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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

BA334Dabcdef Pulse Input Rate Totaliser

IS / I, II, III / ABCDEFG / T4 Ta = 60°C – Entity, CI330-32; Type 4X, IP66

I / 0 / AEx ia IIC T4 Ta = 60°C – Entity, CI330-32; Type 4X, IP66

NI / I / 2 / ABCD / T4 Ta = 60°C – NIFW, CI330-34; Type 4X, IP66

S / I / II, III / EFG / T4 Ta = 60°C – NIFW, CI330-34; Type 4X, IP66

I / 2 / IIC / T4 Ta = 60°C – NIFW, CI330-34; Type 4X, IP66

Intrinsic Safety Parameters

Terminals	Ui (V)	Ii (mA)	Pi (W)	CI (μ F)	LI (mH)	Uo (V)	Io (mA)	Po (mW)	Ca (μ F)	La (mH)
1 & 2	30	100	0.7	0.02	0.02	-	-	-	-	-
3 & 4	30	100	0.7	0.02	0.02	1.1	0.5	24	1000	1000
5 & 6	30	100	0.7	0.02	0.02	10.5	9.2	24	2.39	300
7 & 8	30	100	0.7	0.02	0	3.8	1.6	2	1000	1000
A1 & A2; A3 & A4	28	200	0.84	0.04	0.03	0.7	0.0013	0.0041	1000	1000
B1 & B2	30	159	0.8	0.04	0.03	-	-	-	-	-
C1 & C2	30	100	0.7	0.002	0.008	-	-	-	-	-
P1 & P2	30	100	0.7	0.002	0.008	-	-	-	-	-

Nonincendive Field Wiring Parameters

Terminals	Vmax (V)	CI (μ F)	LI (mH)	Voc (V)	Isc (mA)	Ca (μ F)	La (mH)
1 & 2	30	0.02	0.02	-	-	-	-
3 & 4	30	0.02	0.02	1.1	0.5	1000	1000
5 & 6	30	0.02	0.02	10.5	9.2	2.39	300
7 & 8	30	0.02	0	-	-	-	-
A1 & A2; A3 & A4	28	0.04	0.03	-	-	-	-
B1 & B2	30	0.04	0.03	-	-	-	-
C1 & C2	30	0.002	0.008	-	-	-	-
P1 & P2	30	0.002	0.008	-	-	-	-

a = Type
b = Rate scaling factor.
c = Total scaling factor.
d = Rate timebase.
e = accessories; backlight, alarms, pulse output, 4/20mA output external keypad
f = other items not affecting safety.

Special conditions of use

1. The BA334D shall be protected from direct exposure to sunlight.

BA338CabCdef Pulse Input Rate Totaliser

IS / I / ABCD / T4 Ta = 60°C – Entity, CI330-32; Type 4X*

I / 0 / AEx ia IIC T4 Ta = 60°C – Entity, CI330-32; Type 4X*

NI / I / 2 / ABCD / T4 Ta = 60°C – NIFW, CI330-34; Type 4X*

I / 2 / IIC / T4 Ta = 60°C – NIFW, CI330-34; Type 4X*

*Front panel only

Intrinsic Safety Parameters

Terminals	Ui (V)	Ii (mA)	Pi (W)	Ci (μF)	Li (mH)	Uo (V)	Io (mA)	Po (mW)	Ca (μF)	La (mH)
1 & 2	30	100	0.7	0.02	0.02	-	-	-	-	-
3 & 4	30	100	0.7	0.02	0.02	1.1	0.5	24	1000	1000
5 & 6	30	100	0.7	0.02	0.02	10.5	9.2	24	2.39	300
7 & 8	30	100	0.7	0.02	0	3.8	1.6	2	1000	1000
A1 & A2; A3 & A4	28	200	0.84	0.04	0.03	0.7	0.0013	0.0041	1000	1000
B1 & B2	30	159	0.8	0.04	0.03	-	-	-	-	-
C1 & C2	30	100	0.7	0.002	0.008	-	-	-	-	-
P1 & P2	30	100	0.7	0.002	0.008	-	-	-	-	-

Nonincendive Field Wiring Parameters

Terminals	Vmax (V)	Ci (μF)	Li (mH)	Voc (V)	Isc (mA)	Ca (μF)	La (mH)
1 & 2	30	0.02	0.02	-	-	-	-
3 & 4	30	0.02	0.02	1.1	0.5	1000	1000
5 & 6	30	0.02	0.02	10.5	9.2	2.39	300
7 & 8	30	0.02	0	-	-	-	-
A1 & A2; A3 & A4	28	0.04	0.03	-	-	-	-
B1 & B2	30	0.04	0.03	-	-	-	-
C1 & C2	30	0.002	0.008	-	-	-	-
P1 & P2	30	0.002	0.008	-	-	-	-

a = Type
b = Rate scaling factor.
c = Total scaling factor.
d = Rate timebase.
e = accessories; backlight, alarms, pulse output, 4/20mA output.
f = other items not affecting safety.

Special conditions of use

1. To maintain the Type 4X enclosure rating the BA338C shall be installed in accordance with the mounting conditions provided on drawing numbers CI330-32 and CI330-34.
2. The BA338C shall be installed in compliance with the enclosure, mounting, spacing and



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segregation requirements of the ultimate application.

- The BA338C shall be protected from direct exposure to sunlight.

BA364Dabcde Counter, timer, tachometer and clock

IS / I, II, III / ABCDEFG / T4 Ta = 60°C – Entity, CI330-33; Type 4X, IP66

I / 0 / AEx ia IIC T4 Ta = 60°C – Entity, CI330-33; Type 4X, IP66

NI / I / 2 / ABCD / T4 Ta = 60°C – NIFW, CI330-35; Type 4X, IP66

S / II, III / EFG / T4 Ta = 60°C – NIFW, CI330-35; Type 4X, IP66

I / 2 / IIC / T4 Ta = 60°C – NIFW, CI330-35; Type 4X, IP66

Intrinsic Safety Parameters

Terminals	Ui (V)	Ii (mA)	Pi (W)	CI (μF)	LI (mH)	Uo (V)	Io (mA)	Po (mW)	Ca (μF)	La (mH)
1 & 2	30	100	0.7	0.02	0.02	-	-	-	-	-
3 & 4	30	100	0.7	0.02	0.02	10.5	9.2	24	2.39	300
5 & 6	30	100	0.7	0.02	0.02	10.5	9.2	24	2.39	300
7 & 8	30	100	0.7	0.02	0	3.8	1.6	2	1000	1000
A1 & A2; A3 & A4	28	200	0.84	0.04	0.03	0.7	0.0013	0.0041	1000	1000
B1 & B2	30	159	0.8	0.04	0.03	-	-	-	-	-
C1 & C2	30	100	0.7	0.002	0.008	-	-	-	-	-
P1 & P2	30	100	0.7	0.002	0.008	-	-	-	-	-

Nonincendive Field Wiring Parameters

Terminals	Vmax (V)	CI (μF)	LI (mH)	Voc (V)	Isc (mA)	Ca (μF)	La (mH)
1 & 2	30	0.02	0.02	-	-	-	-
3 & 4	30	0.02	0.02	10.5	9.2	2.39	300
5 & 6	30	0.02	0.02	10.5	9.2	2.39	300
7 & 8	30	0.02	0	3.8	1.6	1000	1000
A1 & A2; A3 & A4	28	0.04	0.03	-	-	-	-
B1 & B2	30	0.04	0.03	-	-	-	-
C1 & C2	30	0.002	0.008	-	-	-	-
P1 & P2	30	0.002	0.008	-	-	-	-

a = Configuration

b = Inputs

c = Calibration.

d = accessories; backlight, alarms, pulse output, 4/20mA output external keypad.

e = other items not affecting safety.

Special conditions of use

- The BA364D shall be protected from direct exposure to sunlight.

BA368Cabdcde Counter, timer, tachometer and clock

IS / I / ABCD / T4 Ta = 60°C – Entity, CI330-32; Type 4X*

I / 0 / AEx ia IIC T4 Ta = 60°C – Entity, CI330-32; Type 4X*

NI / I / 2 / ABCD / T4 Ta = 60°C – NIFW, CI330-32; Type 4X*

I / 2 / IIC / T4 Ta = 60°C – NIFW, CI330-32; Type 4X*

* Front panel only



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Intrinsic Safety Parameters

Terminals	Ui (V)	Ii (mA)	Pi (W)	Ci (μ F)	Li (mH)	Uo (V)	Io (mA)	Po (mW)	Ca (μ F)	La (mH)
1 & 2	30	100	0.7	0.02	0.02	-	-	-	-	-
3 & 4	30	100	0.7	0.02	0.02	10.5	9.2	24	2.39	300

Terminals	Ui (V)	Ii (mA)	Pi (W)	Ci (μ F)	Li (mH)	Uo (V)	Io (mA)	Po (mW)	Ca (μ F)	La (mH)
5 & 6	30	100	0.7	0.02	0.02	10.5	9.2	24	2.39	300
7 & 8	30	100	0.7	0.02	0	3.8	1.6	2	1000	1000
A1 & A2; A3 & A4	28	200	0.84	0.04	0.03	0.7	0.0013	0.0041	1000	1000
B1 & B2	30	159	0.8	0.04	0.03	-	-	-	-	-
C1 & C2	30	100	0.7	0.002	0.008	-	-	-	-	-
P1 & P2	30	100	0.7	0.002	0.008	-	-	-	-	-

Nonincendive Field Wiring Parameters

Terminals	Vmax (V)	Ci (μ F)	Li (mH)	Voc (V)	Isc (mA)	Ca (μ F)	La (mH)
1 & 2	30	0.02	0.02	-	-	-	-
3 & 4	30	0.02	0.02	10.5	9.2	2.39	300
5 & 6	30	0.02	0.02	10.5	9.2	2.39	300
7 & 8	30	0.02	0	3.8	1.6	1000	1000
A1 & A2; A3 & A4	28	0.04	0.03	-	-	-	-
B1 & B2	30	0.04	0.03	-	-	-	-
C1 & C2	30	0.002	0.008	-	-	-	-
P1 & P2	30	0.002	0.008	-	-	-	-

a = Configuration

b = Inputs

c = Calibration.

d = accessories; backlight, alarms, pulse output, 4/20mA output.

e = other items not affecting safety.

Special conditions of use

1. To maintain the Type 4X enclosure rating the BA368C shall be installed in accordance with the mounting conditions provided on drawing numbers CI330-33 and CI330-35.
2. The BA368C shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
3. The BA368C shall be protected from direct exposure to sunlight.

Equipment Ratings:

Models BA334D and BA364D

Intrinsically safe for Class I, II and III, Division 1, Groups A, B, C, D, E, F and G and Class I, Zone 0, Group IIC Hazardous (Classified) Locations when installed in accordance with the entity concept in accordance with Control Drawings CI330-32 and CI330-33; Nonincendive for Class I, Division 2, Groups A, B, C and D and Class I, Zone 2, Group IIC, Hazardous (Classified) Locations when installed in accordance with the nonincendive field wiring concept in accordance with Control Drawings CI330-34 and CI330-35; Suitable for Class II and III, Division 2, Groups E, F and G Hazardous (Classified) Locations when installed in accordance with the nonincendive field wiring concept in accordance with Control Drawings CI330-34 and CI330-35. Temperature class T4 at an ambient of 60°C. Enclosure Type 4X and

IP66.

Models 338C and 368C

Intrinsically safe for Class I, Division 1, Groups A, B, C and D and Class I, Zone 0, Group IIC Hazardous (Classified) Locations when installed in accordance with the entity concept in accordance with Control Drawings CI330-33 and CI330-34; Nonincendive for Class I, Division 2, Groups A, B, C and D and Class I, Zone 2, Group IIC, Hazardous (Classified) Locations when installed in accordance with the nonincendive field wiring concept in accordance with Control Drawings CI330-34 and CI330-35. Temperature class T4 at an ambient of 60°C. Front panel: Type 4X.

FM Approved for:

BEKA associates
Hitchin, Hertfordshire SG5 2DA, United Kingdom



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

Class 3600	1998
Class 3610	2010
Class 3611	2004
Class 3810	2005
ANSI/IEC 60529	2004
NEMA 250	1991

Original Project ID: 3022309

Approval Granted: June 8, 2005

Subsequent Revision Reports / Date Approval Amended

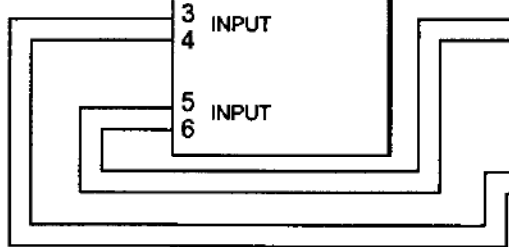
Report Number	Date	Report Number	Date
101217	March 16, 2011		

FM Approvals LLC

Timothy J. Adam
Technical Team Manager

March 16, 2011
Date

HAZARDOUS (CLASSIFIED) LOCATION			UNCLASSIFIED LOCATION				
Appd.	Ckd.		BA334D LOCATIONS: Class I, Division 1, Groups A, B, C, D Class II, Division 1, Groups E, F & G Class III Class I, Zone 0, Group IIC		BA338C LOCATIONS: Class I, Division 1, Groups A, B, C, D Class I, Zone 0, Group IIC		
BEKA associates England Hitchin company confidential, copyright reserved.			BA334D & BA338C Entity Parameters Terminals 1 & 2 Ui = 30V Ii = 100mA dc Pi = 0.7W Ci = 0.02µF Li = 0.02mH Terminals 7 & 8 Ui = 30V dc Uo = 3.8V dc Ii = 100mA Io = 1.6mA dc Pi = 0.7W Po = 2mW Ci = 0.02µF Ca = 1000µF Li = 0mH La = 1000mH Terminals B1 & B2 Ui = 30V dc Ii = 159mA dc Pi = 0.8W Ci = 0.04µF Li = 0.03mH Terminals P1 & P2 Ui = 30V dc Ii = 100mA dc Pi = 0.7W Ci = 0.02µF Li = 0.02mH Terminals C1 & C2 Ui = 30V dc Ii = 100mA dc Pi = 0.7W Ci = 0.002µF Li = 0.008mH Terminals 3 & 4 Ui = 30V dc Uo = 1.1V dc Ii = 100mA dc Io = 0.5mA dc Pi = 0.7W Po = 24mW Ci = 0.02µF Ca = 1000µF Li = 0.02mH La = 1000mH Terminals 5 & 6 Ui = 30V dc Uo = 10.5V dc Ii = 100mA dc Io = 9.2mA dc Pi = 0.7W Po = 24mW Ci = 0.02µF Ca = 2.39µF Li = 0.02mH La = 300mH Terminals A1 & A2 and A3 & A4 Ui = 28V dc Uo = 0.7V dc Ii = 200mA dc Io = 1.3µA Pi = 0.84W Po = 4.1µW Ci = 0.04µF Ca = 1000µF Li = 0.03mH La = 1000mH		BA334D SEE NOTES 8 & 10 OR BA338C SEE NOTE 7 POWER SUPPLY 1 2 REMOTE RESET 7 8 OPTIONAL BACKLIGHT B1 B2 OPTIONAL PULSE OUTPUT P1 P2 OPTIONAL 4/20mA OUTPUT C1 C2 OPTIONAL ALARM A1 A2 OPTIONAL ALARM A3 A4 OR SEE NOTE 6 SEE NOTE 1 SEE NOTE 4 SEE NOTE 4 SEE NOTE 4 SEE NOTE 4 SEE NOTE 4 SEE NOTE 4 SEE NOTE 4 SEE NOTE 2		
			UNCLASSIFIED LOCATION EQUIPMENT				
INPUTS IN HAZARDOUS (CLASSIFIED) LOCATION			Note: No modification to be made without reference/approval from FM Approvals and BEKA Associates Design Department.				
VOLTAGE PULSE SEE NOTE 5 VOLTAGE PULSE, PROXIMITY DETECTOR OR SWITCH CONTACT SEE NOTE 5 3 INPUT 4 5 INPUT 6			SEE NOTE 10				
Date	22.04 2005		Title FM Approvals Control Drawing for intrinsically safe BA334D & BA338C Externally Powered Rate Totalisers		Drawn RC	Checked 	Scale NTS
Iss.	1	Modification First release			Drawing No. Sheet 1 of 4 CI330-32		



Iss.	Date	Modification	Ckd.	Appd.

Notes:

- The associated intrinsically safe barriers or galvanic isolators must be FM approved and the manufacturers' installation drawings must be followed when installing this equipment.
- The unclassified location equipment connected to the associated intrinsically safe barriers must not use or generate more than 250V rms or 250V dc.
- Installation should be in accordance with ANSI/ISA RP 12.06.01 "Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations" and the National Electrical Code ANSI/NFPA 70.
- One single channel or one channel of a dual channel barrier or galvanic isolator with entity parameters complying with the following requirements:

Uo or Vt	equal to or less than	Ui
Io or It	equal to or less than	Ii
Po	equal to or less than	Pi
La	equal to or greater than	Lcable + Li
Ca	equal to or greater than	Ccable + Ci
- Hazardous (classified) location equipment complying with the requirements of note 4 and the input parameters listed on Sheets 1 and 2 for Terminals 3 and 4, and 5 and 6, or simple apparatus.
- Simple apparatus or FM approved associated apparatus with contacts having entity parameters complying with the following requirements:

Uo or Vt	equal to or less than	Ui
Io or It	equal to or less than	Ii
La	equal to or greater than	Lcable + Li
Ca	equal to or greater than	Ccable + Ci
- To maintain NEMA 4X between the BA338C and the mounting panel:

 Four panel mounting clips should be used

 Minimum panel thickness should be 2mm (0.08inches) Steel
 3mm (0.12inches) Aluminium

 Outside panel finish should be smooth, free from particle inclusions, runs or build-up around cut-out.

 Panel cut-out should be 66.2 x 136.0mm -0.0 +0.5
 (2.60 x 5.35 inches -0.00 +0.02)

 Edges of panel cut-out should be deburred and clean

 Each panel mounting clip should be tightened to between: 20 and 22cNm (1.77 to 1.95 inLb)

Cont.

Date	Iss.	Title	Drawn	Checked	Scale
22.04 2005	1	FM Approvals Control Drawing for intrinsically safe BA334D & BA338C Externally Powered Rate Totalisers	RC		NTS
			Drawing No.	CI330-32	
			Sheet 3		

Iss.	Date	Modification	Ckd.	Appd.
	22.04 2005			
Iss.	1	First release	Ckd.	Appd.



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England
Hitchin

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8. When installed in a hazardous (classified) location the BA334D shall be fitted with cable glands / conduit hubs selected from the following table.

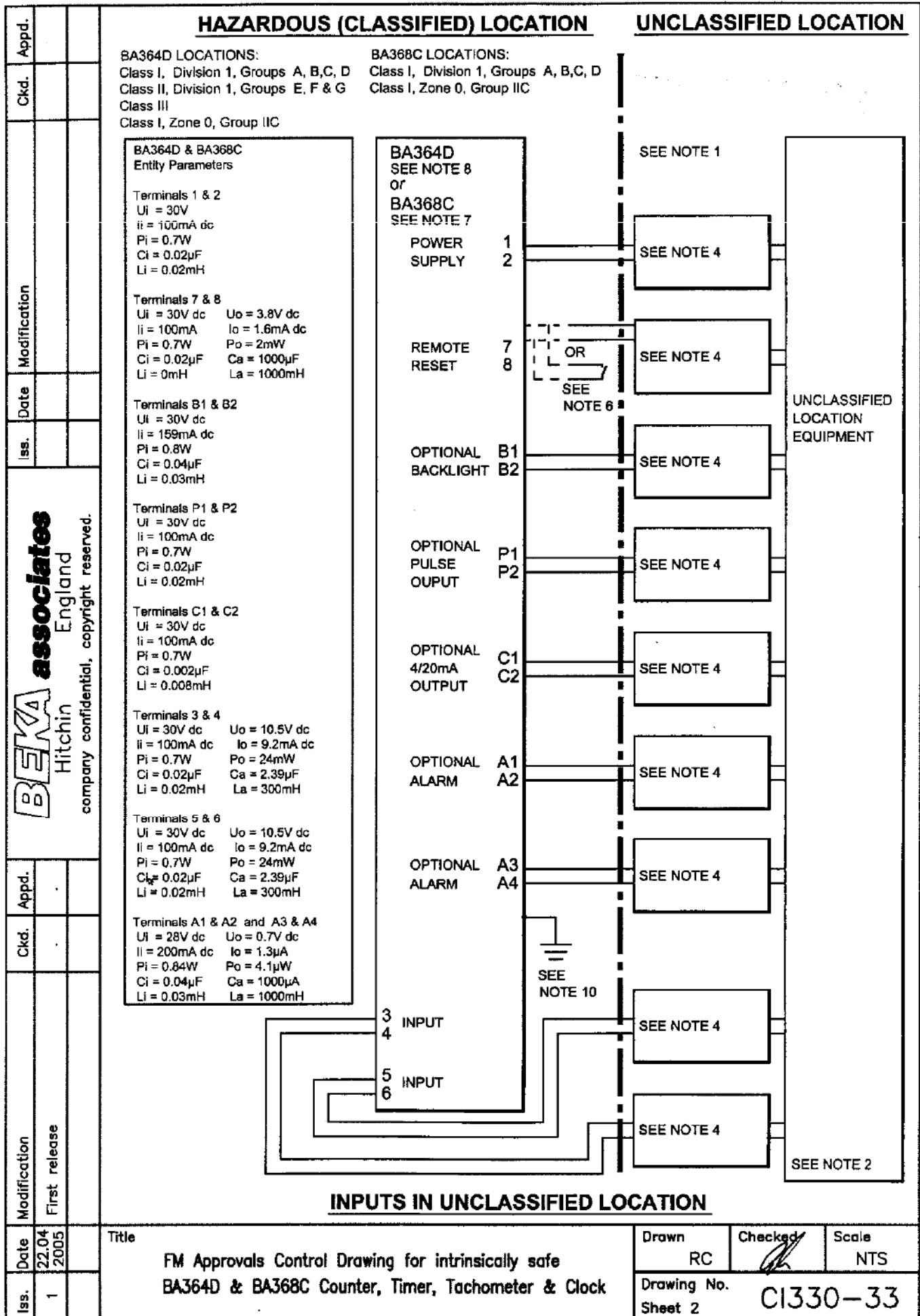
Metallic glands and hubs must be grounded – see note 9.

Class	Permitted gland or conduit hub
Class I	Any metallic or plastic cable gland or conduit hub that provides the required environmental protection.
Class II and III	Crouse – Hinds Myler hubs SSTG-1 STG-1 STAG-1 MHUB-1 O-Z / Gedrey hubs CHMG-50DT REMKE hub WH-1-G Killark Glands CMCXAA050 MCR050 MCX050

9. In addition to the supplied bonding plate, when 2 or 3 metallic glands or conduit hubs are fitted to a BA334D, all metallic glands or conduit hubs must be connected together and grounded.
10. **CAUTION:** The BA334D enclosure is manufactured from conductive plastic per Article 250 of the National Electrical Code the enclosures shall be grounded using the 'E' terminal on the terminal block.
11. Circuit connections to terminals 1 & 2; 7 & 8; B1 & B2; P1 & P2; C1 & C2; A1 & A2 and A3 & A4 shall be installed as separate intrinsically safe circuits in accordance with the National Electrical Code.

Iss.	Date	Title	Drawn	Checked	Scale
			RC		NTS
		FM Approvals Control Drawing for intrinsically safe BA334D & BA338C Externally Powered Rate Totalisers	Drawing No. Sheet 4	CI330-32	

HAZARDOUS (CLASSIFIED) LOCATION				UNCLASSIFIED LOCATION			
BA364D LOCATIONS: Class I, Division 1, Groups A, B, C, D Class II, Division 1, Groups E, F & G Class III Class I, Zone 0, Group IIC		BA368C LOCATIONS: Class I, Division 1, Groups A, B, C, D Class I, Zone 0, Group IIC		SEE NOTE 1 			
BA364D & BA368C Entity Parameters Terminals 1 & 2 U _i = 30V I _i = 100mA dc P _i = 0.7W C _i = 0.02µF L _i = 0.02mH Terminals 7 & 8 U _i = 30V dc U _o = 3.8V dc I _i = 100mA I _o = 1.6mA dc P _i = 0.7W P _o = 2mW C _i = 0.02µF C _a = 1000µF L _i = 0mH L _a = 1000mH Terminals B1 & B2 U _i = 30V dc I _i = 159mA dc P _i = 0.8W C _i = 0.04µF L _i = 0.03mH Terminals P1 & P2 U _i = 30V dc I _i = 100mA dc P _i = 0.7W C _i = 0.02µF L _i = 0.02mH Terminals C1 & C2 U _i = 30V dc I _i = 100mA dc P _i = 0.7W C _i = 0.002µF L _i = 0.008mH Terminals 3 & 4 U _i = 30V dc U _o = 10.5V dc I _i = 100mA dc I _o = 9.2mA dc P _i = 0.7W P _o = 24mW C _i = 0.02µF C _a = 2.39µF L _i = 0.02mH L _a = 300mH Terminals 5 & 6 U _i = 30V dc U _o = 10.5V dc I _i = 100mA dc I _o = 9.2mA dc P _i = 0.7W P _o = 24mW C _i = 0.02µF C _a = 2.39µF L _i = 0.02mH L _a = 300mH Terminals A1 & A2 and A3 & A4 U _i = 28V dc U _o = 0.7V dc I _i = 200mA dc I _o = 1.3µA P _i = 0.84W P _o = 4.1µW C _i = 0.04µF C _a = 1000µA L _i = 0.03mH L _a = 1000mH		BA364D SEE NOTE 8 & 10 OR BA368C SEE NOTE 7 POWER SUPPLY 1 2 REMOTE RESET 7 8 OR SEE NOTE 6 OPTIONAL BACKLIGHT B1 B2 OPTIONAL PULSE OUTPUT P1 P2 OPTIONAL 4/20mA OUTPUT C1 C2 OPTIONAL ALARM A1 A2 OPTIONAL ALARM A3 A4 3 INPUT 4 INPUT 5 INPUT 6 INPUT SEE NOTE 10		SEE NOTE 4 SEE NOTE 4 SEE NOTE 4 SEE NOTE 4 SEE NOTE 4 SEE NOTE 4 SEE NOTE 4 SEE NOTE 2			
VOLTAGE PULSE, PROXIMITY DETECTOR OR SWITCH CONTACT SEE NOTE 5 VOLTAGE PULSE, PROXIMITY DETECTOR OR SWITCH CONTACT SEE NOTE 5		Note: No modification to be made without reference/approval from FM Approvals and BEKA Associates Design Department.					
INPUTS IN HAZARDOUS (CLASSIFIED) LOCATION							
Title FM Approvals Control Drawing for intrinsically safe BA364D & BA368C Counter, Timer, Tachometer & Clock				Drawn RC		Checked 	
Date 22.04.2005				Scale NTS		Drawing No. Sheet 1 of 4 C1330-33	
Iss. 1				File: C1330-33s1.dwg 18.05.05			



Iss.	Date	Modification	Ckd.	Appd.	BEKA associates Hitchin England company confidential, copyright reserved.
1	22.04 2005	First release			

Notes:

- The associated intrinsically safe barriers or galvanic isolators must be FM approved and the manufacturers' installation drawings must be followed when installing this equipment.
- The unclassified location equipment connected to the associated intrinsically safe barriers must not use or generate more than 250V rms or 250V dc.
- Installation should be in accordance with ANSI/ISA RP 12.06.01 "Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations" and the National Electrical Code ANSI/NFPA 70.
- One single channel or one channel of a dual channel barrier or galvanic isolator with entity parameters complying with the following requirements:

Uo or Vt	equal to or less than	Ui
Io or It	equal to or less than	Ii
Po	equal to or less than	Pi
La	equal to or greater than	Lcable + Li
Ca	equal to or greater than	Ccable + Ci
- Hazardous (classified) location equipment complying with the requirements of note 4 and the input parameters listed on Sheets 1 and 2 for Terminals 3 and 4, and 5 and 6, or simple apparatus.
- Simple apparatus or FM approved associated apparatus with contacts having entity parameters complying with the following requirements:

Uo or Vt	equal to or less than	Ui
Io or It	equal to or less than	Ii
La	equal to or greater than	Lcable + Li
Ca	equal to or greater than	Ccable + Ci
- To maintain NEMA 4X protection between the BA368C and the mounting panel:

Four panel mounting clips should be used

Minimum panel thickness should be 2mm (0.08inches) Steel
 3mm (0.12inches) Aluminium

*Outside panel finish should be smooth, free from particle inclusions, runs or build-up around cut-out.

Panel cut-out should be 66.2 x 136.0mm -0.0 +0.5
 (2.60 x 5.35 inches -0.00 +0.02)

Edges of panel cut-out should be deburred and clean

Each panel mounting clip should be tightened to between: 20 and 22cNm (1.77 to 1.95 inLb)

Cont.

Title FM Approved Control Drawing for intrinsically safe BA364D & BA368C Counter, Timer, Tachometer & Clock	Drawn RC	Checked 	Scale NTS
Drawing No. Sheet 3		C1330-33	

Iss.	Date	Modification	Ckd.	Appd.	BEKA associates Hitchin England company confidential, copyright reserved.	8. When installed in a hazardous (classified) location the BA364D shall be fitted with cable glands / conduit hubs selected from the following table. Metallic glands and hubs must be grounded – see note 9.						
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Iss.	Date	Modification	Ckd.	Appd.		11. Circuit connections to terminals 1 & 2; 7 & 8; B1 & B2; P1 & P2; C1 & C2; A1 & A2 and A3 & A4 shall be installed as separate intrinsically safe circuits in accordance with the National Electrical Code.						
Iss.	Date	Modification	Ckd.	Appd.		Title FM Approved Control Drawing for intrinsically safe BA364D & BA368C Counter, Timer, Tachometer & Clock						
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 Note:
 No modification to be made
 without reference/approval
 from FM Approvals and
 BEKA Associates Design
 Department.

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5. When installed in a hazardous (classified) location the BA334D shall be fitted with cable glands / conduit hubs selected from the following table.
Metallic glands and hubs must be grounded – see note 7.

Class	Permitted gland or conduit hub
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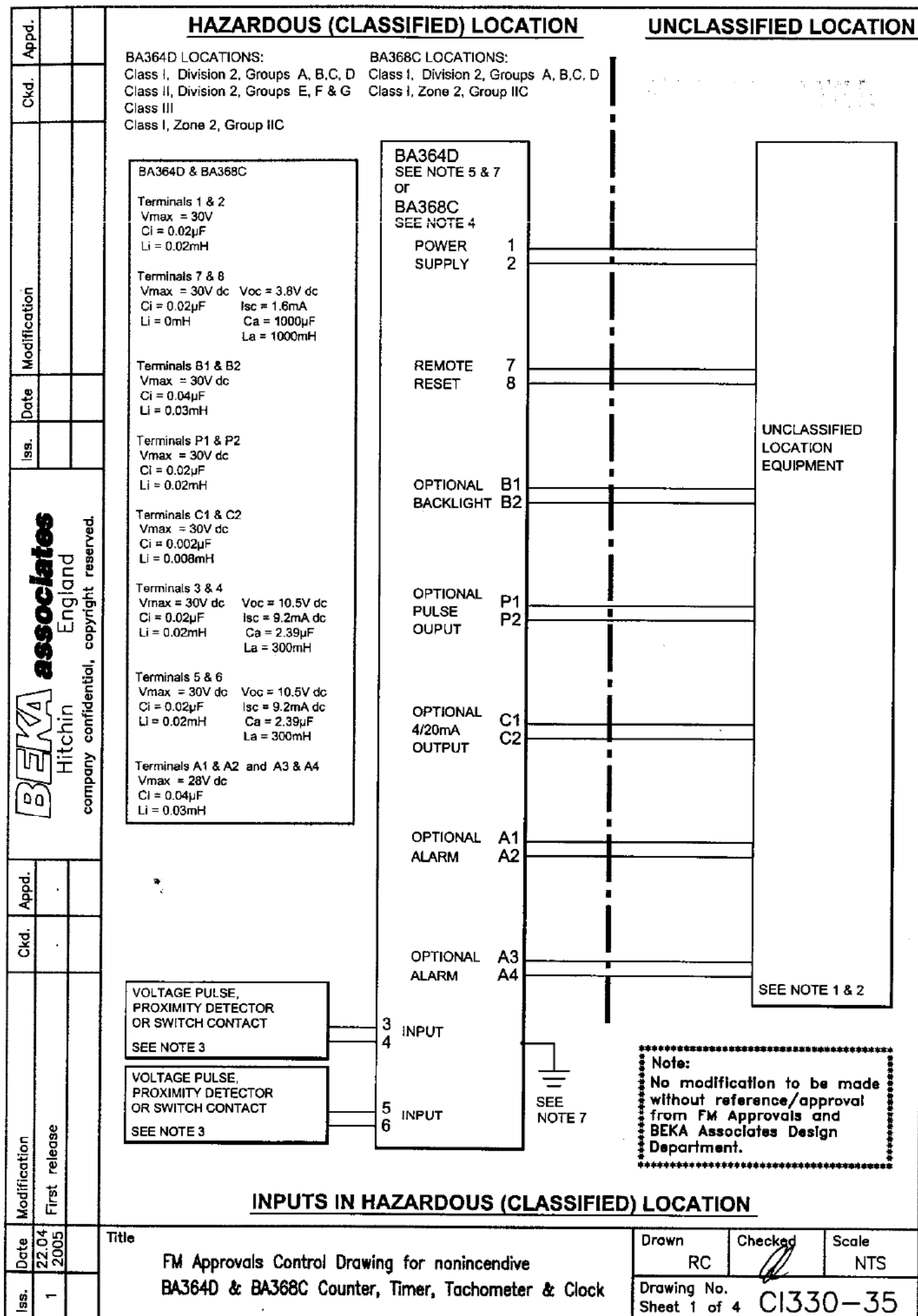
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8. NIFW = Nonincendive Field Wiring; any of the wiring methods permitted for unclassified locations, as defined in the National Electrical Code ANSI/NFPA 70, may be used for this installation.

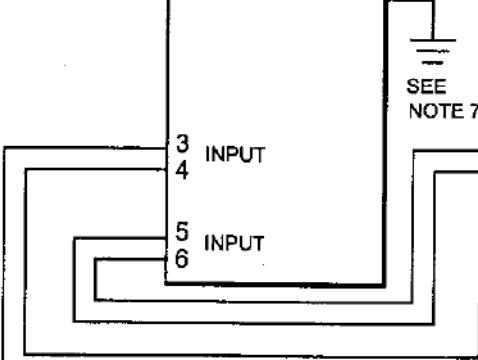
Title

FM Approvals Control Drawing for nonincendive
BA334D & BA338C Externally Powered Rate Totalisers

Drawn RC	Checked 	Scale NTS
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Drawing No. Sheet 4	C1330-34
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HAZARDOUS (CLASSIFIED) LOCATION		UNCLASSIFIED LOCATION	
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Title FM Approvals Control Drawing for nonincendive BA364D & BA368C Counter, Timer, Tachometer & Clock		Drawn RC	Checked 
Date 22.04 2005 Iss. 1		Scale NTS Drawing No. Sheet 2 C1330-35	

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