



Member of the FM Global Group

FM Approvals
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CERTIFICATE OF COMPLIANCE

HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS

This certificate is issued for the following equipment:

KFa-DWB-Ex1.b.c Rotation Speed Limit Alarm

IPA / I / 2 / ABCD / T4 Ta= 60°C

I / 2 / Ex nC IIC / T4 Ta = 60°C

AIS / I,II,II / 1 / ABCDEFG - 16-538FM-12; Entity

I / 0 / [Ex ia] IIC - 16-538FM-12; Entity

Entity Parameters	V _o (V)	I _o (mA)	V _t (V)	I _t (mA)	P _o (mW)	C _a (uF)	L _a (mH)
Terminals 1 & 3	10.10	13.5	-	-	34	2.87	195

a = Input Voltage D2, A5, A6.

b = Display Option D or blank.

c = 485 (with RS485) or blank.

KFU8-DWB-Ex1.b.c Rotation Speed Limit Alarm

IPA / I / 2 / ABCD / T4 Ta= 60°C

AIS / I,II,II / 1 / ABCDEFG - 16-538FM-12; Entity

I / 0 / [Ex ia] IIC - 16-538FM-12; Entity

Entity Parameters	V _o (V)	I _o (mA)	V _t (V)	I _t (mA)	P _o (mW)	C _a (uF)	L _a (mH)
Terminals 1 & 3	10.10	13.5	-	-	34	2.87	195

b = Display Option D or blank.

c = 485 (with RS485) or blank.

KFa-UFC-Ex1.b.c Rotation Speed Converter (Digital or Analog converter)

IPA / I / 2 / ABCD / T4 Ta= 60°C

I / 2 / Ex nC IIC / T4 Ta = 60°C

AIS / I,II,II / 1 / ABCDEFG - 16-538FM-12; Entity

To verify the availability of the Approved product, please refer to www.approvalguide.com

I / 0 / [Ex ia] IIC - 16-538FM-12; Entity

Entity Parameters	V _o (V)	I _o (mA)	V _t (V)	I _t (mA)	P _o (mW)	C _a (uF)	L _a (mH)
Terminals 1 & 3	10.10	13.5	-	-	34	2.87	195

a = Input Voltage D2.

b = Display Option D or blank.

c = 485 (with RS485) or blank.

KFU8-UFC-Ex1.b.c Rotation Speed Converter (Digital or Analog converter)

IPA / I / 2 / ABCD / T4 Ta= 60°C

AIS / I,II,II / 1 / ABCDEFG - 16-538FM-12; Entity

I / 0 / [Ex ia] IIC - 16-538FM-12; Entity

Entity Parameters	V _o (V)	I _o (mA)	V _t (V)	I _t (mA)	P _o (mW)	C _a (uF)	L _a (mH)
Terminals 1 & 3	10.10	13.5	-	-	34	2.87	195

b = Display Option D or blank.

c = 485 (with RS485) or blank.

KFa-UFT-Ex2.b.c Universal Logic Controls

IPA / I / 2 / ABCD / T4 Ta= 60°C

I / 2 / Ex nC IIC / T4 Ta = 60°C

AIS / I,II,II / 1 / ABCDEFG - 16-538FM-12; Entity

I / 0 / [Ex ia] IIC - 16-538FM-12; Entity

Entity Parameters	V _o (V)	I _o (mA)	V _t (V)	I _t (mA)	P _o (mW)	C _a (uF)	L _a (mH)
Terminals 1 & 3, 4 & 6	10.1	13.5	-	-	34	2.87	195
Terminals 1 & 4, 3 & 6	-	-	10.1	27.0	68	2.87	46

a = Input Voltage D2.

b = Display Option D or blank.

c = 485 (with RS485) or blank.

KFU8-UFT-Ex2.b.c Universal Logic Controls

IPA / I / 2 / ABCD / T4 Ta= 60°C

AIS / I,II,II / 1 / ABCDEFG - 16-538FM-12; Entity

I / 0 / [Ex ia] IIC - 16-538FM-12; Entity

Entity Parameters	V _o (V)	I _o (mA)	V _t (V)	I _t (mA)	P _o (mW)	C _a (uF)	L _a (mH)
Terminals 1 & 3, 4 & 6	10.1	13.5	-	-	34	2.87	195
Terminals 1 & 4, 3 & 6	-	-	10.1	27.0	68	2.87	46

b = Display Option D or blank.

c = 485 (with RS485) or blank.

To verify the availability of the Approved product, please refer to www.approvalguide.com

KFa-DU-Ex1.b.c Timer

IPA / I / 2 / ABCD / T4 Ta= 60°C

I / 2 / Ex nC IIC / T4 Ta = 60°C

AIS / I,II,III / 1 / ABCDEFG - 16-538FM-12; Entity

I / 0 / [Ex ia] IIC - 16-538FM-12; Entity

Entity Parameters	V _o (V)	I _o (mA)	V _t (V)	I _t (mA)	P _o (mW)	C _a (uF)	L _a (mH)
Terminals 1 & 3	10.10	13.5	-	-	34	2.87	195

a = Input Voltage D2, A5, A6.

b = Display Option D or blank.

c = 485 (with RS485) or blank.

KFU8-DU-Ex1.b.c Timer

IPA / I / 2 / ABCD / T4 Ta= 60°C

AIS / I,II,III / 1 / ABCDEFG - 16-538FM-12; Entity

I / 0 / [Ex ia] IIC - 16-538FM-12; Entity

Entity Parameters	V _o (V)	I _o (mA)	V _t (V)	I _t (mA)	P _o (mW)	C _a (uF)	L _a (mH)
Terminals 1 & 3	10.10	13.5	-	-	34	2.87	195

b = Display Option D or blank.

c = 485 (with RS485) or blank.

Special Conditions of Use:

1. The apparatus shall be installed within an enclosure meeting the requirements of Class I, Division 2/Zone 2 wiring methods as specified in the Canadian electrical code, Part 1.
2. It is the responsibility of the manufacturer to provide warning markings in French where required by local jurisdictions.

Equipment Ratings:

Suitable for Class I , Division 2, Groups A, B,C and D; Class I, Zone 2, Group IIC, T4 in an ambient of 60°C; Associated Intrinsically Safe apparatus for connection to Class I,II,III, Division 1 Groups A, B, C, D, E, F and G; alternatively for Class I, Zone 1, Group IIC; indoor hazardous locations.

FM Approved for:

Pepperl & Fuchs GmbH
Mannheim, Germany



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This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

C22.2 No. 142	2004
C22.2 No. 213	2004
C22.2 No. 157	2002
CAN/CSA-E 60079-15	2006

Original Project ID: 3009603C

Approval Granted: January 19, 2001

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
3027459	November 2, 2006		
061207	November 20, 2006		
RR201062	June 10, 2015		

FM Approvals LLC

J.E. Marquedant

J.E. Marquedant
Manager of Electrical Systems

10 June 2015

Date