## **Solenoid Driver**

## KFD0-SD2-Ex2.1245

## Features

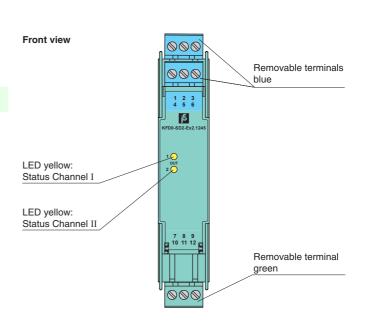
- 2-channel isolated barrier
- 24 V DC supply (loop powered)
- Current limit 45 mA at 12 V DC
- Up to SIL3 acc. to IEC 61508

#### **Function**

This isolated barrier is used for intrinsic safety applications. It supplies power to solenoids, LEDs, and audible alarms located in a hazardous area.

It is loop powered, so the available energy at the output is received from the input signal. The output signal has a resistive characteristic. As a result the output voltage and current are dependent on the load and the input voltage.

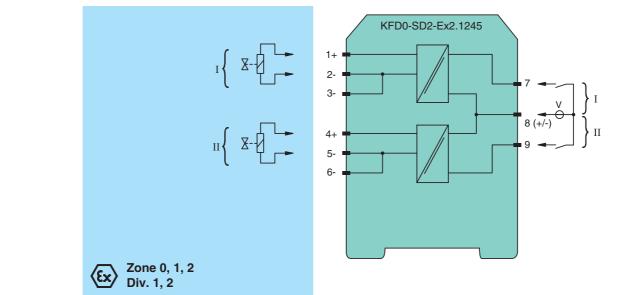
At full load, 12 V at 45 mA is available for the hazardous area application.



Assembly

CE SIL3

## Connection



Refer to "General Notes Relating to Pepperl+Fuchs Product Information" Pepperl+Fuchs Group www.pepperl-fuchs.com

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Genet specifications         Upplie1 Output           Stopp Vyo         Upplie1 Output           Rote voltage         Upplie1 Output           Rote voltage         Upplie1 Output           Connection         Implie1 (S 300 / par channel           Connection         Terminal 7, 8, 8, 9           Rote voltage         Upplie1 (S 300 / par channel           Connection         Terminal 7, 8, 8, 9           Rote voltage         Upplie1 (S 300 / par channel           Connection         Terminal 7, 8, 8, 9           Rote voltage         Upplie1 (S 300 / par channel           Connection         Som At ats0 / input voltage, load = 265 Ω           Connection         Som At ats0 / input voltage, load = 265 Ω           Connection         Voltage         Upplie1 (S 200 / Par channel           Connection         Voltage         236 / A           Connection         Voltage         232 / V           Opplie1 (S 200 / Par channel V)         Stop Ad Adv           Directive 2004 / 108 / E         Voltage         Stop Ad Adv           Directive 2004 / 108 / E         Voltage         Stop Adv           Directive 2004 / 108 / E         Voltage         Stop Adv           Directive 2004 / 108 / E         Voltage         Stop O			
SuppY         Impart Note Prove Probability         Impart Note Prove Probability           Prove Toss          Vis (50 V) par channel           Prove Toss          Vis (50 V) par channel           Common Note Prove Toss         Note Prove Toss         Note Prove Toss           Common Note Prove Toss         Note Prove Toss         Note Prove Toss           Common Note Prove Toss         Note Prove Toss         Note Prove Toss           Prove Toss         Note Prove Toss         Note Prove Toss           Connection         Tom Nation Visite Prove Toss         Note Prove Toss           Output         Soot Nation Visite Prove Toss         Note Prove Toss           Output Indication Prove Toss         Soot Nation Visite Prove Toss         Note Prove Toss           Output Indication Prove Toss         Soot Nation Visite Prove Toss         Note Prove Toss           Directive Control Visite Prove Toss         Soot Nation Visite Prove Toss Prove Toss         Note Prove Toss Prove P	•		
Parter loss of a set of			Digital Output
Poweroiss         + Vi (130 V) per channel           Imput         Ferrination (1)           Stand voltage         Value (2)           Connection         2035 VDC           Current         200 M at 160 V input voltage, load = 265 Ω           Stand voltage         2035 VDC           Current         200 M at 160 V input voltage, load = 265 Ω           Stand voltage         2035 VDC           Connection         R         220 M at 160 V ispat voltage, load = 265 Ω           Connection         R         220 M at 160 V ispat voltage, load = 265 Ω           Connection         R         220 M at 160 V ispat voltage, load = 265 Ω           Connection         R         220 M at 160 V ispat voltage, load = 265 Ω           Connection         R         220 M at 160 V ispat voltage, load = 265 Ω           Connection         R         240 M at 240 K           Connection         R         240 M at 240 K           Connection         R         240 M at 240 K           Contronting         V         210 V           Contronting         V         100 At 240 K           Directive compatibition         NE 1:2006         100 At 240 K           Controntion         V         20	Supply		
Input         Interfactor           Connection         servise 78, 8, 9           Rand voltage         U,         2035 V DC           Current         20.0.00 V input voltage, load = 285 Ω           Storma at 20 V input voltage, load = 285 Ω         30.0.00 V input voltage, load = 285 Ω           Connection         20.00 m at the 100 µs           Connection         40.00 V input voltage, load = 285 Ω           Connection         40.00 V input voltage, load = 285 Ω           Connection         40.00 V input voltage, load = 285 Ω           Connection         40.00 V input voltage, load = 280 Ω           Connection         40.00 V input voltage, load = 280 Ω           Connection         40.00 V input voltage, load = 280 Ω           Connection         40.00 V input voltage, load = 280 Ω           Connection         40.00 V input voltage, load = 280 Ω           Connection         40.00 V input voltage, load = 280 Ω           Connection         10.00 C           Electromagelic compatibility         NE 21.2006           Connection         42000 °C (4140 °F)           Electromagelic electral woltage         2900 °C (4140 °F)           Content condition         42000 °C (4140 °F)           Machancia specification contelectrad woltage and billy in (10.00 K in age) [IC (10.01 (E in ag	Rated voltage	Un	loop powered
Connection         wminist 7.8 8,9           Relate voltage         Q         J. 34 Y0 OC           Current         20.7 A st 20.0 input voltage, lead = 265 Ω           Invish current         S. 200 mA aller 100 µs           Connection         terminals 1+, 2: 4+, 5-           Internal resistor         R,         S. 200 mA aller 100 µs           Connection         terminals 1+, 2: 4+, 5-           Internal resistor         R,         S. 280 ft           Current         l, a         45 mA           Voltage         U, a         2.27 V           Output indet operating current         45 mA           Voltage indet operating current         How subs are valid for the rated operating voltage 20 35 VD, C.           Control voltage indet operating current         How subs are valid for the rated operating voltage 20 35 VD, C.           Directive conformity         EIG 50828201         EIG 50828201           Directive conformity         EIG 50828201         EIG 50828201           Directive 2004/108/EC         EIG 50828201         EIG 50828201           Protection against electrical subscrift convertion         EIG 60828201         EIG 50828201           Directive 2004/108/EC         EIG 50828201         EIG 50828201           Dimerabine subscrift converting         BIG 608	Power loss		< 1 W ( $\leq$ 30 V) per channel
Balay Output         Quart Notation         2 an A 32 0V input volage, load = 265 Ω           Burnah current         2 an A 32 0V input volage, load = 265 Ω           Burnah current         2 an A 32 0V input volage, load = 265 Ω           Burnah current         2 an A 32 0V input volage, load = 265 Ω           Burnah current         4 an A           Connocition         4 an A           Dimension Resource         4 an A           Connocition         4 an A           Connocition Connorm         4 an A           Connocition Connorm         4 an A           Output dignal         4 an A           Output dignal         4 an A           Output dignal         4 an A           Dipertition connormation Connormat	Input		
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Current         >         ?? An 24 20 V input voltage, ical = 265 () 50 m 24 32 V input voltage, ical = 265 () 50 m 24 32 V input voltage, ical = 265 () 50 m 24 32 V input voltage, ical = 265 () 50 m 24 32 V input voltage, ical = 265 () Connection           Connection         I         <	Rated voltage	Un	20 35 V DC
Output         Terminals 1+, 2; 4+, 5-           Connection         Imminals 1+, 2; 4+, 5-           Internal residor         R,         2380           Current         L,         245 mA           Valtage         U,         227 V           Open loop voltage         U,         227 V           Open loop voltage         U,         227 V           Output sido opensing ourrent         45 mA           Directive conformity         These values are v	Current		
Connection         FL         S280 Ω           Internal resistor         FL         S280 Ω           Current         Le         S48 ∩ A           Votage         U <sub>0</sub> S12 ∨           Open log votage         U <sub>0</sub> S28 Ω           Output stade operating current         Af mA           Output stade operating current         Af mA           Output stade operating current         These values are valie for the rated operating votage 20 35 V DC.           Energized/De-energized delay         mage operation (to rthe rated operating votage 20	Inrush current		$\leq$ 200 mA after 100 $\mu$ s
Connection         FL         S280 Ω           Internal resistor         FL         S280 Ω           Current         Le         S48 ∩ A           Votage         U <sub>0</sub> S12 ∨           Open log votage         U <sub>0</sub> S28 Ω           Output stade operating current         Af mA           Output stade operating current         Af mA           Output stade operating current         These values are valie for the rated operating votage 20 35 V DC.           Energized/De-energized delay         mage operation (to rthe rated operating votage 20	Output		
Internal resistor         R₁         £238 Ω           Current         I₀         £45 mA           Current         I₀         £2 V           Open loop voltage         U₀         2.22.7 V           Output raid operating current         45 mA           Curbus isgnal         These values are valid for the rated operating voltage 20 35 V DC.           Energized/De-energized dealy         single operation: typ. 1.7 m/s50 µ/s; periodical: typ. 5 µ/s50 µ/s           Directive accompatibility         These values are valid for the rated operating voltage 20 35 V DC.           Energized/De-energized dealy         single operation: typ. 1.7 m/s50 µ/s; periodical: typ. 5 µ/s50 µ/s           Directive accompatibility         Energized/Obe-energized dealy           Electromagnetic compatibility         KE 21:2006           Electromagnetic compatibility         KE 21:2006           Electromagnetic acompatibility         LIG 60529:2001           Protection against electrical shock         UL 6101-1:204           Ambient comfortion         IP20           Machanical perifications         2060 °C (4140 °F)           Machanical perification in connection         IP20           Dimensions         Can 35 mm DIN mounting rail acc. to EN 60715:2001           Dimensions         Can 55 V A AT2 X 4.5 x 4.5 in), housing type B1 </td <td>Connection</td> <td></td> <td>terminals 1+, 2-; 4+, 5-</td>	Connection		terminals 1+, 2-; 4+, 5-
CurrentI 4VotageU,e2.2.7 VOutput stade operating current45 mÅOutput stade operating current45 mÅOutput stade operating current55 mÅEnergized/De-energized dies/single operation: typ. 1.7 ms/50 µs; periodical: typ. 5 µs/50 µsEnergized/De-energized dies/50 mÅDirective controntly50 mÅElectromagnetic compatibility16 Na S2a-12006Directive controntly16 Na S2a-12006Directive controntly16 Na S2a-12006Directive contront (U16 Na S2a-12006Directive contront (U16 Na S2a-12006Directive contront (U16 Na S2a-12006Directive contront (U16 Na S2a-201Protection against electrical shock16 Na S2a-201Protection against electrical shock10 Na NaDirective contront12 Na	Internal resistor	B:	
Voltage         U,         ≥ 12 V           Open loop voltage         U,         ≥ 27.7 V           Output rated deparating current         45 mA           Output rated deparating current         45 mA           Directive conformity         infigite operation: typ. 1.7 ms/50 µs; periodical: typ. 5 µs/50 µs           Directive conformity         Electronagnetic compatibility           Directive 2004/108/EC         EN 61326-12006           Electronagnetic compatibility         KE 21-2006           Degree of protection         EC 60528-2001           Protective 2004/108/EC         EX 21-2006           Degree of protection         EC 60528-2001           Protection against electrical shock         UL 61016-1:2004           Ambient conditions         2060 °C (4 140 °F)           Mechanical age/ficiations         2060 °C (4 140 °F)           Mechanical age/ficiations         2060 °C (4140 °F)           Mechanical age/ficiations         2060 °C (4140 °F)           Mechanical age/ficiations         2060 °C (4140 °F)           Mechanical age/ficiations         approx100 g           Dimensions         2060 °C (4140 °F)           Mechanical age/ficiations         approx100 g           Dimensions         2060 °C (4140 °F) <td></td> <td></td> <td></td>			
<table-container>          Opportage         Upp         ≥227 V           Output stade operating output         4 5mA           Chuput stade operating output         6 Bee values are valid for the rated operating voltage 203 St VDC.           Energized/De-onergized VDE-onergized VDE-onergized VDE-onergized VDE-onergized VDE-onergized VDE-ONERCY         1000000000000000000000000000000000000</table-container>			
Output rated operating ourment         45 mA           Output rated operating output signal         These values are valid for the rated operating voltage 2035 V DC.           Directive conformity         single operation: typ. 1.7 m/50 µs; periodical: typ. 5 µs/50 µs           Directive conformity         Electronagenetic compatibility           Directive conformity         EN 61326-1:2006           Conformity         Electronagenetic compatibility           Degree of protection         IEC 60529:2001           Protection against electrical shock         UL 61010-1:2004           Ambient conditions         -           Ambient conditions         -           Degree of protection         IP20           approx. 100 g         approx. 100 g           Dimensions         20x. 60° C (-4 140 °F)           Mechanical specifications         IP20           Degree of protection         IP20           approx. 100 g         0           Dimensions         20x. 107 X 115 mm (0.8 x 4.2 x 4.5 in), housing type B1           Mounting         on 35 mm DIN mounting rail acc. to EN 60715:2001           Data for application in connection         Gout (0.8 x 4.2 x 4.5 in), housing type B1           Maximum safe values         Gout (0.16 Exia [a] IIC, II (II) [Exia Ia ]a] IIC, I (MI) [Exia Ma]] (-20 °C < T <sub>amp</sub> ≤ 60 °C)	°		
Output signal         These values are valid for the rated operating voltage 20 35 V DC.           Energized De-energized belay         single operation: typ. 1.7 ms/50 µs; periodicat: typ. 5 µs/50 µs           Directive 2004/108/EC         EN 61326-1:2006           Conformity         EN 61326-1:2006           Dierective 2004/108/EC         EN 61326-1:2006           Dierective 2004/108/EC         EN 61326-1:2006           Dierective 2004/108/EC         EI 6 60328-2001           Dierective 2004/108/EC         UL 61010-1:2004           Ambient temperature         - 20 60 °C (-4 140 °F)           Mechanical specifications         IP20           Digree of protection         IP20           Mass         approx. 100 g           Dimensions         20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in), housing type B1           Mounting         on 35 mm DIM mounting rail acc. to EN 60715:2001           Data for application in commutor         Go 20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in), housing type B1           Mounting         on 35 Mm DIM mounting rail acc. to EN 60715:2001           Valtage         U_0         82:2 V           Group, category, type of protection         Go 21 I (1)G [Ex ia Da] II(.0 [I (M1] [Ex ia Da] III.2 (2 °C < T_{amb 5} 6 0°C)			
Energized/De-energized delay         single operation: typ. 1.7 ms/50 µs; periodicai: typ. 5 µs/50 µs           Directive conformity         Electronagnetic compatibility           Directive 2004/108/EC         EN 61326-1:2006           Conformity         Electronagnetic compatibility           Directive 2004/108/EC         EN 61326-1:2006           Conformity         Electronagnetic compatibility           Degree of protection         IEC 60529:2001           Protection against electrical shock         UL 61010-1:2004           Ambient conditions         VL 6010-1:2004           Ambient conditions         VL 6010-1:2004           Mass         0		ent	
Directive conformity         Interface and a second s			
Electromagnetic compatibility         EN 6128c-1:2006           Conformity         Electromagnetic compatibility         NE 21:2006           Degree of protection against electrical stock         UE 600529:2001           Protection against electrical stock         UE 6101-1:2004           Ambient emperature         20 60 °C (4, 140 °F)           Mechanical specifications         IP20           Masis         approx. 100 g           Masis         approx. 100 g           Data for application in connection         So 3m DIN mounting rail ace. to EN 60715:2001           Pote protection [Set agenetic a			single operation: typ. 1.7 ms/50 $\mu$ s; periodical: typ. 5 $\mu$ s/50 $\mu$ s
Directive 2004/108/EC         EN 61326-1:2006           Contomity         NE 21:2006           Degree of protection         NE 21:2006           Degree of protection         IEC 60529:2001           Protection against electrical shock         UL 51010-1:2004           Ambient conditions         IEC 2005           Degree of protection         IP20           Degree of protection         IP20           Degree of protection         IP20           Mass         approx. 100 g           Dimensions         approx. 100 g           Dimensions         approx. 100 g           Dimensions         approx. 100 g           Dist of application in connection         IP20           Mounting         approx. 100 g           C-Type Examination Certificate         BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com           Group, category, type of protection         ID nd           Power         po         BaseEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com           Group, category, type of protection         EG: 0 X0 ATEX 0252, for additional certificates adj IIC, II (III) [Ex ia Daj IIIC, II (IIII) [Ex ia Daj IIIC, II (III) [Ex ia Daj IIIC, II (I	Directive conformity		
Contormity         NE 21 2006           Electronagnetic compatibility         NE 21 2006           Degree of protection         EIC 60529:2001           Protection against electrical shock         UL 61010-1:2004           Ambient temperature         -2060 °C (4 140 °F)           Mechanical specifications         IP20           Mass         20x 107 x 115 mm (0.8 x 4.2 x 4.5 in), housing type B1           Mounting         on 35 mm DIN mounting rail acc. to EN 60715:2001           Multi Ex-areas         EC-Type Examination Certificate           BASEEFA 66 ATEX 0252, for additional certificates see www.pepperf-fuchs.com           Group, category, type of protection         Go II (1/10 [Ex ia Ga] IIC, II (1/10 [Ex ia Da] IIIC, II (1/11 [Ex ia Ma] I (-20 °C ≤ T <sub>amb</sub> ≤ 60 °C)           Voltage         U <sub>0</sub> 25.2 V           Current         I <sub>0</sub> 110 mA           Power         P <sub>0</sub> 693 mW           Type of protection [EEx ia]         EO-Type Atamination Certificates           Maximum safe voltage         U <sub>m</sub> 25.2 V           Current         I <sub>0</sub> 693 mW           Type of protection [EEx ia]         EU           Maximum safe voltage         U <sub>m</sub> 10 GA           Group, category, type of protection         Gi II 3G Ex nA II T4 [device in zon	Electromagnetic compatibility		
Electromagnetic compatibility       NE 21:2006         Degree of protection       IEC 60529:2001         Ambient conditions	Directive 2004/108/EC		EN 61326-1:2006
Degree of protection         IEC 60529:2001           Protection against electrical shock         UL 61010-1:2004           Ambient comparison         co 60 °C (4 140 °F)           Mechanical specifications         IP20           Mass         approx. 100 g           Dimensions         20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in), housing type B1           Mounting         on 35 mm DIN mounting rail ace. to EN 60715:2001           Data for application in connection         BASEEFA 06 ATEX 0252, for additional certificates see www.pepperf-fuchs.com           © C-Type Examination Certificate         BASEEFA 06 ATEX 0252, for additional certificates see www.pepperf-fuchs.com           © Sin (1) (G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] 1(-20 °C ≤ T <sub>amb</sub> ≤ 60 °C)           Voltage         U <sub>0</sub> 252 V         Current           Current         I <sub>0</sub> Nye         Power           Power         Po           Maximum safe voltage         Um           Statement of conformity         TUV 99 ATEX 1499 X, observe statement of conformity           Group, category, type of protection, temperature class         Sofe (electrical isolation ace. to EC/EN 60079-11; voltage peak value 375 V           Directive volformity         Safe electrical isolation ace. to EC/EN 60079-15:2010           Input/Output         Safe elec	Conformity		
Degree of protection         IEC 60529:2001           Protection against electrical shock         UL 61010-1:2004           Ambient comparison         co 60 °C (4 140 °F)           Mechanical specifications         IP20           Mass         approx. 100 g           Dimensions         20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in), housing type B1           Mounting         on 35 mm DIN mounting rail ace. to EN 60715:2001           Data for application in connection         BASEEFA 06 ATEX 0252, for additional certificates see www.pepperf-fuchs.com           © C-Type Examination Certificate         BASEEFA 06 ATEX 0252, for additional certificates see www.pepperf-fuchs.com           © Sin (1) (G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] 1(-20 °C ≤ T <sub>amb</sub> ≤ 60 °C)           Voltage         U <sub>0</sub> 252 V         Current           Current         I <sub>0</sub> Nye         Power           Power         Po           Maximum safe voltage         Um           Statement of conformity         TUV 99 ATEX 1499 X, observe statement of conformity           Group, category, type of protection, temperature class         Sofe (electrical isolation ace. to EC/EN 60079-11; voltage peak value 375 V           Directive volformity         Safe electrical isolation ace. to EC/EN 60079-15:2010           Input/Output         Safe elec	•	tv	NE 21:2006
Projection against electrical shock       UL 61010-1:2004         Ambient conditions		-,	
Ambient conditions       -2060°C (-4140°F)         Mechanical specifications       -2060°C (-4140°F)         Mechanical specifications       IP20         Mass       aprox.100 g         Dimensions       20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in) , housing type B1         Mounting       on 35 mm DIN mounting rail ace. to EN 60715:2001         Data for application in connection with Ex-areas       BASEEFA 06 ATEX 0252 , for additional certificates see www.pepperl-fuchs.com         C-Type Examination Certificate       BASEEFA 06 ATEX 0252 , for additional certificates see www.pepperl-fuchs.com         C-Type Examination Certificate       BASEEFA 06 ATEX 0252 , for additional certificates see www.pepperl-fuchs.com         C-Type Examination Certificate       BASEEFA 06 ATEX 0252 , for additional certificates see www.pepperl-fuchs.com         Group, category, type of protection       Ge 311 (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIC. I (M1) [Ex ia Ma] I (-20°C < T <sub>amb</sub> ≤ 60°C)         Votage       U <sub>o</sub> 25.2 V         Current       I <sub>o</sub> 110 mA         Power       P <sub>o</sub> 693 mW         Type of protection [EEx ia]       110 mA         Input       250 V (Attentioni The rated voltage can be lower.)         Statement of conformity       TÜ 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protection, temperature claso		shock	
Ambient temperature       -2060°C (-4140°F)         Mechanical specifications       IP20         Degree of protection       IP20         Mass       approx.100 g         Dimensions       20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in), housing type B1         Mouning       on 35 mm DIN mounting rail acc. to EN 60715:2001         Data for application in Certificat=       BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com         Group, category, type of protection       Give II (130 [Ex ia Ga] IIC, II (11) [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20°C ≤ T <sub>amb</sub> ≤ 60°C)         Voltage       U_0       25.2 V         Current       P_0       693 mW         Power       P_0       693 mW         Statement of conformity       TUV 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protector, filex ialsolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Input       Statement of conformity       Give II (14 (device in zone 2)         Input/Output       See electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Incretive 94/9/EC       EN 60079-0:2012, EN 60079-11, voltage peak value 375 V         Directive ontormity       See electrical isolation acc. to IEC/EN 60079-15:2010         International approval       See 031FM-12 (ce/Mus)         Control drawing	Ŭ		02 01010-1.2004
Mechanical specifications         IP20           Degree of protection         IP20           Mass         approx.100 g           Dimensions         20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in), housing type B1           Mounting         on 35 mm DIN mounting rail acc. to EN 60715:2001           Data for application in constructions         BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com           EC-Type Examination Certificate         BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com           Group, category, type of protection         Si II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C ≤ T <sub>amb</sub> ≤ 60 °C)           Voltage         Uo         25.2 V           Current         Io         110 mA           Power         Po         69 30 MV           Type of protection [EEx ia]         110 mA           Input         250 V (Attention! The rated voltage can be lower.)           Statement of conformity         TUV 99 ATEX 1499 X, observe statement of conformity           Group, category, type of protection         Safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V           Directive conformity         Safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V           Directive onformity         Safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V			
Degree of protection       IP20         Mass       approx. 100 g         Dimensions       20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in), housing type B1         Mounting       on 35 mm DIM mounting rail ace. to EN 60715:2001         Data for application in connection with Ex-areas       EASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com         Corrent       BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com         Corrent       Io         Power       Po         Power       Po         Power       Po         Maximum safe voltage       Um         Maximum safe voltage       Um         Statement of conformity       TÜV 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protection       Siaf (1/2 GEN in 20079-11, voltage peak value 375 V         Input       Siaf Electrical isolation acc. to IEC/FN 60079-11, voltage peak value 375 V         Input/Output       Siaf electrical isolation acc. to IEC/FN 60079-11, voltage peak value 375 V         Input/Output       Siaf electrical isolation acc. to IEC/FN 60079-11, voltage peak value 375 V         Input/Output       Siaf electrical isolation acc. to IEC/FN 60079-11, voltage peak value 375 V         Input/Output       Siaf electrical isolation acc. to IEC/FN 60079-11, voltage peak value 375 V         Input/Output <td colspan="2">·</td> <td>-20 60 °C (-4 140 °F)</td>	·		-20 60 °C (-4 140 °F)
Mass       approx. 100 g         Dimensions       20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in), housing type B1         Mounting       on 35 mm DIN mounting rail acc. to EN 60715:2001         Data for application in connection       BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com         Group, category, type of protection       Group, category, type of protection         Voltage       Uo       25.2 V         Current       Io       110 mA         Power       Po       900 mW         Type of protection [EEx ia]       TUV 99 ATEX 1499 X, observe statement of conformity         Type of protection       TUV 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protection, temperature class       Safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive conformity       TUV 99 ATEX 1499 X, observe statement of conformity       Safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive conformity       Safe electrical isolation acc. to IEC/EN 60079-15:2010       Safe electrical isolation acc. to IEC/EN 60079-15:2010         International approval       Ge6-031FM-12 (oFMus)       Safe old TM-12 (oFMus)       Safe old TM-12 (oFMus)         UL approval       Ge0-031FM-12 (oFMus)       Electrical isolation acc. to IEC/EN 60079-15:2010       Electrical isolation acc. to IEC/EN 60079-15:2010			
Dimensions       20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in), housing type B1         Mounting       on 35 mm DIN mounting rail acc. to EN 60715:2001         Data for application in connection       BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com         Group, category, type of protection       BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com         Group, category, type of protection       U       25.2 V         Current       I₀       110 mA         Power       P₀       693 mW         Type of protection [Ex ia]       Input         Maximum safe voltage       U_m       250 V (Attention! The rated voltage can be lower.)         Statement of conformity       TÚV 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protection, temperature class       Safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive conformity       safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive conformity       EN 60079-0:2012, EN 60079-11, voltage peak value 375 V         Directive of Proval       266-031FM-12 (cFMus)         UL approval       266-031FM-12 (cFMus)         UL approval       116-0316 (cULus)         IECEx approval       IECEX approval         IECEX approval       IECEX approval   <	Degree of protection		IP20
Mounting       on 35 mm DIN mounting rail acc. to EN 60715:2001         Data for application in connection with Ex-areas       BASEEFA 06 ATEX 0252 , for additional certificates see www.pepperl-fuchs.com         C-Type Examination Certificate       BASEEFA 06 ATEX 0252 , for additional certificates see www.pepperl-fuchs.com         Group, category, type of protection       to II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C ≤ T <sub>amb</sub> ≤ 60 °C)         Voltage       U_o       25.2 V         Current       I_o       110 mA         Power       P_o       693 mW         Type of protection [EEx ia]       Input         Input       250 V (Attention! The rated voltage can be lower.)         Statement of conformity       TÜV 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protection, temperature class       safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive conformity       Safe electrical isolation acc. to IEC/EN 60079-15;2010         International approval       266-031FM-12 (cFMus)         Control drawing       266-031FM-12 (cFMus)         UL approval       266-031FM-12 (cFMus)         UL approval       116-0316 (cULus)         IECEx approval       IECEX BAS 06.0058	Mass		approx. 100 g
Data for application in connection with Ex-areas       BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com         EC-Type Examination Certificate       BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com         Group, category, type of protection       With (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C ≤ T <sub>amb</sub> ≤ 60 °C)         Voltage       U <sub>o</sub> 25.2 V         Current       I <sub>o</sub> 110 mA         Power       P <sub>o</sub> 693 mW         Type of protection [EEx ia]       110 mA         Input       50 V (Attention! The rated voltage can be lower.)         Statement of conformity       70V 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protection, etcrical isolation       £0 II 3G Ex nA II T4 [device in zone 2]         Input/Output       safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive conformity       51 B 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010         International approval       EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010         International approval       26-0:31FM-12 (cFMus)         UL approval       116-0:316 (cULus)         ICCx training       116-0:316 (cULus)         IECEx approval       IECEx approval         IECEx approval       IECEx approval <td colspan="2">Dimensions</td> <td>20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in) , housing type B1</td>	Dimensions		20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in) , housing type B1
with Exarians         Identifieate         BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com           EC-Type Examination Certificate         BASEEFA 06 ATEX 0252, for additional certificates see www.pepperl-fuchs.com           Group, category, type of protection         voltage         Uo         Si II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C ≤ T <sub>amb</sub> ≤ 60 °C)           Voltage         Uo         52.2 V         Si II (1) m A           Current         Io         10 m A         Si II (1) m A           Power         Po         693 mW         Si II (1) m A           Type of protection [Ex ia]         III         Maximum safe voltage         Um           Input         III A         Si II (1) m A         III (1) m A           Statement of conformity         III (1) m A         III (1) m A           Maximum safe voltage         Um         Si III (1) The rated voltage can be lower.)         IIII (1) (1) (2) III (2) (2) IIII (2) IIII (2) III (2) III (2) III (2) IIII (2) III (2) III (2) I	Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
Group, category, type of protection       Isi (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C ≤ T <sub>amb</sub> ≤ 60 °C)         Voltage       Uo       25.2 V         Current       Io       110 mA         Power       Po       693 mW         Type of protection [EEx ia]       100 mA         Input       500 V (Attention! The rated voltage can be lower.)         Statement of conformity       250 V (Attention! The rated voltage can be lower.)         Statement of conformity       TUV 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protection, temperature class       Eise electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive solation       safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive 94/9/EC       EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010         International approval       266-031FM-12 (cFMus)         UL approval       266-031FM-12 (cFMus)         UL approval       116-0316 (cULus)         IECEx approval       IECEx BAS 06.0058         General information       EICEX BAS 06.0058	••		
Group, category, type of protection       Isi (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C ≤ T <sub>amb</sub> ≤ 60 °C)         Voltage       Uo       25.2 V         Current       Io       110 mA         Power       Po       693 mW         Type of protection [EEx ia]       100 mA         Input       500 V (Attention! The rated voltage can be lower.)         Statement of conformity       250 V (Attention! The rated voltage can be lower.)         Statement of conformity       TUV 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protection, temperature class       Eise electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive solation       safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive 94/9/EC       EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010         International approval       266-031FM-12 (cFMus)         UL approval       266-031FM-12 (cFMus)         UL approval       116-0316 (cULus)         IECEx approval       IECEx BAS 06.0058         General information       EICEX BAS 06.0058	EC-Type Examination Certificate		BASEEFA 06 ATEX 0252 , for additional certificates see www.pepperl-fuchs.com
Current       Io       110 mA         Power       Po       693 mW         Type of protection [EEx ia]       Input       Input         Maximum safe voltage       Um       250 V (Attention! The rated voltage can be lower.)         Statement of conformity       TÜV 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protection       See I 3G Ex nA II T4 [device in zone 2]         Electrical isolation       safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive onformity       safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive onformity       EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010         International approval       Se6-031FM-12 (cFMus)         Control drawing       266-031FM-12 (cFMus)         UL approval       116-0316 (cULus)         IECEx approval       IECEx BAS 06.0058	Group, category, type of protection		$\langle Ex \rangle$ II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C $\leq T_{amb} \leq 60$ °C)
Current       Io       110 mA         Power       Po       693 mW         Type of protection [EEx ia]       Input       Input         Maximum safe voltage       Um       250 V (Attention! The rated voltage can be lower.)         Statement of conformity       TÜV 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protection       See I 3G Ex nA II T4 [device in zone 2]         Electrical isolation       safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive onformity       safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive onformity       EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010         International approval       Se6-031FM-12 (cFMus)         Control drawing       266-031FM-12 (cFMus)         UL approval       116-0316 (cULus)         IECEx approval       IECEx BAS 06.0058	Voltage	Uo	25.2 V
Power       Power <td< td=""><td>-</td><td></td><td>110 mA</td></td<>	-		110 mA
Type of protection [EEx ia]       Input         Input       250 V (Attention! The rated voltage can be lower.)         Statement of conformity       TÜV 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protection, temperature class       Si II 3G Ex nA II T4 [device in zone 2]         Electrical isolation       safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive conformity       EN 60079-0:2012, EN 60079-11, voltage peak value 375 V         Directive od/9/EC       EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010         International approvals       EN 60079-0:2012, EN 60079-15:2010         FM approval       E6-031FM-12 (cFMus)         UL approval       116-0316 (cULus)         IECEx approval       I16-0316 (cULus)         IECEx approval       IECEx BAS 06.0058			
Input       Input         Maximum safe voltage       Um         Statement of conformity       250 V (Attention! The rated voltage can be lower.)         Statement of conformity       TÜV 99 ATEX 1499 X, observe statement of conformity         Group, category, type of protection, temperature class       i 3G Ex nA II T4 [device in zone 2]         Electrical isolation       safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive conformity       safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V         Directive conformity       EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010         International approvals       EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010         FM approval       266-031FM-12 (cFMus)         UL approval       266-031FM-12 (cFMus)         UL approval       116-0316 (cULus)         IECEx approval       IECEx BAS 06.0058         General information       IECEx BAS 06.0058		. 0	
Maximum safe voltageUm250 V (Attention! The rated voltage can be lower.)Statement of conformityTÜV 99 ATEX 1499 X, observe statement of conformityGroup, category, type of protection, temperature classSi II 3G Ex n A II T4 [device in zone 2]Electrical isolationInput/Outputsafe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 VDirective onformityDirective 94/9/ECEN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010International approvalsFM approval266-031FM-12 (cFMus)UL approvalControl drawing116-0316 (cULus)IECEx approvalIECEx BAS 06.0058General information			
Statement of conformityTÜV 99 ATEX 1499 X, observe statement of conformityGroup, category, type of protection, temperature classIi 3G Ex nA II 74 [device in zone 2]Electrical isolationInput/Outputsafe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 VDirective conformityDirective 94/9/ECEN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010International approvalsFM approval266-031FM-12 (cFMus)UL approval116-0316 (cULus)IECEx approvalIECEx BAS 06.0058General information	•		250 V (Attestion) The reted voltage can be lower )
Group, category, type of protection, temperature classIs G Ex nA II T4 [device in zone 2]Electrical isolationInput/Outputsafe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 VDirective conformityDirective 94/9/ECEN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010International approvalsFM approval266-031FM-12 (cFMus)UL approval116-0316 (cULus)IECEx approvalII 6-0316 (cULus)IECEx approvalIECEx BAS 06.0058	-	Um	
temperature classImage: Constraint of the	,		
Input/Outputsafe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 VDirective conformityDirective 94/9/ECEN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010International approvalsFM approvalControl drawing266-031FM-12 (cFMus)UL approvalControl drawing116-0316 (cULus)IECEx approvalIECEx BAS 06.0058General information	temperature class		⟨↔⟩ II 3G Ex nA II T4 [device in zone 2]
Directive conformityEN 60079-0:2012 , EN 60079-11:2012 , EN 60079-15:2010Directive 94/9/ECEN 60079-0:2012 , EN 60079-11:2012 , EN 60079-15:2010International approvalsEN 60079-0:2012 , EN 60079-11:2012 , EN 60079-15:2010FM approval266-031FM-12 (cFMus)Control drawing266-031FM-12 (cFMus)UL approval116-0316 (cULus)IECEx approval116-0316 (cULus)IECEx approvalIECEx BAS 06.0058General informationIerce and an	Electrical isolation		
Directive 94/9/ECEN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010International approvalsFM approvalControl drawing266-031FM-12 (cFMus)UL approvalControl drawing116-0316 (cULus)IECEx approvalIECEx BAS 06.0058General information	Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
International approvals     International approvals       FM approval     FM approval       Control drawing     266-031FM-12 (cFMus)       UL approval	Directive conformity		
International approvals     International approvals       FM approval	Directive 94/9/EC		EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010
FM approval     266-031FM-12 (cFMus)       Control drawing     266-031FM-12 (cFMus)       UL approval     116-0316 (cULus)       Control drawing     116-0316 (cULus)       IECEx approval     IECEx BAS 06.0058       General information     IECEX BAS 06.0058	International approvals		
Control drawing     266-031FM-12 (cFMus)       UL approval     -       Control drawing     116-0316 (cULus)       IECEx approval     IECEx BAS 06.0058       General information     -			
UL approval     Intervention       Control drawing     116-0316 (cULus)       IECEx approval     IECEx BAS 06.0058       General information     IECEX BAS 06.0058			266-031FM-12 (cFMus)
Control drawing     116-0316 (cULus)       IECEx approval     IECEx BAS 06.0058       General information     IECEX BAS 06.0058	-		
IECEx approval     IECEx BAS 06.0058       General information     IECEX BAS 06.0058			
General information	Ŭ		
			IEUEX BAS 06.0058
Supplementary information EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of			
Conformity and instructions have to be observed where applicable. For information see www.pepperl- fuchs.com.	Supplementary information		

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information". USA: +1 330 486 0002 pa-info@us.pepperl-fuchs.com

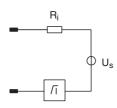
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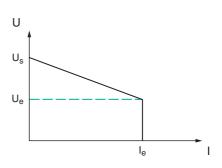


# **Output characteristics**

## Output circuit diagram



## **Output characteristic**



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