

Signal transmission	Channel 1 JP 11	Channel 2 JP 21	Cable error detection	Channel 1 JP 12	Channel 2 JP 22
Direct	<input type="checkbox"/>	<input type="checkbox"/>	ON	<input type="checkbox"/>	<input type="checkbox"/>
Inverted	<input type="checkbox"/>	<input type="checkbox"/>	OFF	<input type="checkbox"/>	<input type="checkbox"/>

Channel 1 signal to channel 2	Channel 1 JP 13	Channel 2 function	Channel 2 JP 23
Cable error	<input type="checkbox"/>	Channel 1 to channel 2 ON, input 2 disabled	<input type="checkbox"/>
Signal	<input type="checkbox"/>	Channel 1 to channel 2 OFF, input 2 active	<input type="checkbox"/>

520ZB4		
Relay function	N.O.	N.C.
Channel 1	Relay 1, JP41	Relay 2, JP42
Channel 2	Relay 1, JP51	Relay 2, JP52

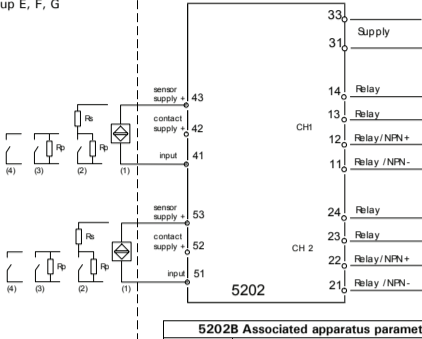
	520ZB	520ZB	522ZB	5420B
ATEX	EX II (1) GD [EEx ia] IIC DEMKO 99ATEX127186	DEMKO 99ATEX126257	KEMA 04ATEX1001	DEMKO 99ATEX126256
UL	IS, Cl. I, Div. 1, Gr. A, B, C, D IS, Cl. I, zone 0 og 1, Gr. IIC IS, Cl. II, Div. 1, Group E, F, G	UL Control Drawing No.: 520ZQU01	N.A.	N.A.
FM	Cl. I, Div. 2, Gr. A, B, C, D Cl. I, Zone 2, Gr. IIC, IIB, IIA Cl. I, Div. 1, Gr. A, B, C, D Cl. II, Div. 1, Gr. E, F, G	N.A.	N.A.	N.A.

	520ZB	520ZB	522ZB	5420B
ATEX	Ex II (1) GD [EEx ia] IIC Um 250 V	DEMKO 99ATEX127186 250 V	DEMKO 99ATEX126257 250 V	KEMA 04ATEX1001 250 V
		520ZB_F	520ZB_H	520ZB_I
Terminal	41, 42, 43 (51, 52, 53)	41-43 (51-53)	41-43 (51-53)	41-43 (51-53)
Uo	10.6 V	28 VDC	28 VDC	28 VDC
Io	13.8 mA	115 mADC	110 mADC	93.0 mADC
Po	38 mW	0.81 W	0.77 W	0.65 W
Lo	160 mH	2 mH	2.6 mH	3 mH
Co	1.9 µF	0.08 µF	0.08 µF	0.08 µF
UL	IS, Cl. I, Div. 1, Gr. A, B, C, D IS, Cl. I, zone 0 og 1, Gr. IIC IS, Cl. II, Div. 1, Group E, F, G	UL Control Drawing No.: 520ZQU01	UL Control Drawing No.: 520ZQU01	N.A.

UL CONTROL DRAWING 520ZQU01

Hazardous (Classified) Location
Class I, Division 1, Group A,B,C,D
Class I, Zone 0 and 1, Group IIC
Class II, Division 1 Group E, F, G

Nonhazardous
Associated apparatus
Galvanic Isolated



520ZB Associated apparatus parameters	
CH1	Terminals 41 to 43
CH2	Terminals 51 to 53
Vt Uo	10.6 V
It (Io)	13.8 mA
Po	0.038 W
IIC / grp. A, B	IIB / grp. C IIA / grp. D
Ca (Co)	1.9 µF 4.0 µF 50 µF
La (Lo)	160 mH 600 mH 1 H
Relay output 11 - 14, 21 - 24	
Voltage	250V AC, 100 VA
Current	2 A AC, 100 VA
24VDC	1 A DC
Pilot Duty	120/240 V AC, 100V AC
NPN output 11 - 12, 21 - 22	
General purpose	30V DC, 80 mA
Pilot duty	30V DC, 80 mA

Intrinsically safe apparatus
entity parameters:

Vmax (Ui) ≥ Vt (Uo)
Imax (Ii) ≥ It (Io)
Pi ≥ Po

Ca ≥ Ccable + Ci
La ≥ Lcable + Li

The sum of capacitance and inductance of cable and intrinsic safe equipment must be less or equal to Ca and La

Installation notes:

- The maximum nonhazardous location voltage is 250Vac/dc.
- The installation shall be in accordance with the National Electrical Code NFPA 70, Articles 504 and 505.
- The terminals of the two individual channels shall not be interconnected in any way.
- Install in Pollution degree 2 or better
- Use 60 / 75 °C Copper Conductors with Wire Size AWG: (26 - 14).
- Warning: Substitution of components may impair intrinsic safety.
- If cable parameters are unknown Ccable may be set to 60pF/ft and Lcable may be set to 0.20 µH/ft

Rev. AA 2003-09-19

UL CONTROL DRAWING 520ZQU01

Hazardous (Classified) Location
Class I, Division 1, Group A,B,C,D
Class I, Zone 0 and 1, Group IIC
Class II, Division 1 Group E, F, G

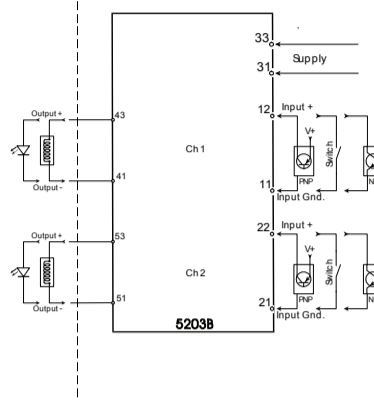
Nonhazardous
Associated apparatus
Galvanic Isolated

Intrinsically safe apparatus
entity parameters:

Vmax (Ui) ≥ Vt (Uo)
Imax (Ii) ≥ It (Io)
Pi ≥ Po

Ca ≥ Ccable + Ci
La ≥ Lcable + Li

The sum of capacitance and inductance of cable and intrinsic safe equipment must be less or equal to Ca and La



520ZB Associated apparatus parameters			
Type	F	H	I
Vt Uo	28 V	28 V	28 V
It (Io)	115 mA	110 mA	93 mA
Po	0.81 W	0.77 W	0.65 W
Group	A, B and IIC	C and IIB	D and IIA
La (Lo)	1.6 mH 5.0 mH 16mH	2.0 mH 8 mH 20 mH	2.4 mH 9 mH 25 mH
Ca (Co)	0.06 µF 0.52 µF 1.7µF	0.06µF 0.52 µF 1.7µF	0.06 µF 0.52 µF 1.7µF

Installation notes:

- The maximum nonhazardous location voltage is 250Vac/dc.
- The installation shall be in accordance with the National Electrical Code NFPA 70, Articles 504 and 505.
- The terminals of the two individual channels shall not be interconnected in any way.
- Install in Pollution degree 2 or better
- Use 60 / 75 °C Copper Conductors with Wire Size AWG: (26 - 14).
- Warning: Substitution of components may impair intrinsic safety.
- If cable parameters are unknown Ccable may be set to 60pF/ft and Lcable may be set to 0.20 µH/ft

Rev. AA 2003-09-19

EU DECLARATION OF CONFORMITY



(520ZDoC_102)

As manufacturer
PR electronics A/S, Lerbakken 10, DK-8410 Rønde

hereby declares that the following products:
Type: 520Z
Name: Pulse isolator
From serial no.: 171359005

is in conformity with the following directives and standards:

The EMC Directive 2014/30/EU and later amendments
EN 61326-1 : 2013

Immunity test requirements for equipment intended to be used in an industrial electromagnetic environment. For specification of the acceptable EMC performance level, refer to the electrical specifications for the device.

The Low Voltage Directive 2014/35/EU and later amendments
EN 61010-1 : 2010

The ATEX Directive 2014/34/EU and later amendments
EN 50014 : 1997 E incl. A1+A2, EN 50020 : 2002 E
and EN 50281-1-1 : 1998 incl. A1
ATEX certificate: DEMKO 99ATEX127186 (520ZB)

No changes are required to enable compliance with the replacement standards:
EN 60079-0 : 2012 + A11 : 2013 and EN 60079-11 : 2012

ATEX notified body (type approval)
UL International Demko A/S
Borupvang 5
DK-2750 Ballerup

The RoHS2 Directive 2011/65/EU and later amendments
EN 50581 : 2012

Notified body 0344
DEKRA Certification B.V.
Meander 1051, 6825 MJ Arnhem
P.O. Box 5185, 6802 ED Arnhem
The Netherlands

Notified body 0344
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P.O. Box 5185, 6802 ED Arnhem
The Netherlands

Rønde, 16 January 2018

Stig Lindemann
Stig Lindemann, CTO
Manufacturer's signature

EU DECLARATION OF CONFORMITY



(5203DoC_102)

As manufacturer
PR electronics A/S, Lerbakken 10, DK-8410 Rønde

hereby declares that the following products:
Type: 520ZB
Name: Ex solenoid / alarm driver
From serial no.: 171283076

is in conformity with the following directives and standards:

The EMC Directive 2014/30/EU and later amendments
EN 61326-1 : 2013

Immunity test requirements for equipment intended to be used in an industrial electromagnetic environment. For specification of the acceptable EMC performance level, refer to the electrical specifications for the device.

The Low Voltage Directive 2014/35/EU and later amendments
EN 61010-1 : 2010

The ATEX Directive 2014/34/EU and later amendments
EN 50014 : 1997 E incl. A1+A2, EN 50020 : 2002 E
and EN 50281-1-1 : 1998 incl. A1
ATEX certificate: DEMKO 99ATEX126257

No changes are required to enable compliance with the replacement standards:
EN 60079-0 : 2012 + A11 : 2013 and EN 60079-11 : 2012

ATEX notified body (type approval)
UL International Demko A/S
Borupvang 5
DK-2750 Ballerup

The RoHS2 Directive 2011/65/EU and later amendments
EN 50581 : 2012

Notified body 0344
DEKRA Certification B.V.
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P.O. Box 5185, 6802 ED Arnhem
The Netherlands

Rønde, 16 January 2018

Stig Lindemann
Stig Lindemann, CTO
Manufacturer's signature

EU DECLARATION OF CONFORMITY



(5420DoC_102)

As manufacturer
PR electronics A/S, Lerbakken 10, DK-8410 Rønde

hereby declares that the following products:
Type: 5420B
Name: Ex power supply
From serial no.: 151453059

is in conformity with the following directives and standards:

The EMC Directive 2014/30/EU and later amendments
EN 61326-1 : 2013

Immunity test requirements for equipment intended to be used in an industrial electromagnetic environment. For specification of the acceptable EMC performance level, refer to the electrical specifications for the device.

The Low Voltage Directive 2014/35/EU and later amendments
EN 61010-1 : 2010

The ATEX Directive 2014/34/EU and later amendments
EN 50014 : 1997 E incl. A1+A2, EN 50020 : 2002 E
and EN 50281-1-1 : 1998 incl. A1
ATEX certificate: DEMKO 99ATEX126256

No changes are required to enable compliance with the replacement standards:
EN 60079-0 : 2012 + A11 : 2013 and EN 60079-11 : 2012

ATEX notified body (type approval)
UL International Demko A/S
Borupvang 5
DK-2750 Ballerup

The RoHS2 Directive 2011/65/EU and later amendments
EN 50581 : 2012

Notified body 0344
DEKRA Certification B.V.
Meander 1051, 6825 MJ Arnhem
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Rønde, 16 January 2018

Stig Lindemann
Stig Lindemann, CTO
Manufacturer's signature