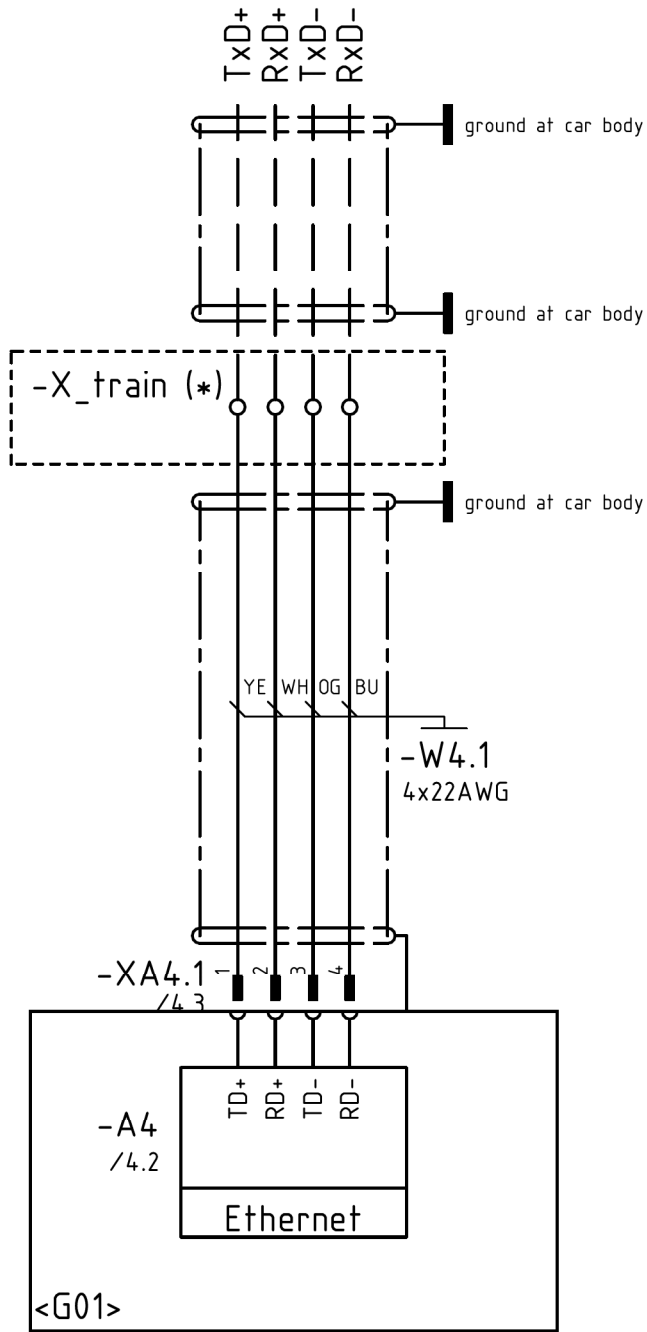
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Rev.	Date	Name	Page	Change
00	06.10.08	Huthmacher	all	creation, based on TA32870/230 Vers. 01
01	22.10.08	Huthmacher	4, 14	correct cable for Ethernet interface
02	18.11.08	Huthmacher	5,7,11	C-pressure switches added,
			5,13	WSP-Ready indication relais added
03	02.12.09	HuthmacR	9	correction of sensor cable shielding
			4	correction of CB12A symbol (no USB interface)
04	14.12.09	HuthmacR	14	cable shielding added
05	07.01.10	HuthmacR	3,8	cable coding description added