

Nonincendive Applications in Division 2 / Zone 2

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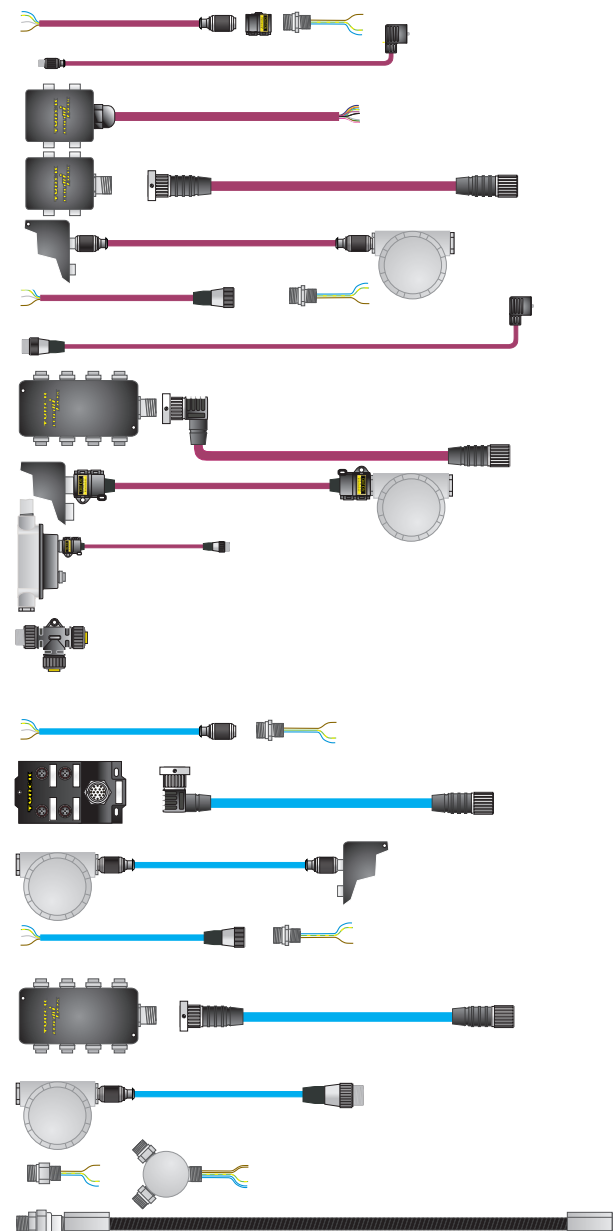
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Explosionproof Applications

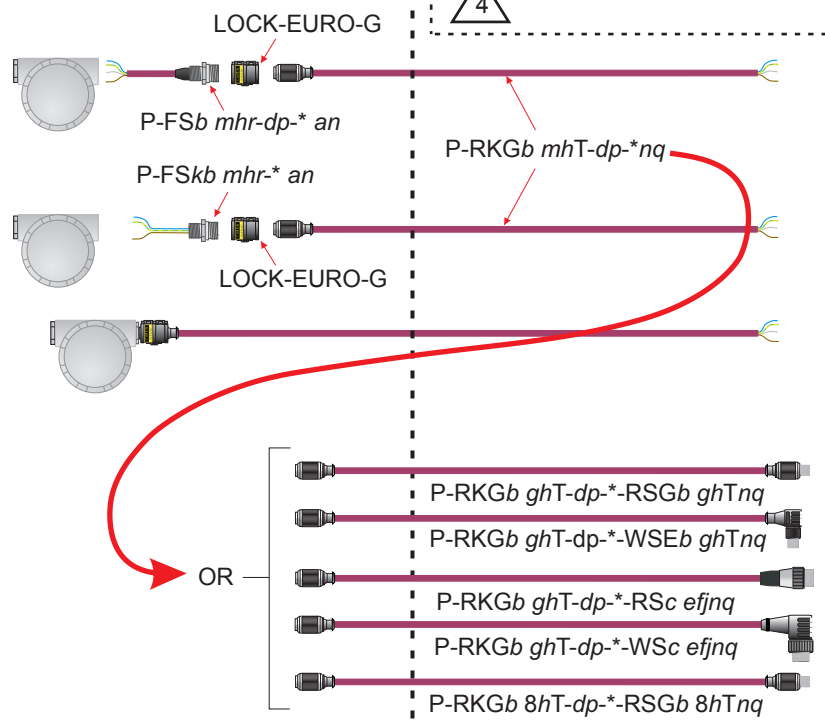
<i>minifast</i> [™] explosionproof feed-thru receptacles	56-61
<i>minifast</i> [™] MC-HL receptacle extensions and cords	62



Rev	Description	Date	This document is the property of Turck Inc. The use of this document without written permission is prohibited.	TURCK 3000 Campus Drive Minneapolis, MN 55441-2656 1-800-544-7769 (763) 553-7300 (763) 553-0708 fax www.turck.com	Drawing No. QCF-00147	
M	Add minifast for Class II, Division 2; remove M-M and F-F cords; add S849, S613, S1658 options	10/16/19			Title Control Drawing for FM Approved Turck multibox Junction Box Process Wiring System	
L	Add P-VB2-RSE.../2RKE... splitters, add EXG with integral molded minifast connector	6/26/18			Scale None	Sheet 1 of 62

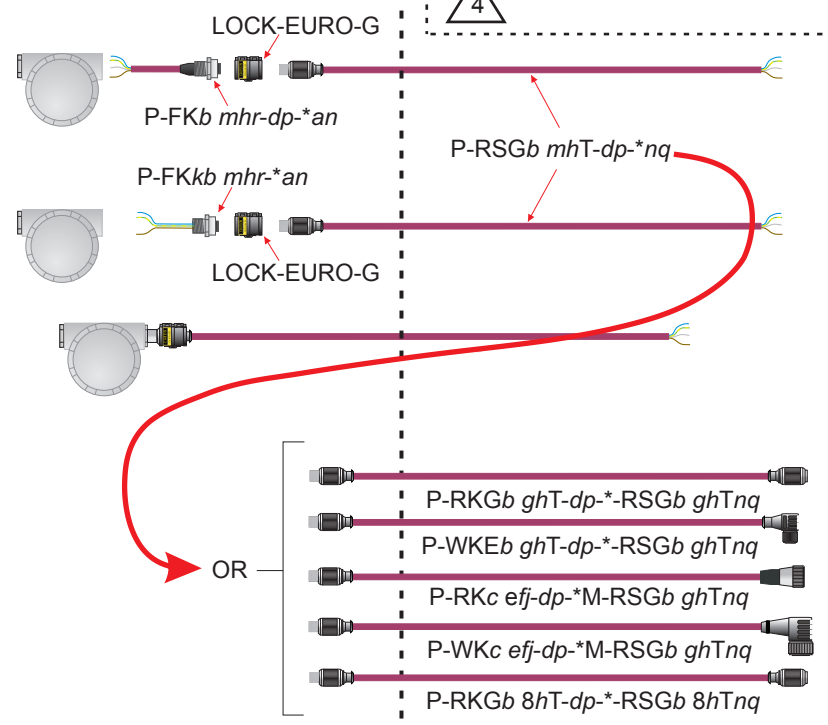
Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Notes:

- Key: $a = /14.5/NPT, /14.75/NPT, /M20, \text{ or blank}$ $b = V \text{ or blank}$ $c = M \text{ or V}$ $d = 3 \text{ or 4-digit ITC or PLTC cable number}$ $e = 2, 3, 4, 5, \text{ or } 6$
 $f = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $g = 4 \text{ or } 5$ $h = .1, .2, .3, \dots .99, \text{ or blank}$ $j = H \text{ or blank}$ $k = P \text{ or blank}$ $m = 4, 5, \text{ or } 8$
 $n = /S1331, /S1599, /S613, /S849, \text{ or blank}$ $p = XL \text{ or blank}$ $q = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 \text{ or blank}$
 $r = \text{Drain, D or blank}$



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2

- The installation must be in accordance with the National Electrical Code (NEC), ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.
- lokfast guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.

4. The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

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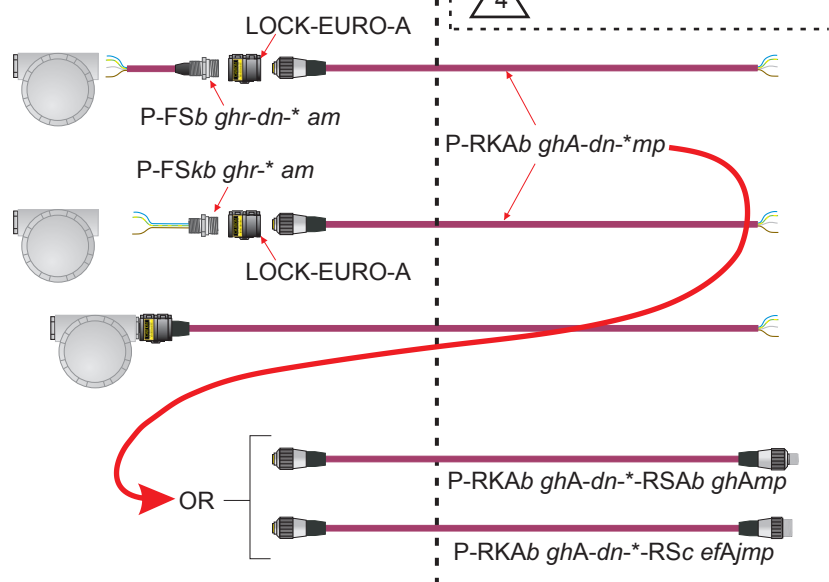
Rev M

Scale None

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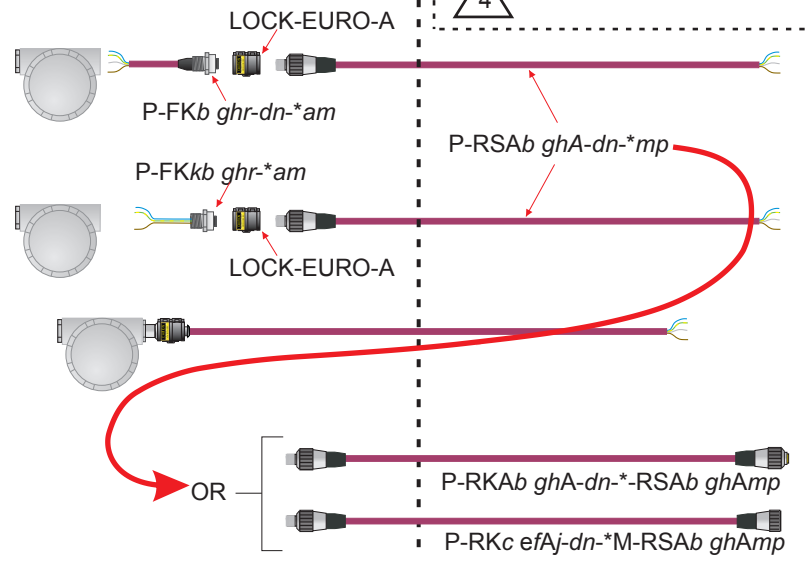
Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Notes:

- Key: $a = /14.5/NPT, /14.75/NPT, /M20, \text{ or blank}$ $b = V \text{ or blank}$ $c = M \text{ or V}$ $d = 3 \text{ or 4-digit ITC or PLTC cable number}$ $e = 2, 3, 4, 5, \text{ or } 6$
 $f = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $g = 4 \text{ or } 5$ $h = .1, .2, .3, \dots .99, \text{ or blank}$ $j = H \text{ or blank}$ $k = P \text{ or blank}$
 $m = /S1331, /S1599, /S613, /S849, \text{ or blank}$ $n = XL \text{ or blank}$ $p = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 \text{ or blank}$
 $r = \text{Drain, D or blank}$



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2

- The installation must be in accordance with the National Electrical Code (NEC), ANSI/NFPA 70. Specific requirements for the installation of PLTC and ITC rated cable may be found in Article 501, Article 725 and Article 727.

- lokfast* guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.

- The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

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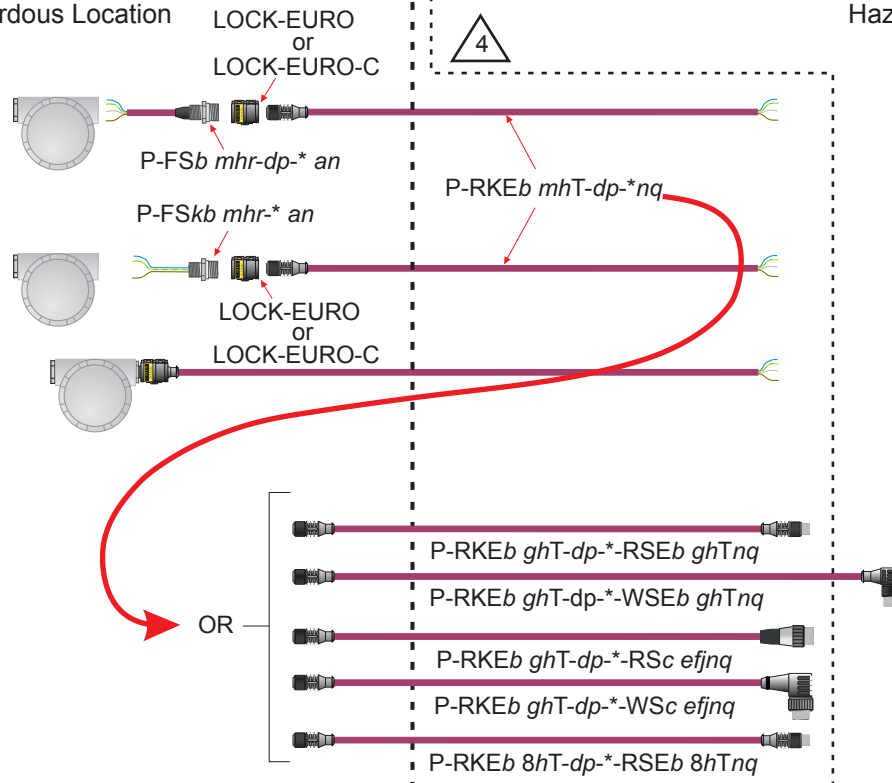
Rev M

Scale None

Sheet 3 of 62

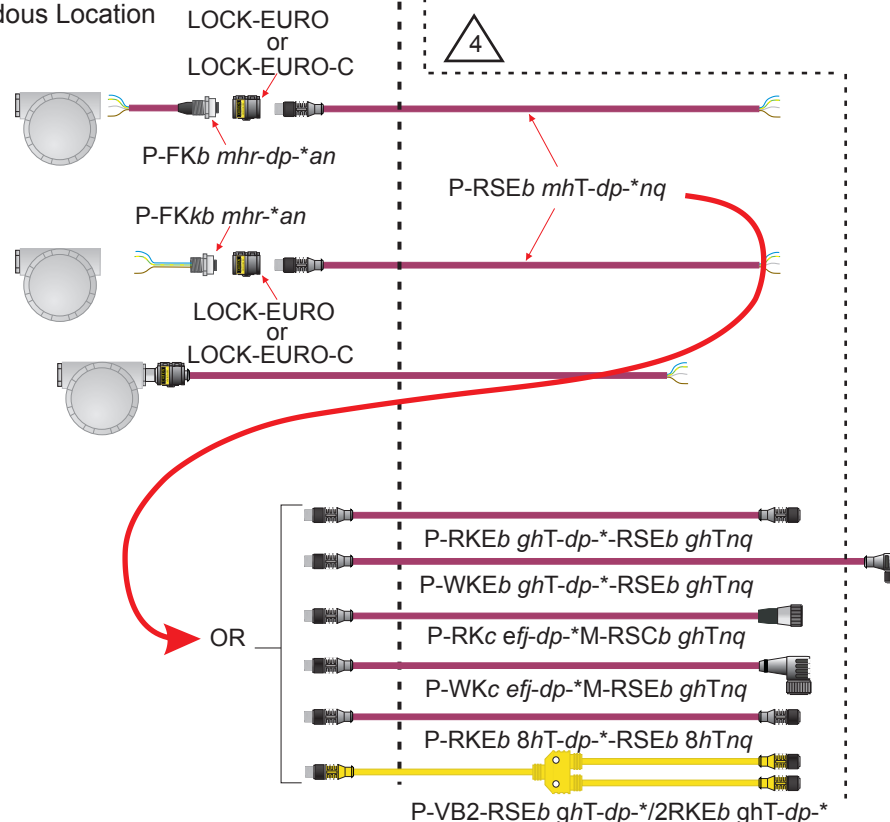
Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Notes:

- Key: $a = /14.5/NPT, /14.75/NPT, /M20, \text{ or blank}$ $b = V \text{ or blank}$ $c = M \text{ or V}$ $d = 3 \text{ or 4-digit ITC or PLTC cable number}$ $e = 2, 3, 4, 5, \text{ or } 6$
 $f = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $g = 4 \text{ or } 5$ $h = .1, .2, .3, \dots .99, \text{ or blank}$ $j = H \text{ or blank}$ $k = P \text{ or blank}$ $m = 4, 5, \text{ or } 8$
 $n = /S1331, /S1599, /S613, /S849, \text{ or blank}$ $p = XL \text{ or blank}$ $q = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 \text{ or blank}$
 $r = \text{Drain, D or blank}$



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2

- The installation must be in accordance with the National Electrical Code (NEC), ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.
- lokfast guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.
- The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

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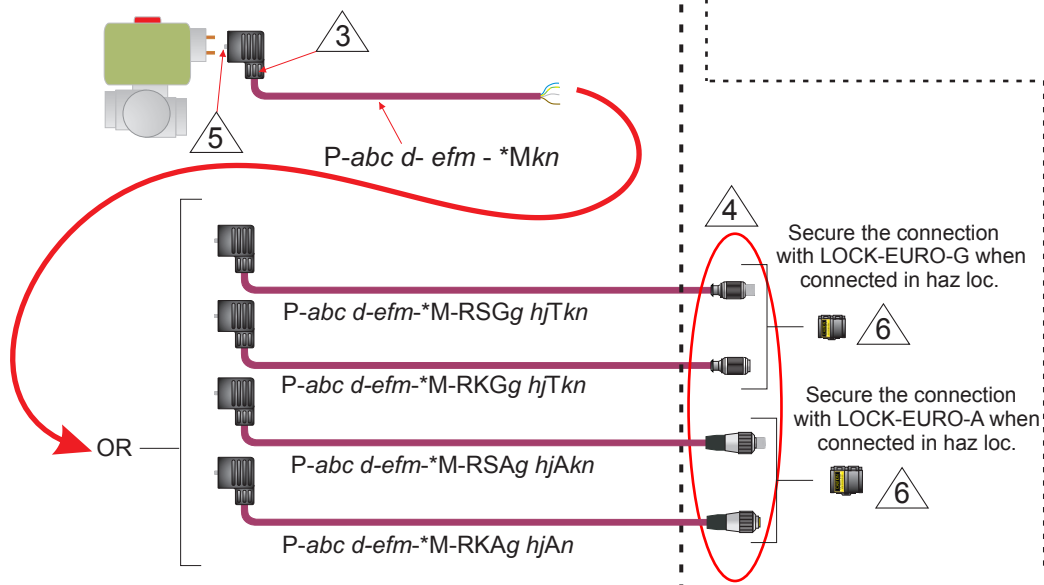
Rev M

Scale None

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Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC Hazardous Location

4 Nonhazardous Location



Notes:

1. Key:

a = Cable exit orientation H, T or V

b = DIN 43650 Type A, B, I, C8 or C9

c = Body color G, S or Y

d = Pinout 2, 21, 22, or 3

e = Wiring Code A, B, C, D, E, F, K, L, M, N, P, R

(A, B, C, D, E, F, K for use with DIN Type A; A, B, C, D, E, F, for use with DIN Type B or I; A, L, M, N, P, R for use with DIN Type C8 or C9)

f = 3 or 4-digit ITC or PLTC cable number

g = Coupling nut material V or blank

h = Number of conductors 4 or 5

j = Connection code .1, .2, .3,99, or blank

k = /S1331, /S1599, /S1830, or blank

m = XL or blank

n = /S679, /S771, /S996, /S1055, /S1057, /S1126, /S3001, /S3034 or blank



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2; with an integral connector per DIN 43650, Type A (18 mm contact spacing), Type B (10 mm contact spacing), Type I (11 mm contact spacing), Type C8 (8 mm contact spacing) or Type C9 (9.4 mm contact spacing).

2. The installation must be in accordance with the National Electrical Code (NEC), ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.

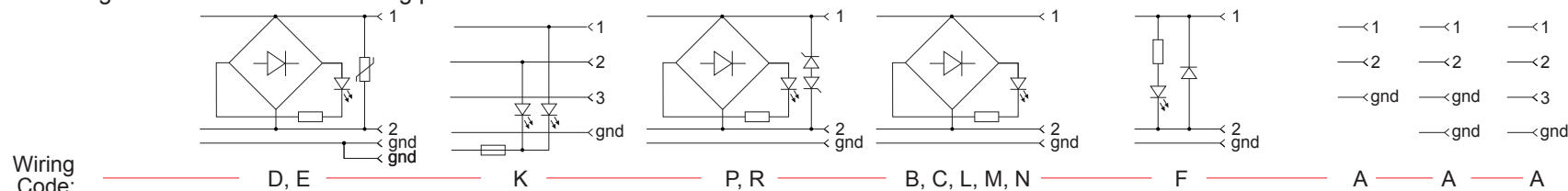
3. The molded DIN 43650 valve plug does not meet the requirements of the NEC, Article 501, for cable seals in Class I, Division 2. Therefore, when the installation requires cable sealing, single-ended DIN 43650 cordsets must be entirely installed in Division 2 - e.g the cable must not cross the boundary to an unclassified location and the cable must be terminated in a manner in accordance with the NEC..

4. The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

5. The fastening screw requires a tool to disconnect, rendering the connection not normally arcing. The fastening screw must be engaged at all times when the circuit is live.

6. All eurofast connections in the hazardous location must fitted with a lokfast guard, rendering the connection not normally arcing. The lokfast guard must be in place at all times when the circuit is live.

7. The wiring codes indicate the following pin-outs:



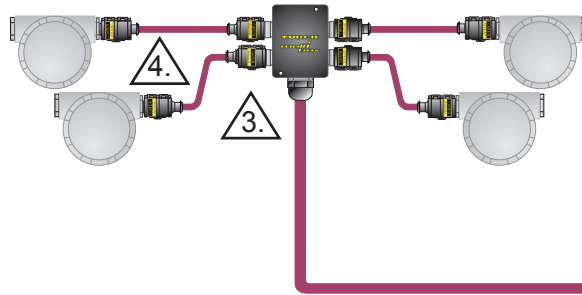
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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	5 of 62

Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC
Hazardous Location

Additional port number/type
description groups when all
ports are not identical

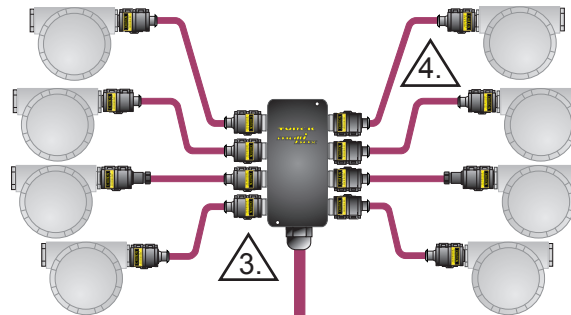
P- a VBM b c def def def def - gr - hM - jk m n q s



a = Housing material: SS- or blank
b = Port connector material: V or blank
c = Total number of ports: 3, 4, 5, 6, 7 or 8
d = Number of a given type if all ports
are not identical: -1, -2, -3, -4, -5, -6, -7 or blank
e = Number of port conductors: 4 or 5
f = Wiring option: 0, .1, .2, .3, . . . , .99
g = 3 or 4-digit ITC or PLTC cable number
h = Cable/lead length in meters
j = Molded home-run connector type: CSM, CSWM,
CKM, CKWM, CSSM, RS, WS, RK, WK or blank

Additional port number/type
description groups when all
ports are not identical

P- a VBM b c def def def def - gr - hM - jk m n q s

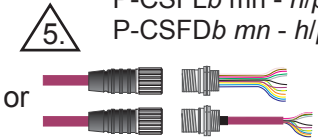


CA-1/CK ms, CA-1/CKV ms,
CA-1/CS ms, CA-1/CSV ms

k = Home-run connector material/locking:
With CS../CK.. types - L, T, V or blank
With R./W. types - M or V
m = Number of home-run connector conductors:
7, 8, 9, 10, 12 or 19
n = Wiring option: 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99

Nonhazardous Location

P-CKFLb mn - h/ps
P-CKFDb mn - h/ps
P-CSFLb mn - h/ps
P-CSFDb mn - h/ps



P-CKFLb mn - gr-h -*/ps
P-CKFDb mn - gr-h -*/ps
P-CSFLb mn - gr-h -*/ps
P-CSFDb mn - gr-h -*/ps

p = Option /S613 or blank
q = Armor option: A or blank
r = XL or blank
s = Option /S1331, /S1599
or blank

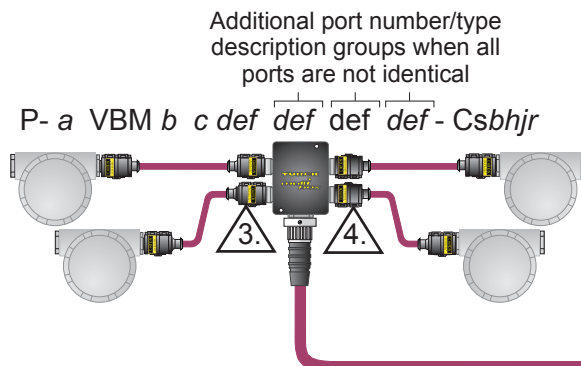
Notes:

1. Field circuits may be installed using any of the combinations of equipment shown on sheets 9-11.
2. The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, and Articles 725 and 727.
3. The potted-in construction of the integral home-run cable and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Class I, Division 2.
4. lokfast guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.
5. When j = CSM..., CKM..., CSSM..., CXM..., RS., RK., WS., or WK., a connector is molded to the end of the home-run cable. When connection is made to a fixed receptacle in the hazardous location, molded CS../CK. connectors must have k = L or T indicating a locking coupling nut; R./W. connectors must be locked with a lokfast guard. When the connection is made in the nonhazardous location, locking type coupling nuts or lokfast guards are not required.
6. When j = RS, WS, RK or WK, a minifast B- or C-size connector is molded to the end of the home-run cable for installation per Turck control drawing Ni-2.407.
7. See Sheets 25 and 26 for installation of CA-... conduit body adaptors.

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Drawing No.	QCF-00147	Rev	M
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Class I, Division 2, Group A,B,C, or D; or Class I, Zone 2, Group IIC Hazardous Location



When connection is made to a fixed receptacle in the hazardous location (e.g. - P-C.F. receptacle or CA-.. conduit body adaptor), the molded connector must have $x = L$ or T indicating locking coupling nut.

When the connection of a .CSM., .CSWM., .CKM., or .CKWM. connector is made to an extension cord in the hazardous location, the connection must be the locking type: .CSML., .CSWML., .CSMT., .CSWMT., .CKML., .CKWML., .CKWMT., or .CKMT.

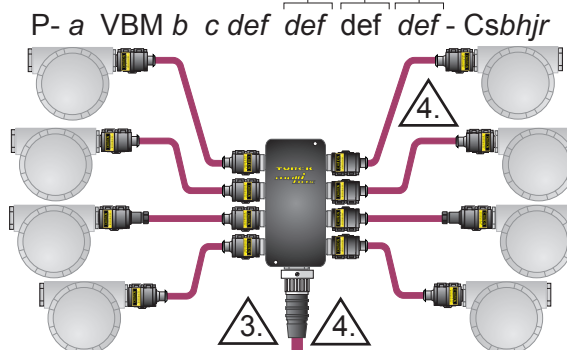
When the connection of a .CSSM. or .CXM. connector is made to an extension cord in the hazardous location, the cord must be the locking type: .CSML., .CSWML., .CSMT., .CSWMT., .CKML., .CKWML., .CKMT. or .CKWMT.

Notes:

- Field circuits may be installed using any of the combinations of equipment shown on sheets 9-11.
- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated or ITC rated cable may be found in Article 501, and Articles 725 and 727.

- The molded construction of the home-run cable and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501 for cable seals in Class I, Division 2. P-CKM... home-run connectors must either be securely connected to the junction box or plugged using a Turck CS-CC closure cap.
- lokfast guards or set-screw construction on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.
- See Sheets 25 and 26 for installation of CA-... conduit body adaptors.

Additional port number/type description groups when all ports are not identical



P-CKMp hjm - ks - gr

CA-1/CK hr, CA-1/CKV hr, CA-1/CS hr, CA-1/CSV hr

P-CSMn CKMn hjm - ks - gr,

P-CSMn CKWMn hjm - ks - gr,

P-CSWMn CKMn hjm - ks - gr

P-CSWMn CKWMn hjm - ks - gr,

P-CSSMb CKMn hjm - k - gr,

P-CKMn CXMb hjm - k - gr

P-CSSMb CKWMn hjm - k - gr,

P-CKWMn CXMb hjm - k - gr

Nonhazardous Location

a = Housing material: SS- or blank
b = Material: V or blank
c = Total number of ports: 3, 4, 5, 6, 7 or 8
d = Number of a given type if all ports are not identical: -1, -2, -3, -4, -5, -6, -7 or blank
e = Number of port conductors: 4 or 5
f = Wiring option: 0, .1, .2, .3, . . . , .99
g = Cable or lead length in meters
h = Number of home-run conductors: 12 or 19
j = Wiring option: 1, 2, 3, . . . 9, 01, 02, 03, . . . 99
k = 3 or 4-digit ITC or PLTC cable number
m = A or blank n = L or T
p = L, T, V or blank q = /S613 or blank
r = /S1331, /S1599 or blank s = XL or blank

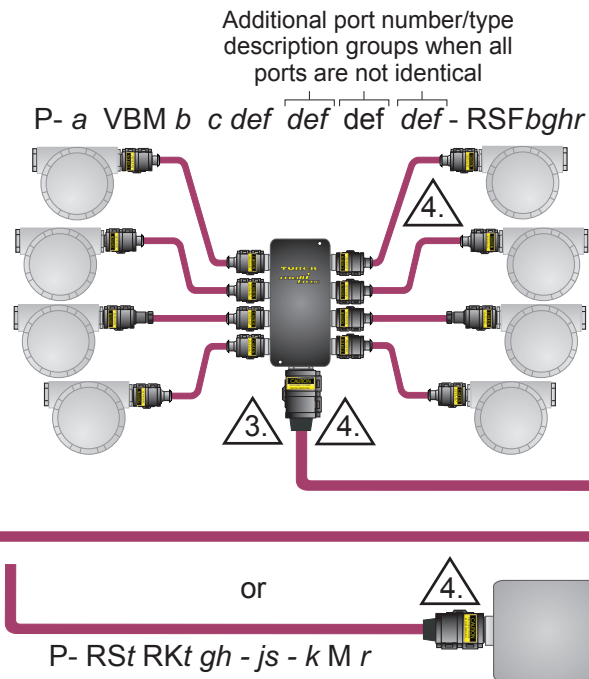
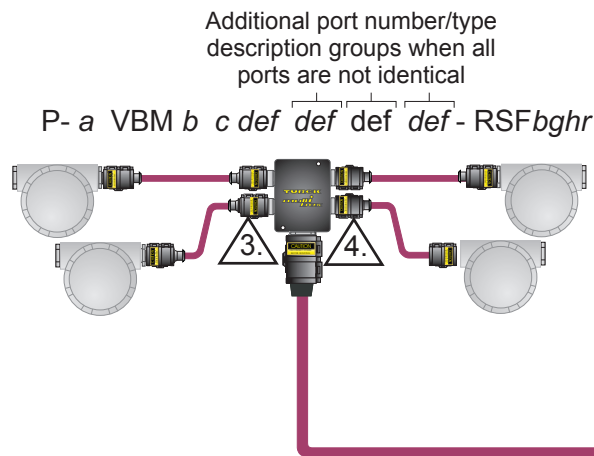
P-CKFLb hjm - ks - gr
P-CKFDb hjm - ks - gr
P-CSFLb hjm - ks - gr
P-CSFDb hjm - ks - gr
P-CKFLb hj - glqr
P-CKFDb hj - glqr
P-CSFLb hj - glqr
P-CSFDb hj - glqr

When the connection is made in the non hazardous location, locking type coupling nuts are not required.

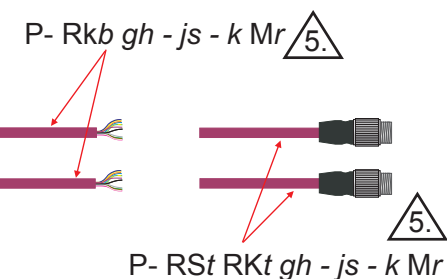
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Drawing No.	QCF-00147	Rev	M
Scale	None	Sheet	7 of 62

Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC
Hazardous Location



Nonhazardous Location



a = Housing material: SS- or blank

b = Port connector material: V or blank

c = Total number of ports: 3, 4, 5, 6, 7 or 8

d = Number of a given type if all ports
are not identical: -1, -2, -3, -4, -5, -6, -7 or blank

e = Number of port conductors: 4 or 5

f = Wiring option: 0, .1, .2, .3, . . . , .99

g = Number of home-run connector conductors:
7, 8, 9, 10, 12, or 19

h = Wiring option: 0, 1, 2, 3, . . . 9, 01, 02, 03, . . .
99 or blank

j = 3 or 4-digit ITC or PLTC cable number

k = Cable length in meters

r = /S1331, /S1599, or blank

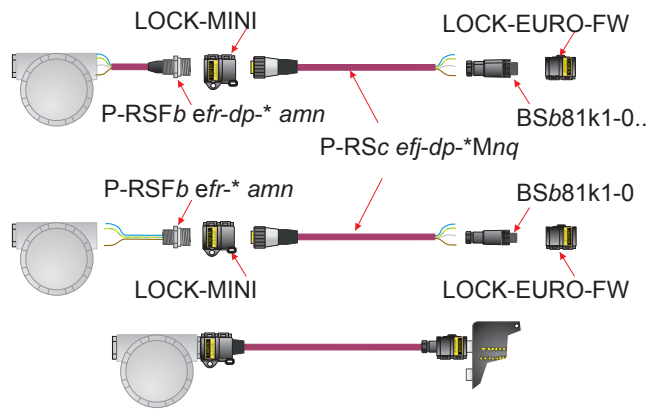
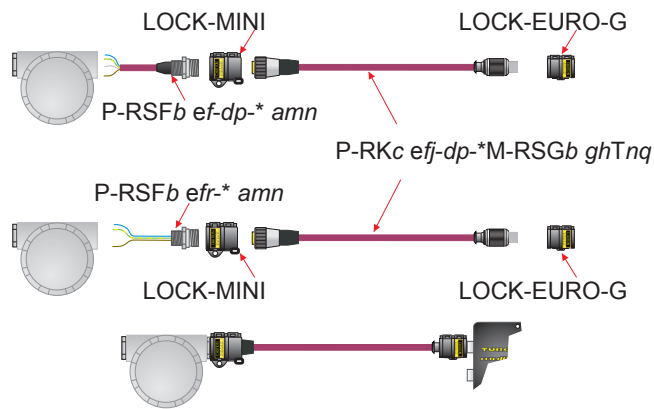
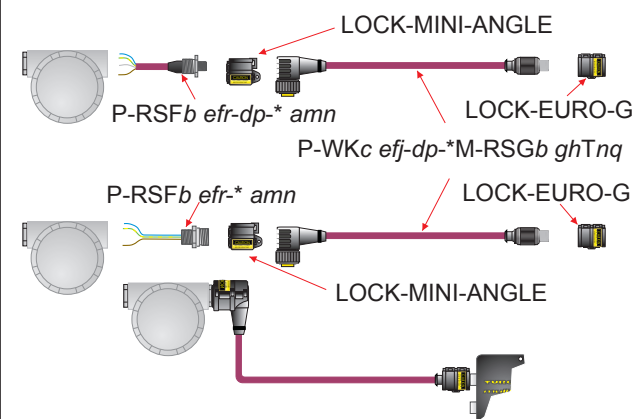
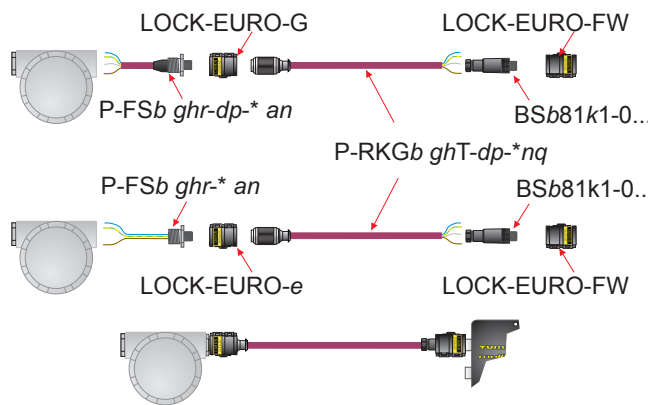
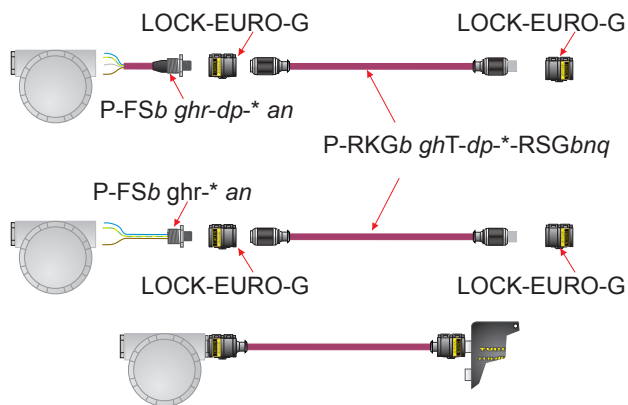
s = XL or blank

t = Coupling nut material, M or V

Notes:

- Field circuits may be installed using any of the combinations of equipment shown on sheets 9-11.
- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated or ITC rated cable may be found in Article 501, and Articles 725 and 727.
- The molded construction of the home-run cable and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501 for cable seals in Class I, Division 2. P-CKM... home-run connectors must either be securely connected to the junction box or plugged using a Turck CS-CC closure cap.
- lokfast guards or set-screw construction on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.
- Home-run cables may be installed per Turck control drawing Ni-2.407.

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	Scale None	Sheet 8 of 62	



KEY

a = /14.5/NPT, /14.75/NPT, /M20, or blank

b = V or blank

c = M or V

d = 3 or 4-digit ITC or PLTC cable number

e = 2, 3, 4, 5, or 6

f = 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99

g = 4 or 5

h = .1, .2, .3,99, or blank

j = H or blank

k = 4, or 5

m = /S3256 or blank

n = /S1331, /S1599, /S613, /S1658, /S849, or blank

p = XL or blank

q = /S679, /S771, /S1055, /S1057, /S1126,
/S3001, /S3034 or blank

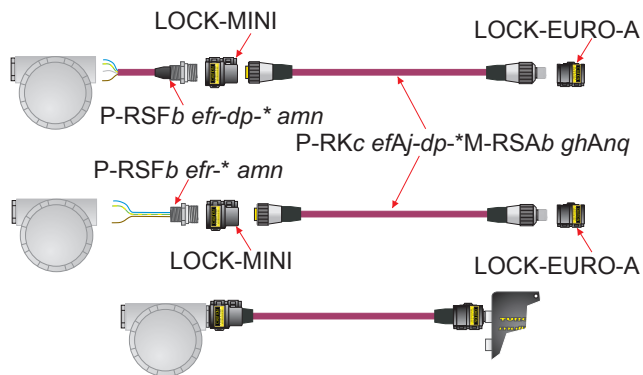
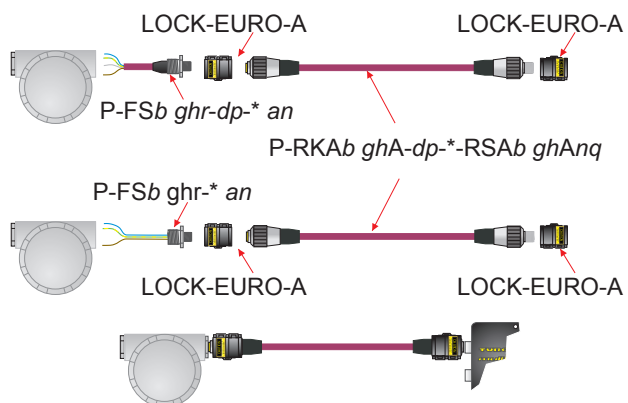
r = D or blank



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2



= Turck multibox with *euromax* port connectors, part numbers identified on Sheets 6-8.



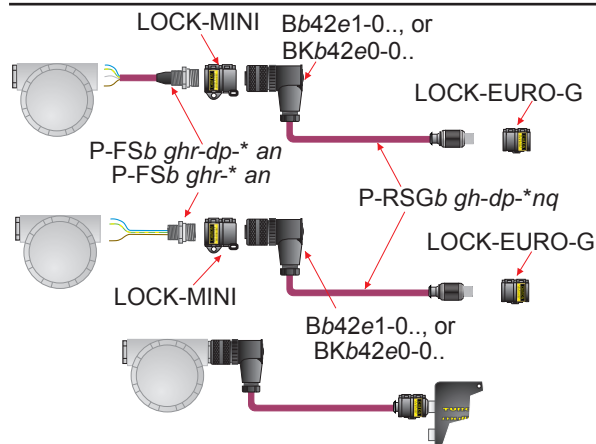
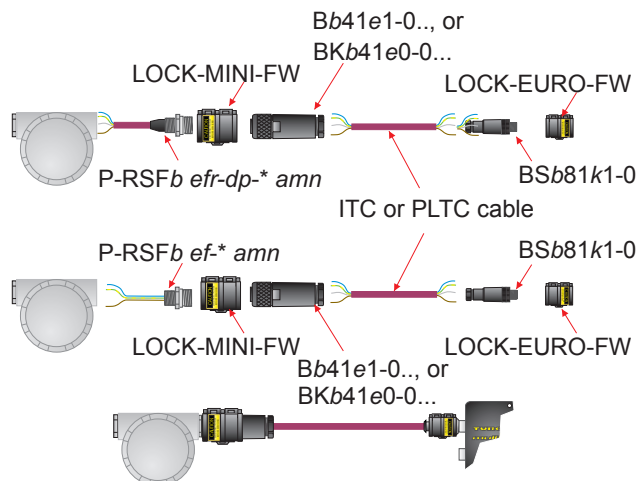
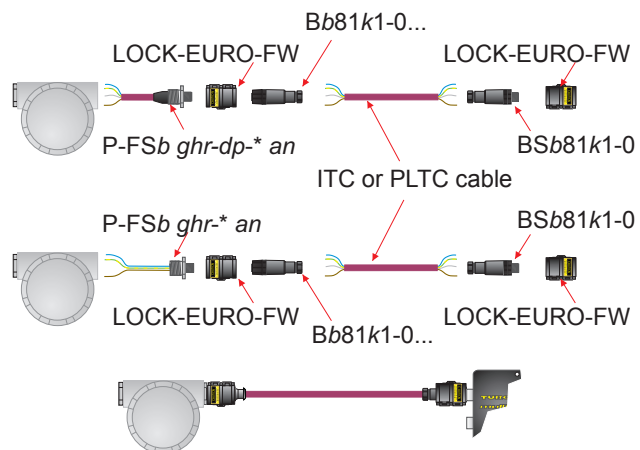
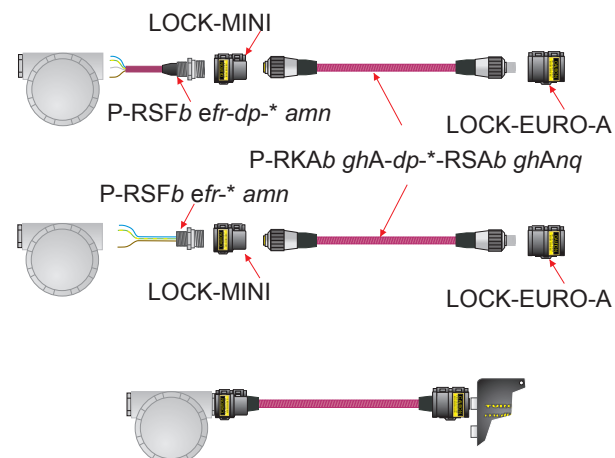
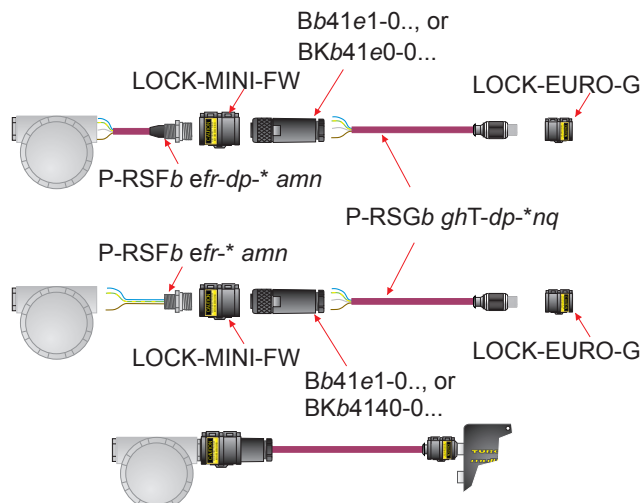
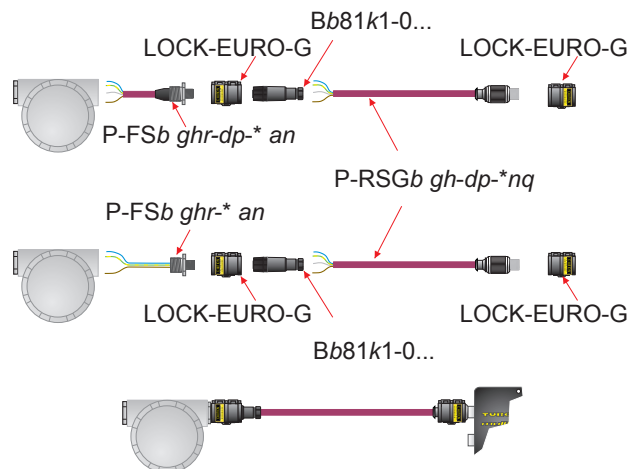
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Drawing No. QCF-00147

Rev M

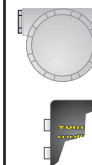
Scale None

Sheet 9 of 62



KEY

a = /14.5/NPT, /14.75/NPT, /M20, or blank
 b = V or blank
 c = M or V
 d = 3 or 4-digit ITC or PLTC cable number
 e = 2, 3, 4, 5, or 6
 f = 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99
 g = 4 or 5
 h = .1, .2, .3,99, or blank
 k = 4, or 5
 m = /S3256 or blank
 n = /S1331, /S1599, /S613, /S1658, /S849, or blank
 p = XL or blank
 q = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 or blank
 r = D or blank



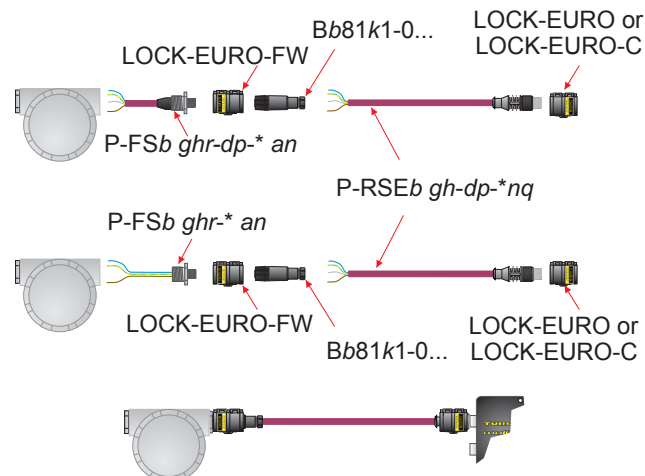
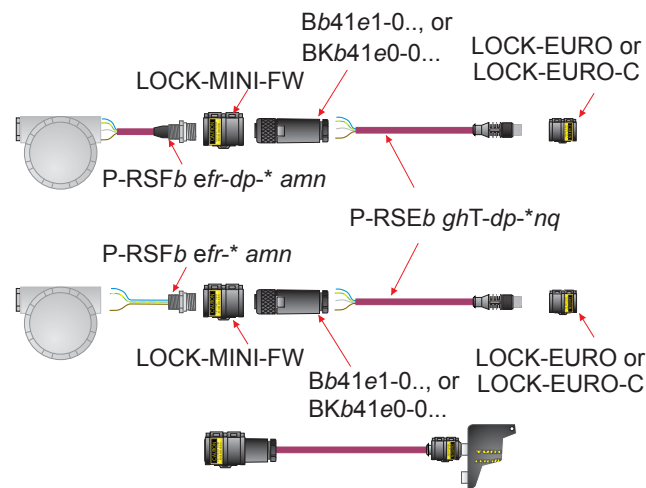
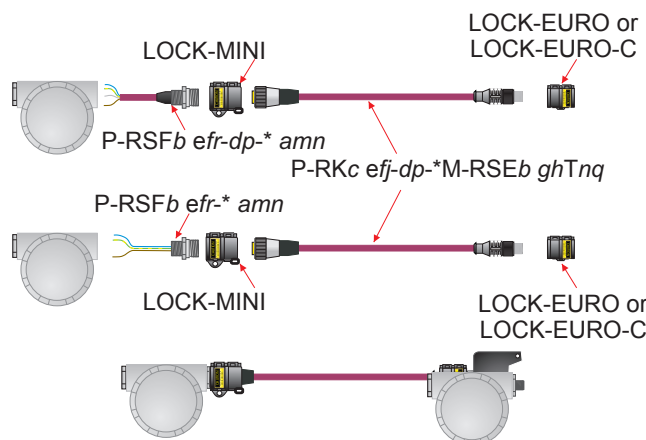
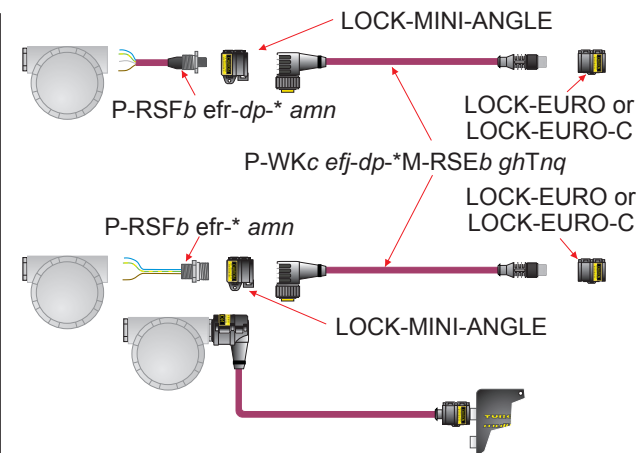
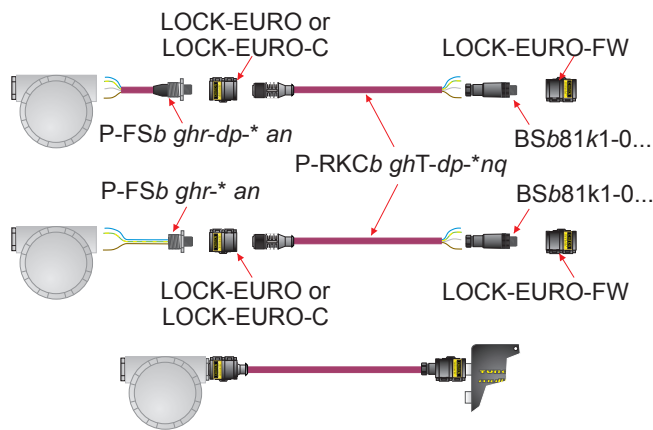
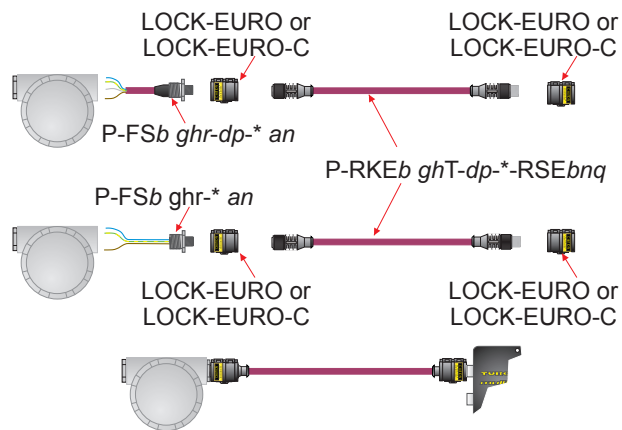
= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2



= Turck multibox with *eurofast* port connectors, part numbers identified on Sheets 6-8.

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Drawing No.	QCF-00147	Rev	M
Scale	None	Sheet	10 of 62



KEY

a = /14.5/NPT, /14.75/NPT, /M20, or blank
b = V or blank
c = M or V
d = 3 or 4-digit ITC or PLTC cable number
e = 2, 3, 4, 5, or 6
f = 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99
g = 4 or 5
h = .1, .2, .3,99, or blank
j = H or blank
k = 4, or 5
m = /S3256 or blank
n = /S1331, /S1599, /S613, /S1658, /S849, or blank
p = XL or blank
q = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 or blank
r = D or blank



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2



= Turck multibox with *eurofast* port connectors, part numbers identified on Sheets 6-8.

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Drawing No. QCF-00147

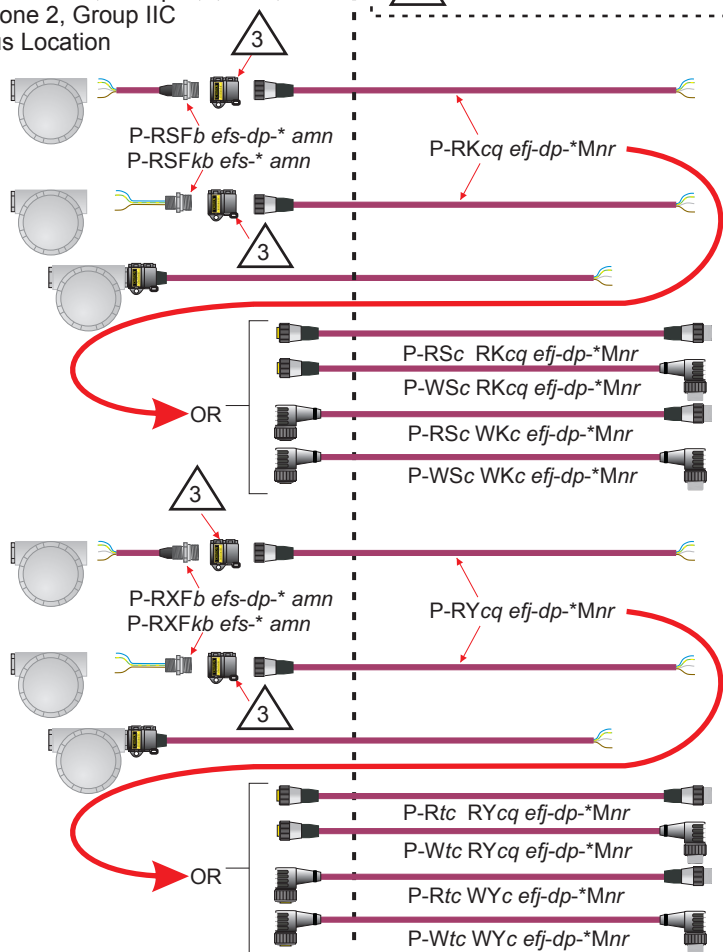
Rev M

Scale None

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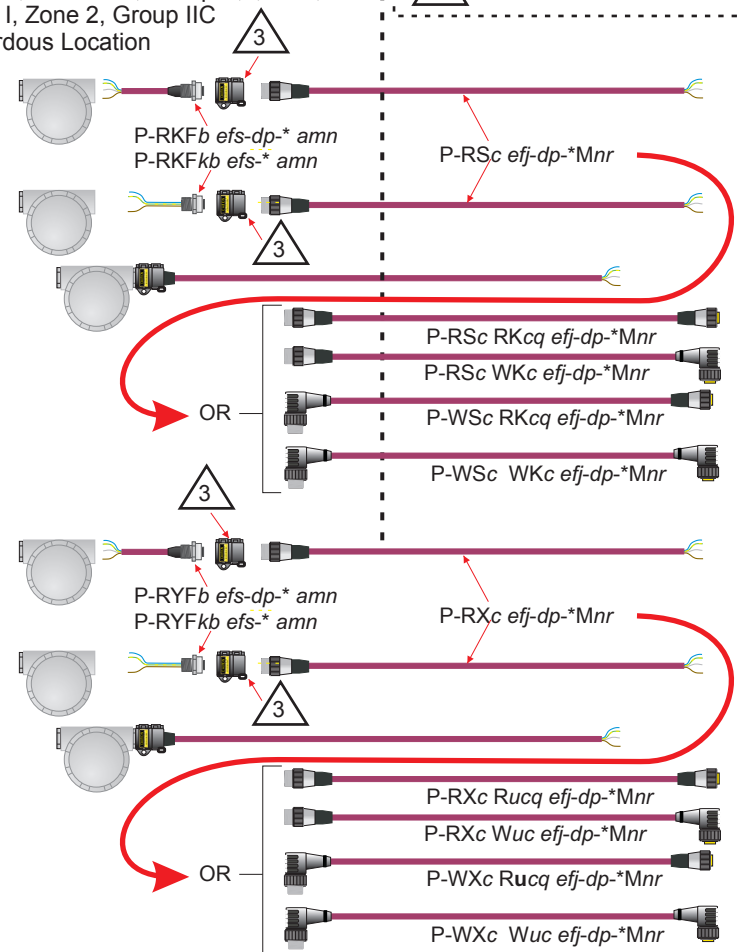
Class I, Division 2, Group A,B,C, or D;
Class II, Division 2, Group E,F, or G, or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Class I, Division 2, Group A,B,C, or D;
Class II, Division 2, Group E,F, or G, or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Notes:

- Key: $a = /14.5/NPT, /14.75/NPT, /M20, \text{ or blank}$ $b = V \text{ or blank}$ $c = M \text{ or } V$ $d = 3 \text{ or 4-digit ITC or PLTC cable number}$ $e = 2, 3, 4, 5, \text{ or } 6$
 $f = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $g = 4 \text{ or } 5$ $h = .1, .2, .3, \dots .99, \text{ or blank}$ $j = H \text{ or blank}$ $k = P \text{ or blank}$ $m = /S3256 \text{ or blank}$
 $n = /S1331, /S1599, /S1658, /S849, \text{ or blank}$ $p = XL \text{ or blank}$ $q = S \text{ or blank}$ $r = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 \text{ or blank}$ $s = D \text{ or blank}$
 $t = S \text{ or } X$ $u = K \text{ or } Y$



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2

- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.

3. Lokfast guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing. Use LOCK-MINI for straight connectors, or LOCK-MINI-ANGLE for right angle connectors.

4. The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

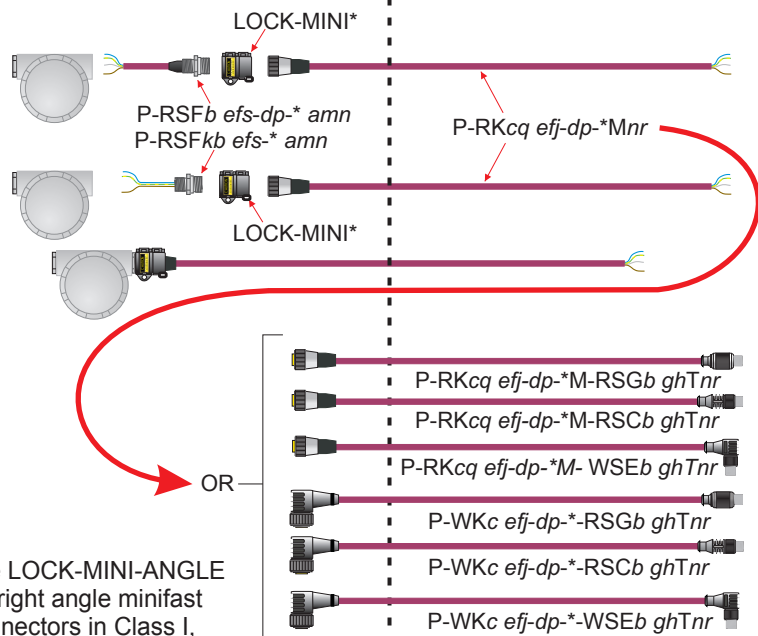
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Scale	None		Sheet	12	of	62	

Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC
Hazardous Location



Nonhazardous Location

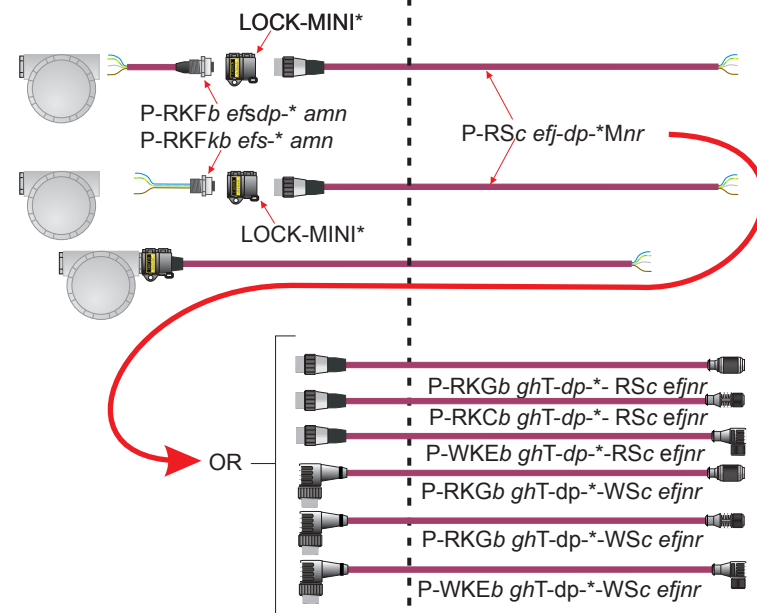


* Use LOCK-MINI-ANGLE
for right angle minifast
connectors in Class I,
Division 2

Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC
Hazardous Location



Nonhazardous Location



Notes:

- Key: $a = /14.5/NPT, /14.75/NPT, /M20, \text{ or blank}$ $b = V \text{ or blank}$ $c = M \text{ or V}$ $d = 3 \text{ or 4-digit ITC or PLTC cable number}$ $e = 2, 3, 4, 5, \text{ or } 6$
 $f = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $g = 4 \text{ or } 5$ $h = .1, .2, .3, \dots .99, \text{ or blank}$ $j = H \text{ or blank}$ $k = P \text{ or blank}$ $m = /S3256 \text{ or blank}$
 $n = /S1331, /S1599, /S613, /S1658, /S849, \text{ or blank}$ $p = XL \text{ or blank}$ $q = S \text{ or blank}$ $r = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 \text{ or blank}$
 $s = D \text{ or blank}$



= Nonincendive equipment, FM approved for
installation in Class I, Division 2 or Class I, Zone 2

- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.
- lokfast guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.
- The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

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Drawing No. QCF-00147

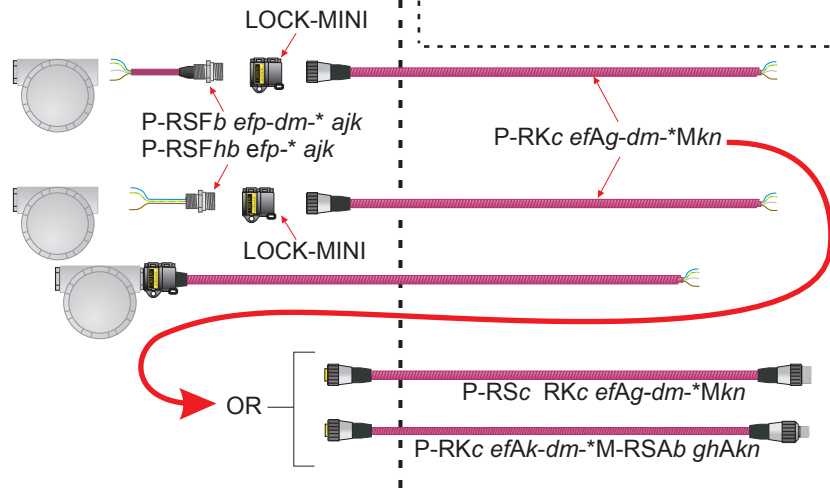
Rev M

Scale None

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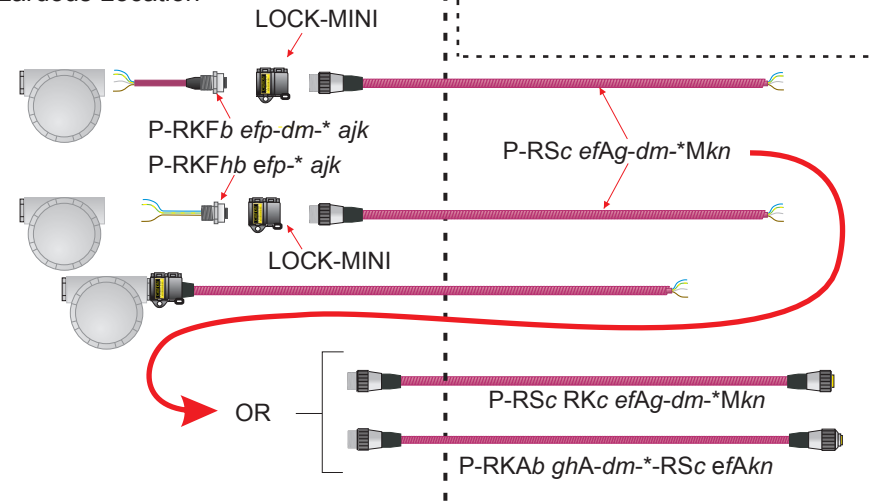
Class I, Division 2, Group A,B,C, or D;
Class II, Division 2, Group E,F, or G; or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Class I, Division 2, Group A,B,C, or D;
Class II, Division 2, Group E,F, or G; or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Notes:

- Key: a = /14.5/NPT, /14.75/NPT, /M20, or blank b = V or blank c = M or V d = 3 or 4-digit ITC or PLTC cable number e = 2, 3, 4, 5, or 6
 f = 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99 g = H or blank h = P or blank j = /S3256 or blank k = /S1331, /S1599, /S613, /S1658, /S849, or blank
 m = XL or blank n = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 or blank p = D or blank



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2

- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.

- lokfast* guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.

- The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

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Drawing No. QCF-00147

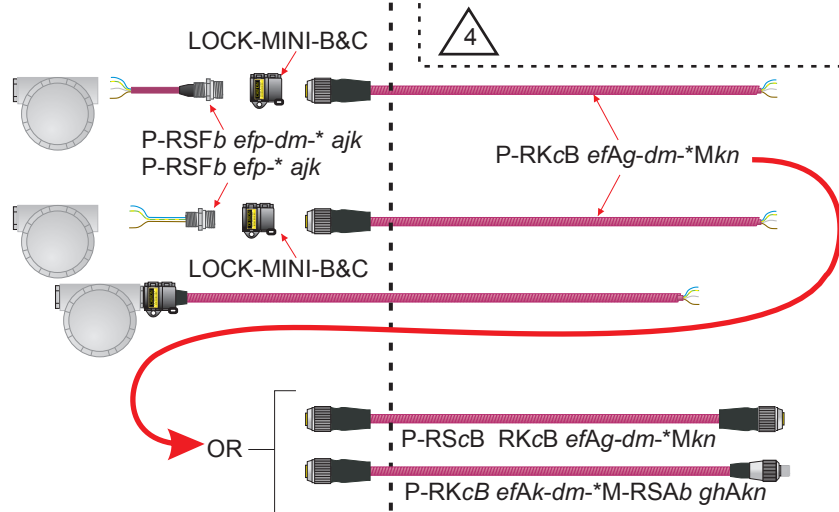
Rev M

Scale None

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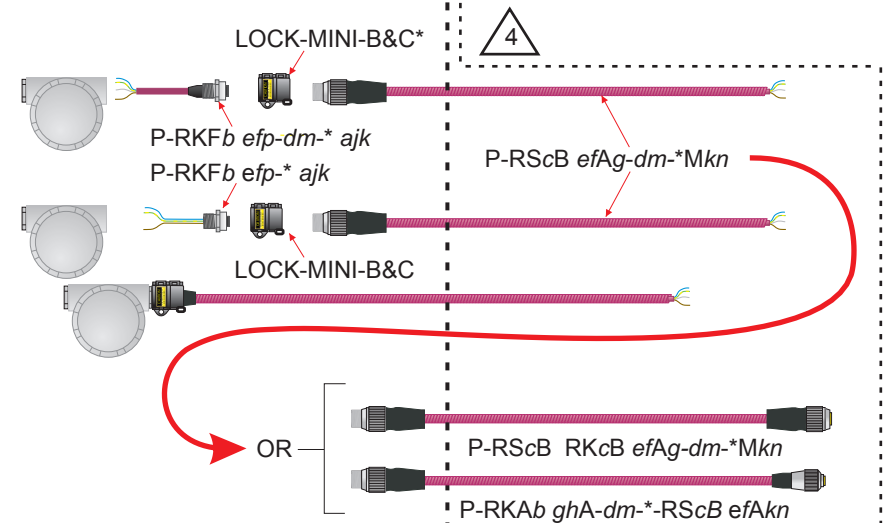
Class I, Division 2, Group A,B,C, or D;
Class II, Division 2, Group E,F, or G; or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Class I, Division 2, Group A,B,C, or D;
Class II, Division 2, Group E,F, or G; or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Notes:

- Key: $a = /14.5/NPT, /14.75/NPT, /M20, \text{ or blank}$ $b = V \text{ or blank}$ $c = M \text{ or V}$ $d = 3 \text{ or 4-digit ITC or PLTC cable number}$ $e = 2, 3, 4, 5, \text{ or } 6$
 $f = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $g = H \text{ or blank}$ $h = P \text{ or blank}$ $j = /S3256 \text{ or blank}$ $k = /S1331, /S1599, /S613, /S1658, /S849, \text{ or blank}$
 $m = XL \text{ or blank}$ $n = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 \text{ or blank}$ $p = D \text{ or blank}$



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2

- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.
- lokfast* guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.
-  The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

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Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC Hazardous Location

Nonhazardous Location

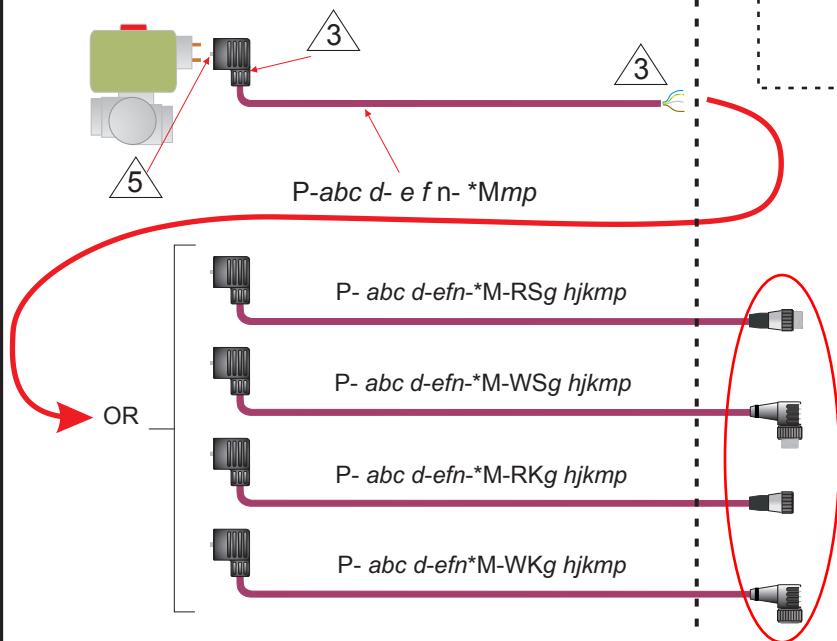
Notes:

1. Key:

- a = Cable exit orientation H, T or V
- b = DIN 43650 Type A, B, I, C8 or C9
- c = Body color G, S or Y
- d = Pinout 2, 21, 22, 3, 31, or 41
- e = Wiring Code A, B, C, D, E, F, K, L, M, N, P, R
(A, B, C, D, E, F, K for use with DIN Type A; A, B, C, D, E, F, for use with DIN Type B or I; A, L, M, N, P, R for use with DIN Type C8 or C9)
- f = 3 or 4-digit ITC or PLTC cable number
- g = Coupling nut material M or V
- h = Number of conductors 2, 3, 4, 5, or 6
- j = Connection code 0, 1, 2, 3, . . . 99
- k = H or blank
- m = /S1331, /S1599, /S1830, or blank
- n = XL or blank
- p = /S679, /S771, /S996, /S1055, /S1057, /S1126, /S3001, /S3034 or blank



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2; with an integral connector per DIN 43650, Type A (18 mm contact spacing), Type B (10 mm contact spacing), Type I (11 mm contact spacing), Type C8 (8 mm contact spacing) or Type C9 (9.4 mm contact spacing).



2. The installation must be in accordance with the National Electrical Code (NEC), ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.

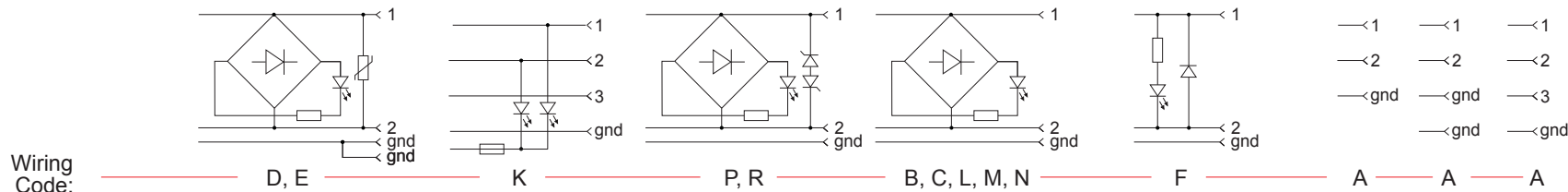
3. The molded DIN 43650 valve plug does not meet the requirements of the NEC, Article 501, for cable seals in Class I, Division 2. Therefore, when the installation the installation requires cable sealing, single-ended DIN 43650 cordsets must be entirely installed in Division 2 - e.g, the cable must not cross the boundary to an unclassified location and the cable must be terminated in a manner in accordance with the NEC..

4. The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

5. The fastening screw requires a tool to disconnect, rendering the connection not normally arcing. The fastening screw must be engaged at all times when the circuit is live.

6. All minifast connections in the hazardous location must fitted with a lokfast guard, rendering the connection not normally arcing. The lokfast guard must be in place at all times when the circuit is live.

7. The wiring codes indicate the following pin-outs:



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Drawing No. QCF-00147

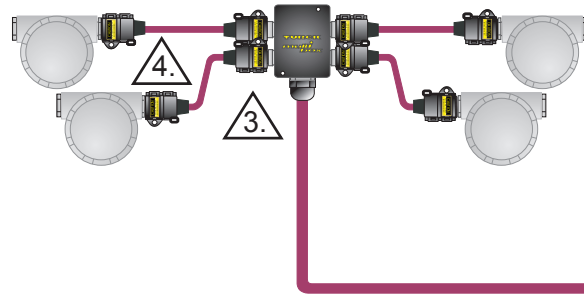
Rev M

Scale None

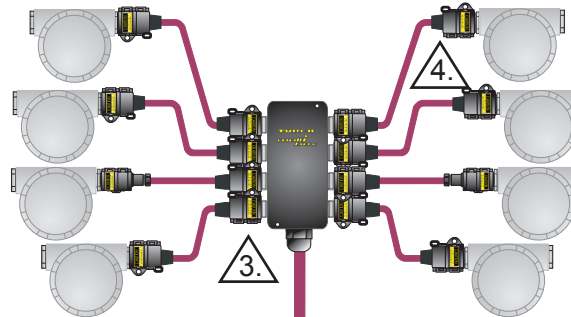
Sheet 16 of 62

Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC Hazardous Location

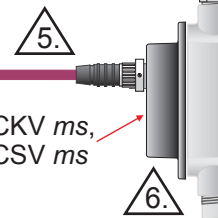
Additional port number/type
description groups when all
ports are not identical
P- a - b cdefg cdefg cdefg cdefg - hr - j M - klmnqs



Additional port number/type
description groups when all
ports are not identical
P- a - b cdefg cdefg cdefg cdefg - hr - j M - klmnqs



or

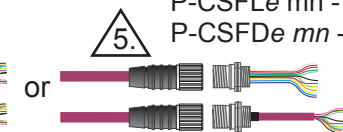


CA-1/CK ms, CA-1/CKV ms,
CA-1/CS ms, CA-1/CSV ms

k = Molded home-run connector type: CSM, CSWM, CKM,
CKWM, CSSM or blank
l = Home-run connector material/locking: L, T, V or blank
m = Number of home-run connector conductors: 12 or 19
n = Wiring option: 1, 2, 3, . . . 9, 01, 02, 03, . . . 99

Nonhazardous Location

P-CKFLe mn - j/ps
P-CKFDe mn - j/ps
P-CSFLe mn - j/ps
P-CSFDe mn - j/ps



P-CKFLe mn - hr - js
P-CKFDe mn - hr - js
P-CSFLe mn - hr - js
P-CSFDe mn - hr - js

p = Option S613 or blank
q = Armor option: A or blank
r = XL or blank
s = Option /S1331,/S1599
or blank

a = Housing material: SS or blank
b = Total number of ports: 3, 4, 5, 6, 7 or 8
c = Number of a given type if all ports
are not identical: -1, -2, -3, -4, -5, -6, -7 or blank
d = Port connector type: RSF, or RKF
e = Port connector material: V or blank
f = Number of port conductors: 2, 3, 4, 5, 6, 7, or 8
g = 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99
h = 3 or 4-digit ITC or PLTC cable number
j = Cable length in meters

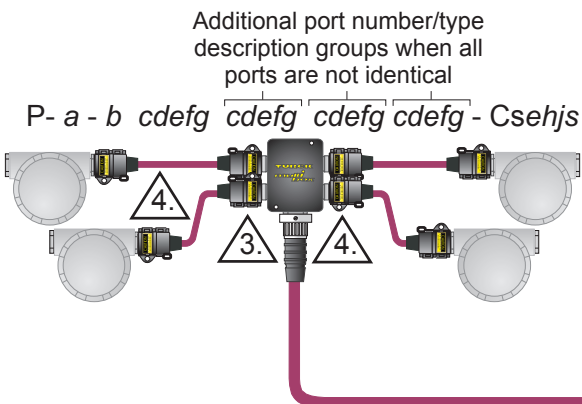
Notes:

- Field circuits may be installed using any of the combinations of equipment shown on Sheet 22 for Class I, Division 2; Class II, Division 2; or Class I, Zone 2. Field circuits may be installed using any of the combinations of equipment shown on Sheets 22-24 for Class I, Division 2; or Class I, Zone 2.
- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, and Articles 725 and 727.
- The potted-in construction of the integral home-run cable and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Class I, Division 2.
- lokfast guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.
- When k = CSM..., CKM..., CSSM..., or CXM..., a connector is molded to the end of the home-run cable. When connection is made to a fixed receptacle in the hazardous location, the molded connector must have l = L or T indicating a locking coupling nut. When the connection is made in the nonhazardous location, locking type coupling nuts are not required (l = L, T, V or blank).
- See Sheets 25 and 26 for installation of CA-... conduit body adaptors.

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Drawing No.	QCF-00147	Rev	M
Scale	None	Sheet	17 of 62

Class I, Division 2, Group A,B,C, or D; or Class I, Zone 2, Group IIC Hazardous Location



or

When connection is made to a fixed receptacle in the hazardous location (e.g. - P-C.F. receptacle or CA-.. conduit body adaptor), the molded connector must have x = L or T indicating locking coupling nut.

or

When the connection of a .CSM., .CSWM., CKM., or .CKWM. connector is made to an extension cord in the hazardous location, the connection must be the locking type: .CSML., CSWML., CSMT., .CSWMT., .CKML., .CKWML., .CKWMT., or .CKMT.

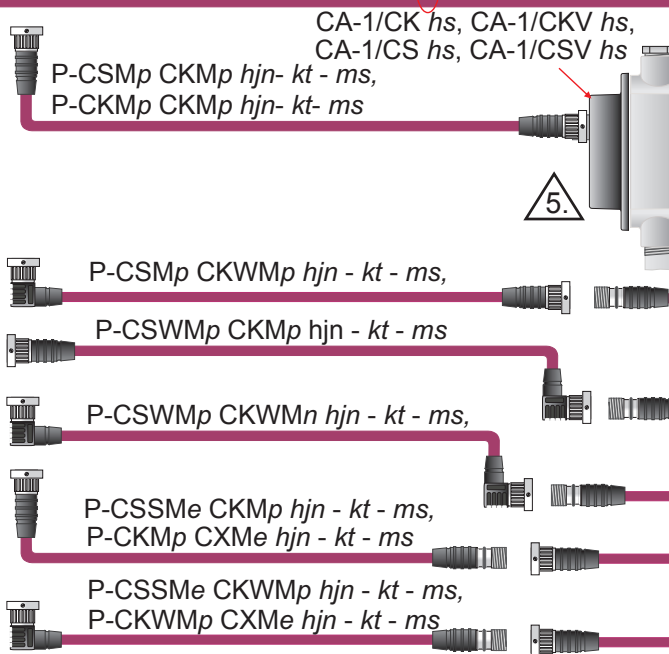
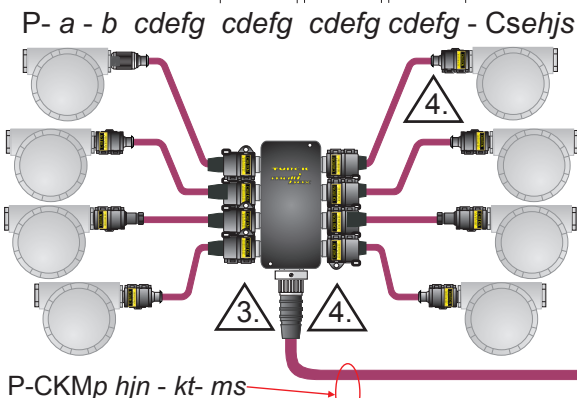
or

When the connection of a .CSSM. or .CXM. connector is made to an extension cord in the hazardous location, the cord must be the locking type: .CSML., CSWML., CSMT., .CSWMT., .CKML., .CKWML., .CKMT or .CKWMT.

Notes:

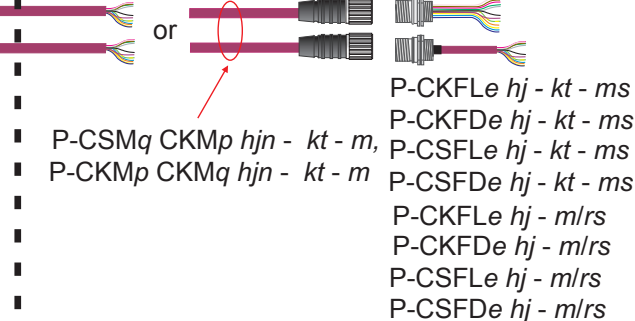
- Field circuits may be installed using any of the combinations of equipment shown on Sheet 22-24.
- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated or ITC rated cable may be found in Article 501, and Articles 725 and 727.
- The molded construction of the home-run cable and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501 for cable seals in Class I, Division 2. P-CKM... home-run connectors must either be securely connected to the junction box or plugged using a Turck CS-CC closure cap.
- lokfast guards or set-screw construction on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.
- See Sheets 25 and 26 for installation of CA-... conduit body adaptors.

Additional port number/type description groups when all ports are not identical



Nonhazardous Location

- a = Housing material: SS or blank
- b = Total number of ports: 3, 4, 5, 6, 7 or 8
- c = Number of a given type if all ports are not identical: -1, -2, -3, -4, -5, -6, -7 or blank
- d = Port connector type: RSF, or RKF
- e = Material: V or blank
- f = # of port cond.: 2, 3, 4, 5, 6, 7, 8 or blank
- g = Wiring option: 0, 1, 2, 3, . . . 99 or blank
- h = Number of home-run conductors: 12 or 19
- j = Wiring option: 1, 2, 3, . . . 9, 01, 02, 03, . . . 99 or blank
- k = 3 or 4-digit ITC or PLTC cable number
- m = Cable or lead length in meters
- n = A or blank p = L or T q = L, T, V or blank
- r = /S613 or blank s = /S1331, /S1599 or blank
- t = XL or blank



When the connection is made in the non hazardous location, locking type coupling nuts are not required.

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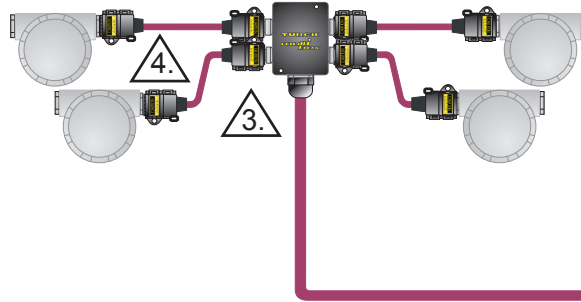
Drawing No.	QCF-00147	Rev	M
Scale	None	Sheet	18 of 62

Class I, Division 2, Group A,B,C, or D; or
 Class II, Division 2, Group E,F, or G; or
 Class I, Zone 2, Group IIC Hazardous Location

Nonhazardous Location

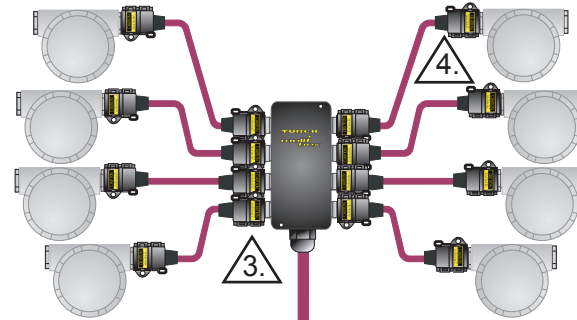
Additional port number/type
 description groups when all
 ports are not identical

P- a - b cdefg cdefg cdefg cdefg - hn - j M - kelp



Additional port number/type
 description groups when all
 ports are not identical

P- a - b cdefg cdefg cdefg cdefg - hn - j M - kelp



a = Housing material: SS or blank
 b = Total number of ports: 3, 4, 5, 6, 7 or 8
 c = Number of a given type if all ports
 are not identical: -1, -2, -3, -4, -5, -6, -7 or blank
 d = Port connector type: RSF, or RKF
 e = Port connector material: V or blank
 f = Number of port conductors: 2, 3, 4, 5, 6, 7 or 8
 g = Wiring option: 0, 1, 2, 3, 4, . . . 99 or blank

h = 3 or 4-digit ITC or PLTC cable number
 j = Cable length in meters
 k = Molded home-run connector type: RS, WS, RK, WK or blank
 l = Number of home-run connector conductors: 7, 8, 9, 10, 12 or 19
 m = Wiring option: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 01, 02, 03, . . . 99
 n = XL or blank
 p = /S1331, /S1599 or blank

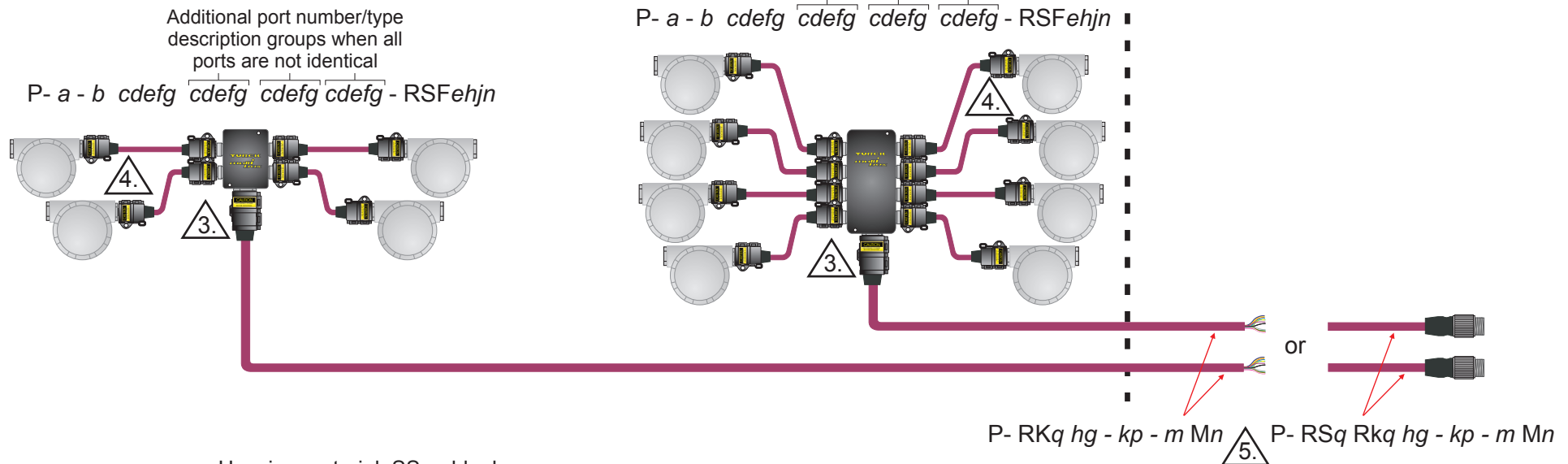
Notes:

- Field circuits may be installed using any of the combinations of equipment shown on Sheet 22 for Class I, Division 2; Class II, Division 2; or Class I, Zone 2. Field circuits may be installed using any of the combinations of equipment shown on Sheets 22-24 for Class I, Division 2; or Class I, Zone 2.
- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated or ITC rated cable may be found in Article 501, and Articles 725 and 727.
- The potted-in construction of the integral home-run cable and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Class I, Division 2.
- lokfast guards or set-screw construction on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.
- When k = RS, WS, RK or WK, a minifast B- or C-size connector is molded to the end of the home-run cable per Turck control drawing Ni-2.407.

TURCK 3000 Campus Drive Minneapolis, MN 55441-2656	Drawing No. QCF-00147		Rev M	
	Scale	None	Sheet	19 of 62

Class I, Division 2, Group A,B,C, or D; or
 Class II, Division 2, Group E,F, or G; or
 Class I, Zone 2, Group IIC Hazardous Location

Nonhazardous Location



a = Housing material: SS or blank
 b = Total number of ports: 3, 4, 5, 6, 7 or 8
 c = Number of a given type if all ports are not identical: -1, -2, -3, -4, -5, -6, -7 or blank
 d = Port connector type: RSF, or RKF
 e = Port connector material: V or blank
 f = Number of port conductors: 2, 3, 4, 5, 6, 7, or 8
 g = Wiring option: 0, 1, 2, 3, 4, . . . 99 or blank

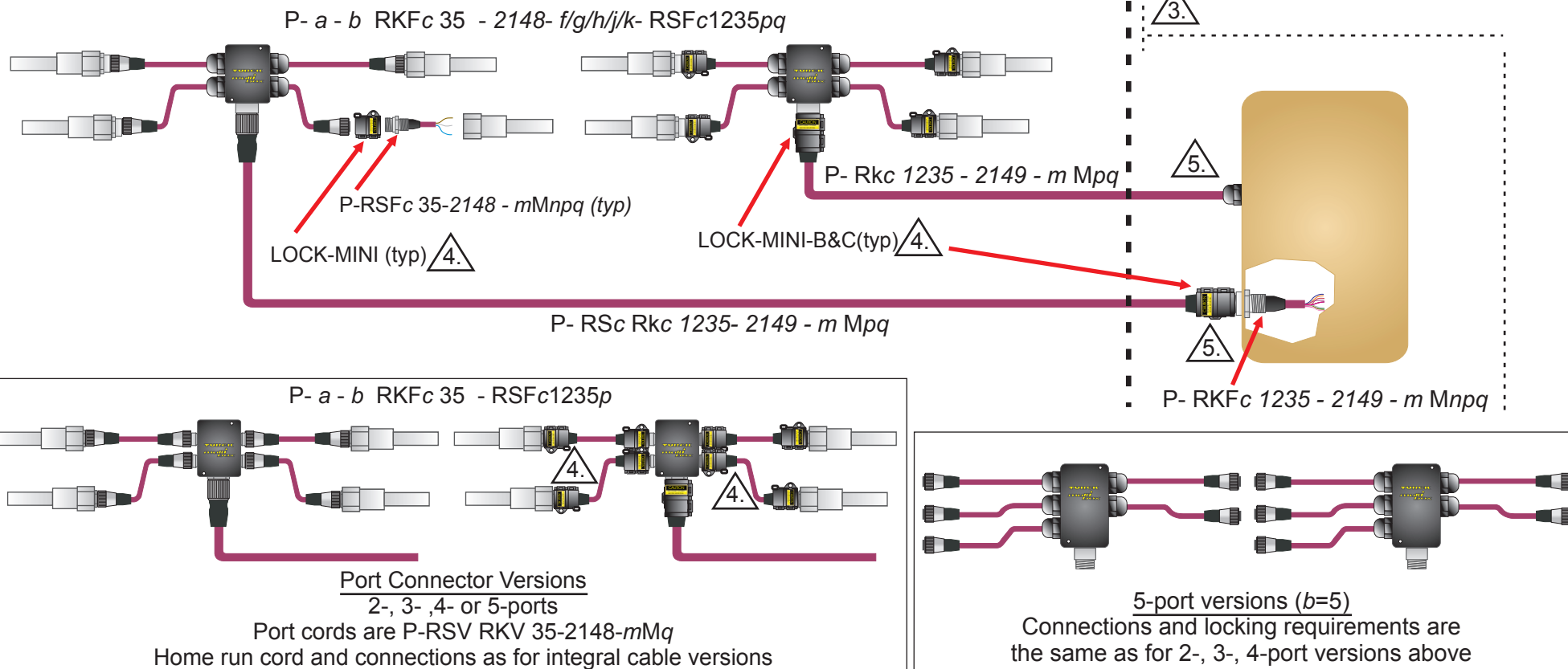
h = Number of home-run conductors: 7, 8, 9, 10, 12 or 19
 j = Wiring option: 1, 2, 3, . . . 9, 01, 02, 03, . . . 99 or blank
 k = 3 or 4-digit ITC or PLTC cable number
 m = Cable length in meters
 n = /S1331, /S1599, or blank
 p = XL or blank
 q = Coupling nut material, M or V

Notes:

- Field circuits may be installed using any of the combinations of equipment shown on Sheet 22 for Class I, Division 2; Class II, Division 2; or Class I, Zone 2. Field circuits may be installed using any of the combinations of equipment shown on Sheets 22-24 for Class I, Division 2; or Class I, Zone 2.
- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated or ITC rated cable may be found in Article 501, and Articles 725 and 727.
- The molded construction of the home-run cable and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501 for cable seals in Class I, Division 2.
- lokfast guards or set-screw construction on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.
- Home-run cables may be installed per Turck control drawing Ni-2.407.

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	Scale None	Sheet 20 of 62	

Class I, Division 2, Group A,B,C, or D; or
Class II, Division 2, Group E,F, or G; or
Class I, Zone 2, Group IIC Hazardous Location



Notes:

- Key: a = Housing material: SS or blank f = Port 1 cable length in meters j = Port 4 cable length in meters, or blank n = /14.5/NPT, 14.75/NPT, /M20, or blank
b = Total number of ports: 3, 4, or 5 g = Port 2 cable length in meters, or blank k = Port 5 cable length in meters, or blank m = Cable length in meters p = /S1331, /S1599, or blank
c = Material: M, V, or blank h = Port 3 cable length in meters, or blank q = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 or blank



= Simple apparatus thermocouple

- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated or ITC rated cable may be found in Article 501, and Articles 725 and 727.

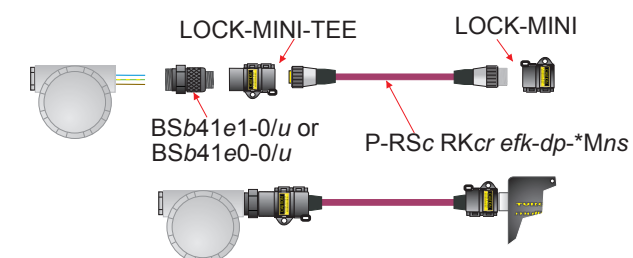
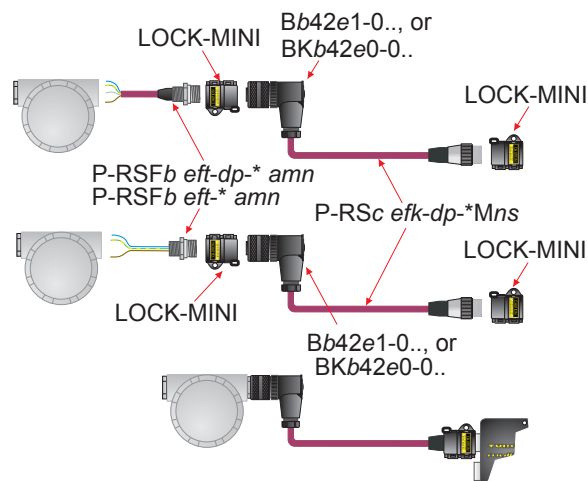
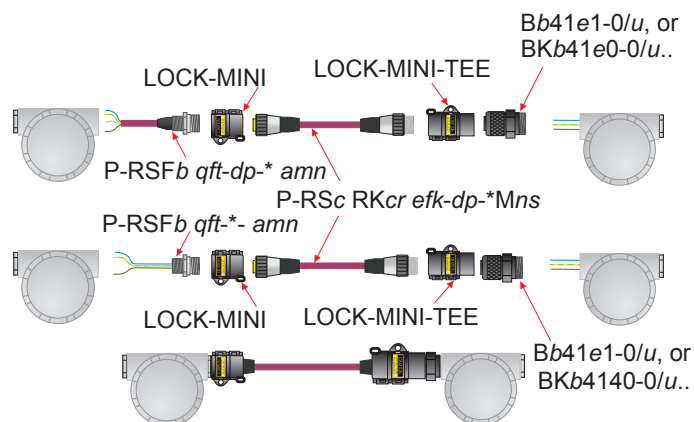
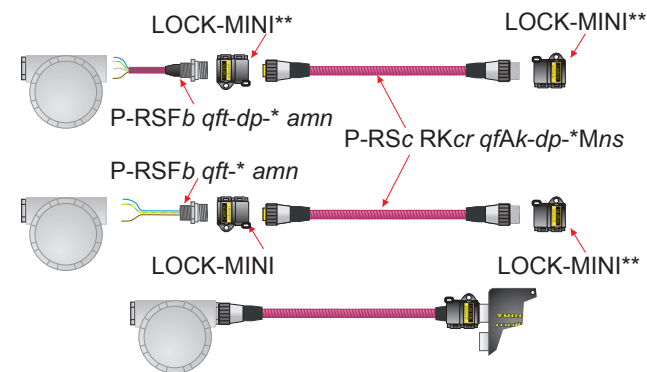
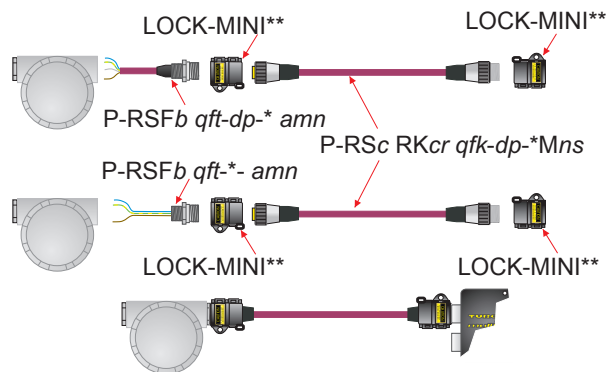
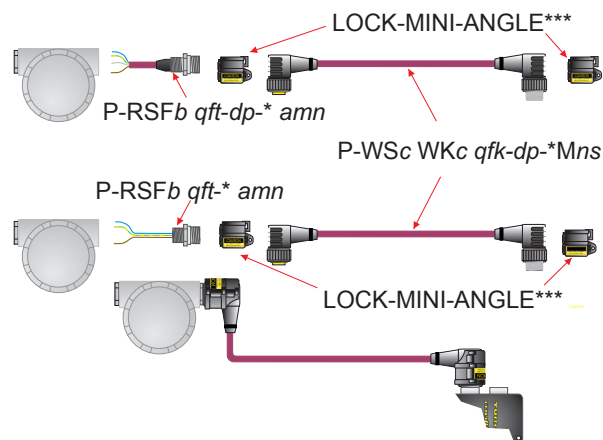
3. The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

4. lokfast guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.

5. Home-run cables may be installed per Turck control drawing Ni-2.407.

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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	21 of 62



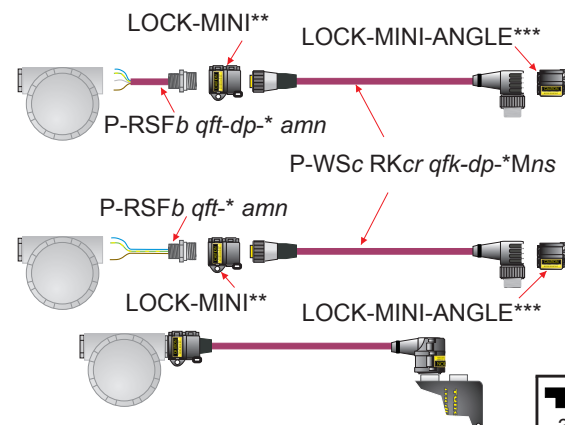
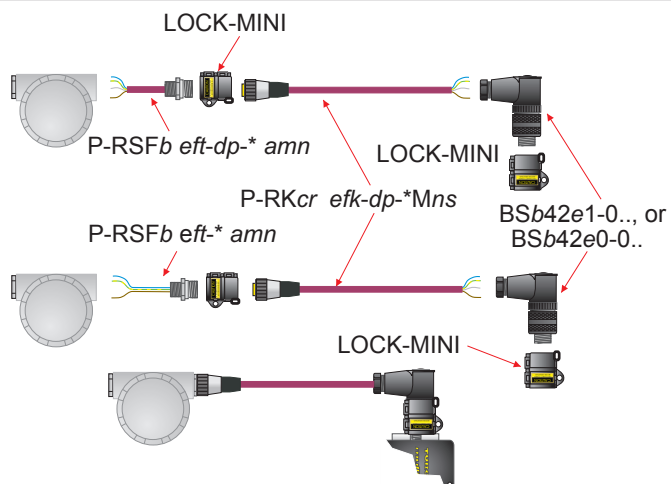
KEY

a = /14.5/NPT, /14.75/NPT, n = /S1331, /S1599, /S1658, /M20, or blank
 b = V or blank p = XL or blank
 c = M or V q = 2, 3, 4, 5, 6, 7, or 8
 d = 3 or 4-digit ITC or r = S or blank
 PLTC cable # s = /S679, /S771, /S1055, /S1055, /S1057, /S1126, /S3001, /S3034 or blank
 e = 2, 3, 4, 5, or 6 t = D or blank
 f = 0, 1, 2, 3, . . . 99 u = /14.5/NPT or /14.75/NPT
 k = H or blank
 m = /S3256 or blank

 = Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2
 = Turck multibox with minifast port connectors, part numbers identified on Sheets 17-20.

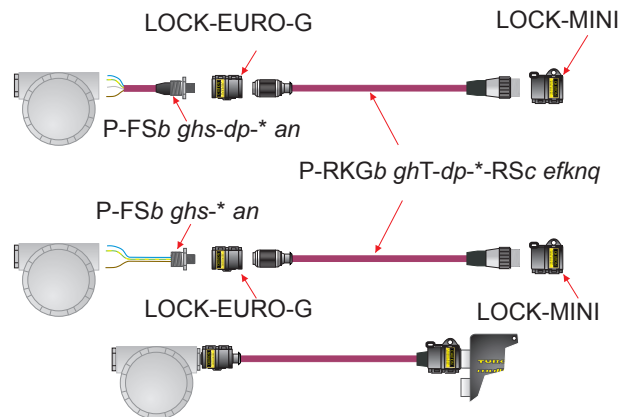
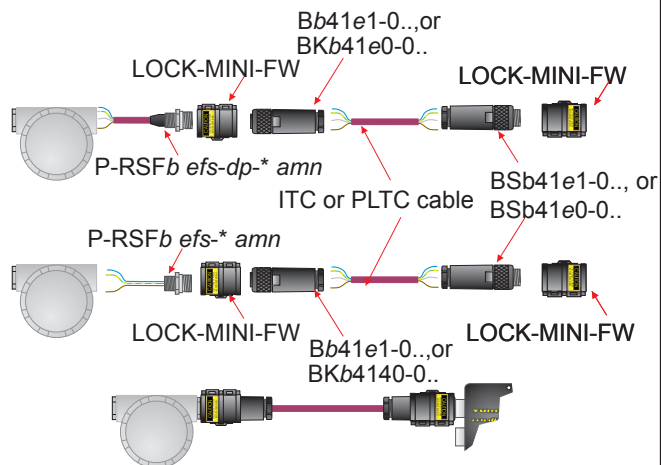
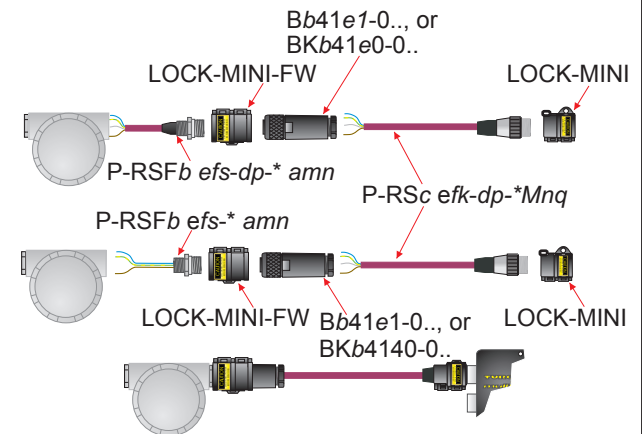
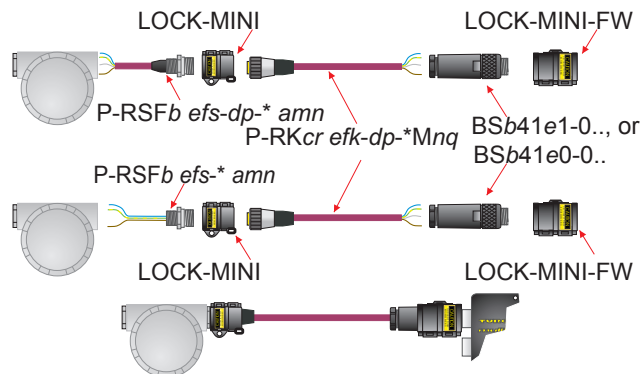
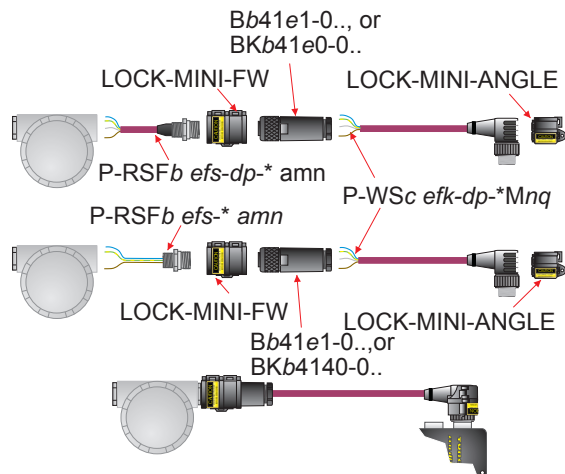
** LOCK-MINI-B&C for q = 7 or 8

*** LOCK-MINI-B&C ANGLE for q = 7 or 8



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Drawing No.	QCF-00147	Rev	M
Scale	None	Sheet	22 of 62



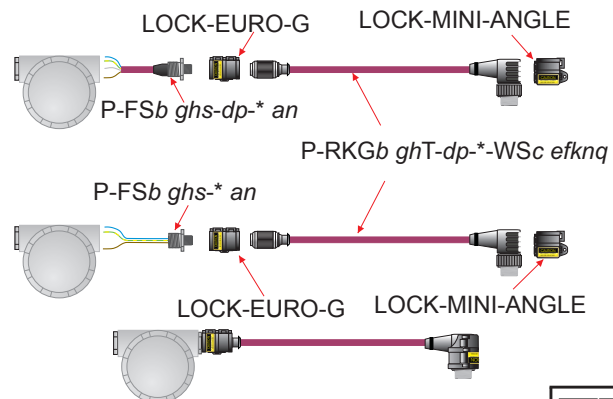
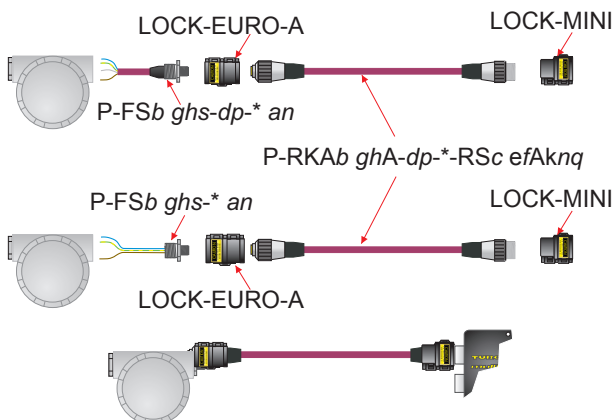
KEY

a = /14.5/NPT, /14.75/NPT, /M20, or blank
b = V or blank
c = M or V
d = 3 or 4-digit ITC or PLTC cable number
e = 2, 3, 4, 5, or 6
f = 0, 1, 2, 3, . . . 99
g = 4 or 5
h = .1, .2, .3,99, or blank
k = H or blank
m = /S3256 or blank
n = /S1331, /S1599, /S613, /S1658, /S849, or blank
p = XL or blank
q = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 or blank
r = S or blank
s = D or blank



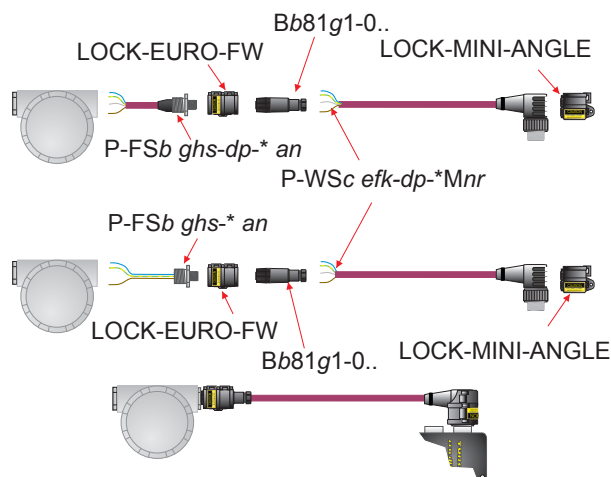
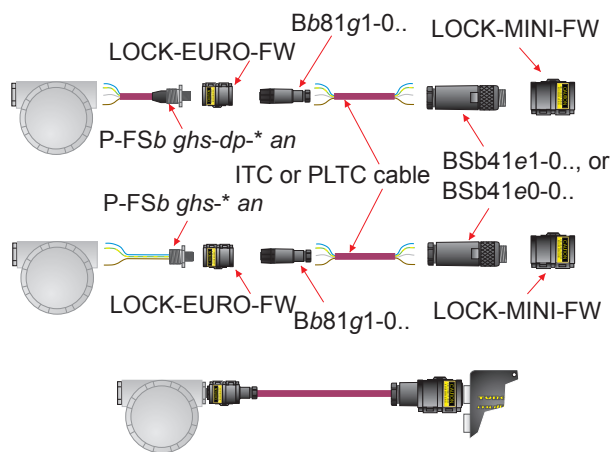
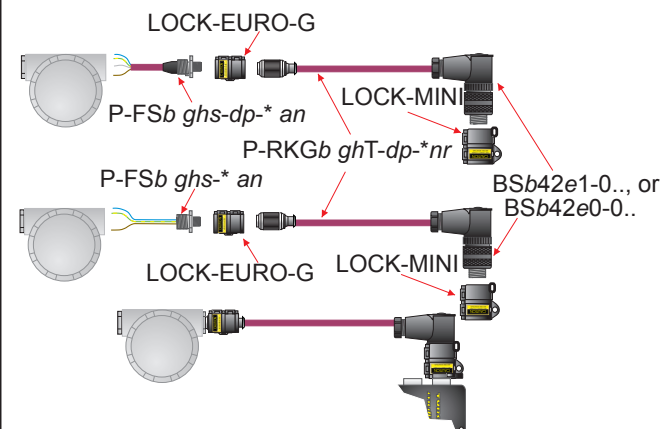
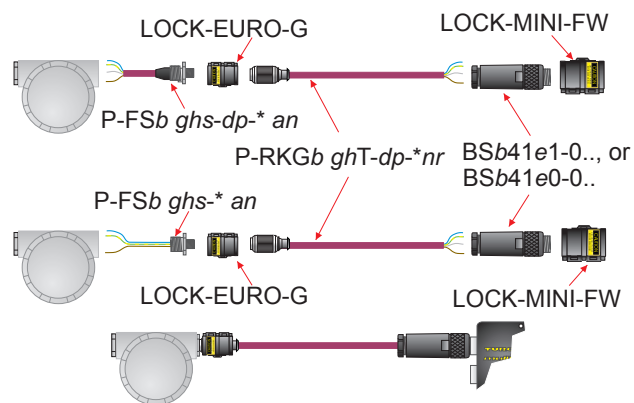
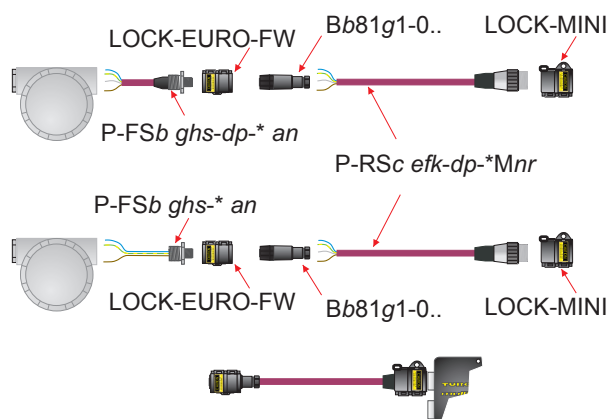
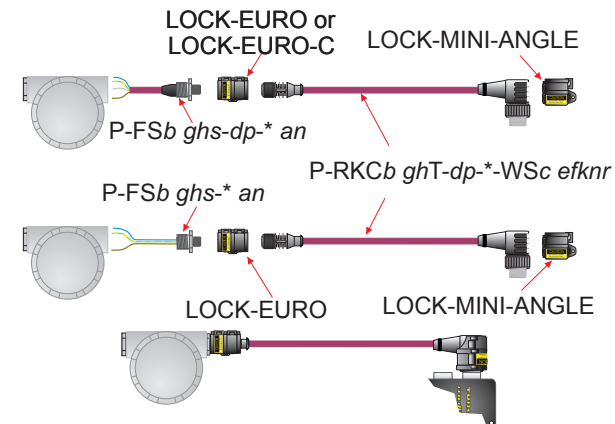
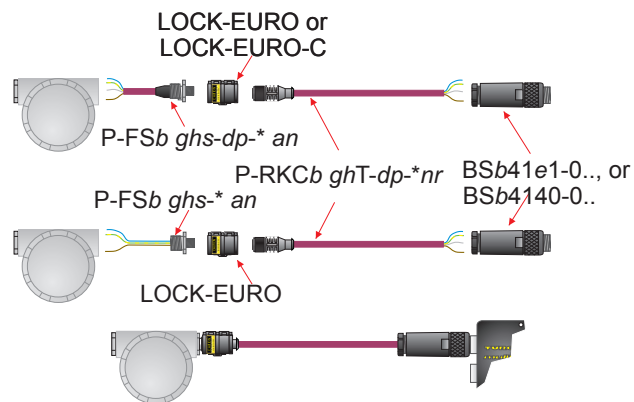
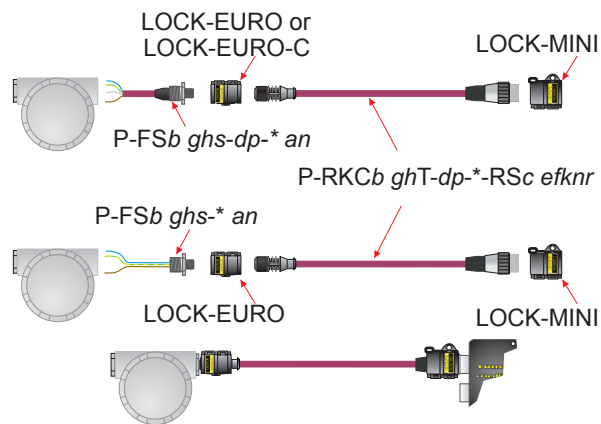
= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2

= Turck multibox with *minifast* port connectors, part numbers identified on Sheets 17-20.



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Drawing No. QCF-00147		Rev M	
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KEY

a = /14.5/NPT, /14.75/NPT, k = H or blank
 b = V or blank n = /S1331, /S1599, /S1658,
 c = M or V /S849, or blank
 d = 3 or 4-digit ITC or p = XL or blank
 PLTC cable # r = /S679, /S771, /S1055,
 e = 2, 3, 4, 5, or 6 /S1055, /S1057, /S1126,
 f = 0, 1, 2, 3, . . . 99 /S3001, /S3034 or blank
 g = 4 or 5 s = D or blank
 h = .1, .2, .3,99, or blank



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2

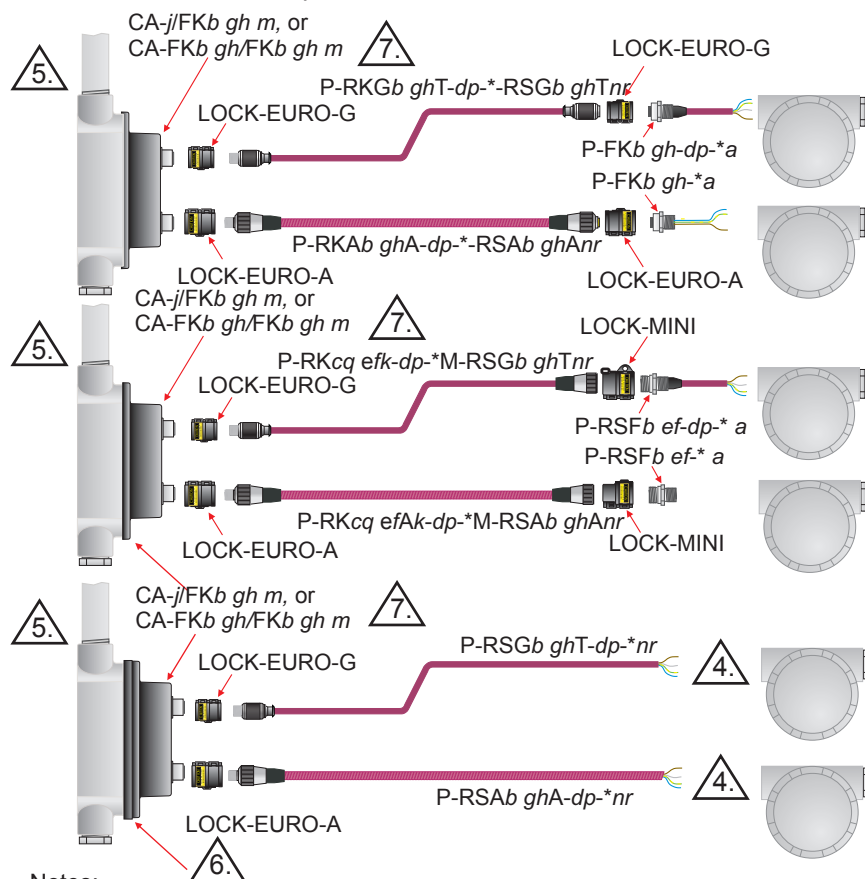


= Turck multibox with *minifast* port connectors, part numbers identified on Sheets 17-20.

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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	24 of 62

Class I, Division 2, Group A, B, C, or D; or
Class I, Zone 2, Group IIC Hazardous Location



Notes:

1. Key: a = /14.5/NPT or /14.75/NPT b = V or blank c = M or V d = 3 or 4-digit ITC or PLTC cable number e = 2, 3, 4, 5, or 6 f = 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99
g = 4 or 5 h = .1, .2, .3, . . . 99, or blank j = 1 or 2 k = H or blank m = /S651, /S3077 or blank n = /S1331, /S1599, or blank p = XL or blank q = S or blank
r = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034, /S613, /S1658, or blank

 = Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2  = Conduit body, NRTL approved, suitable for installation in Class I, Division 2. See sheet 26 for conduit body cover interface dimensions or consult factory for a list of recommended suitable conduit bodies.

2. The installation must be in accordance with the National Electrical Code (NEC), ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.

3. lokfast guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.

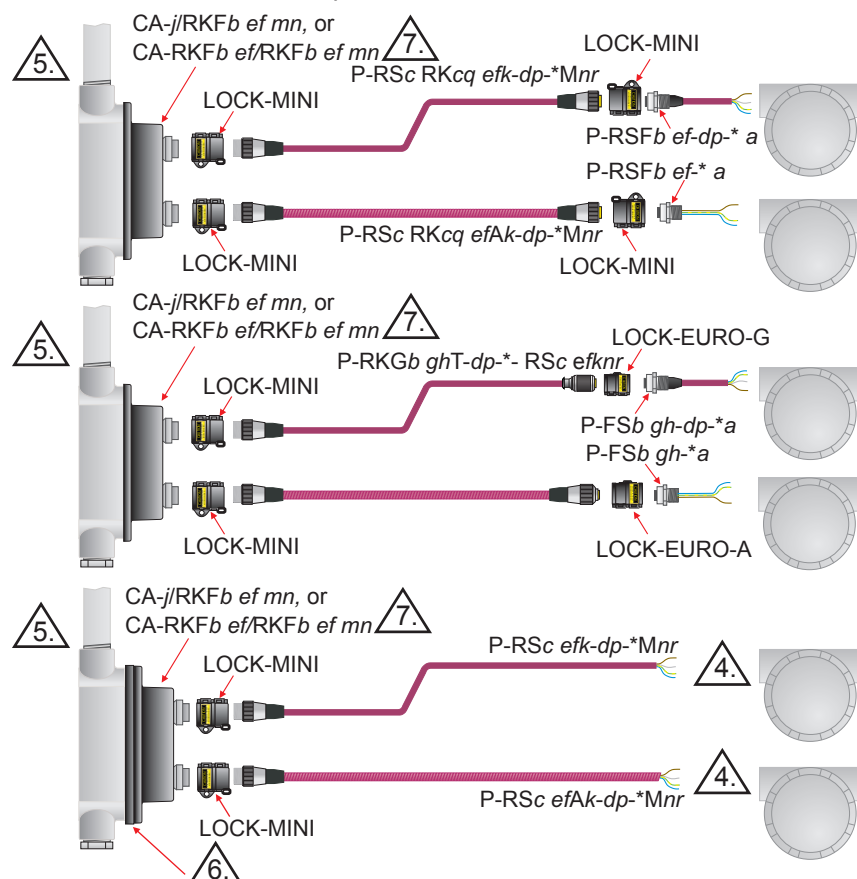
4. Single-ended cordsets must enter the nonincendive equipment using a method suitable for interfacing PLTC or ITC cable with the entry type of the equipment.

5. The conduit body must be installed in accordance with the NEC and the manufacturer's instructions.

6. Adaptor plate A9534 may be used to adapt the CA-xxx to Form 7 conduit bodies (bodies designed for use with wedge nut covers). This is indicated by option code S3077 when supplied with the CA-... adaptor.

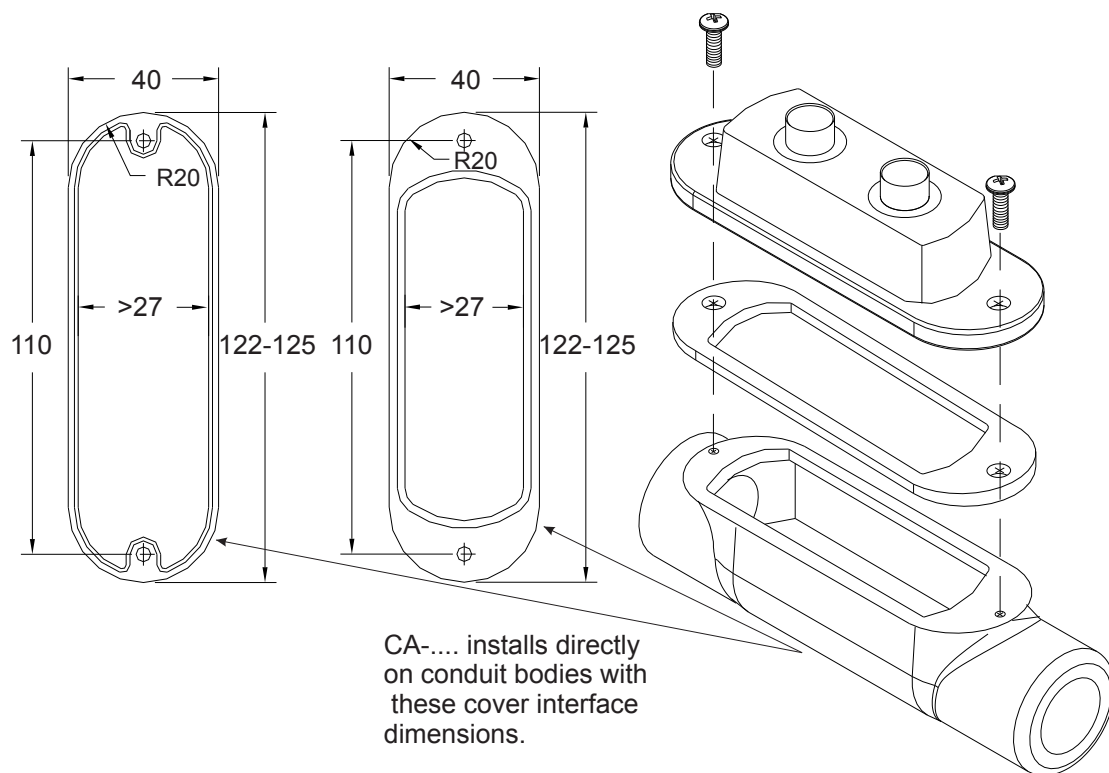
7. Models with two female ports of the same type are shown. Single-port models (j = 1), models with two male ports (e.g. CA-2RSFV 40 or CA-RSFV 40/RSFV 50), mixed gender models (e.g. CA-RSFV/RKFV 40), and/or mixed type models (e.g. CA-RSV 40/FKV 4.5) are also possible.

Class I, Division 2, Group A, B, C, or D; or
Class I, Zone 2, Group IIC Hazardous Location

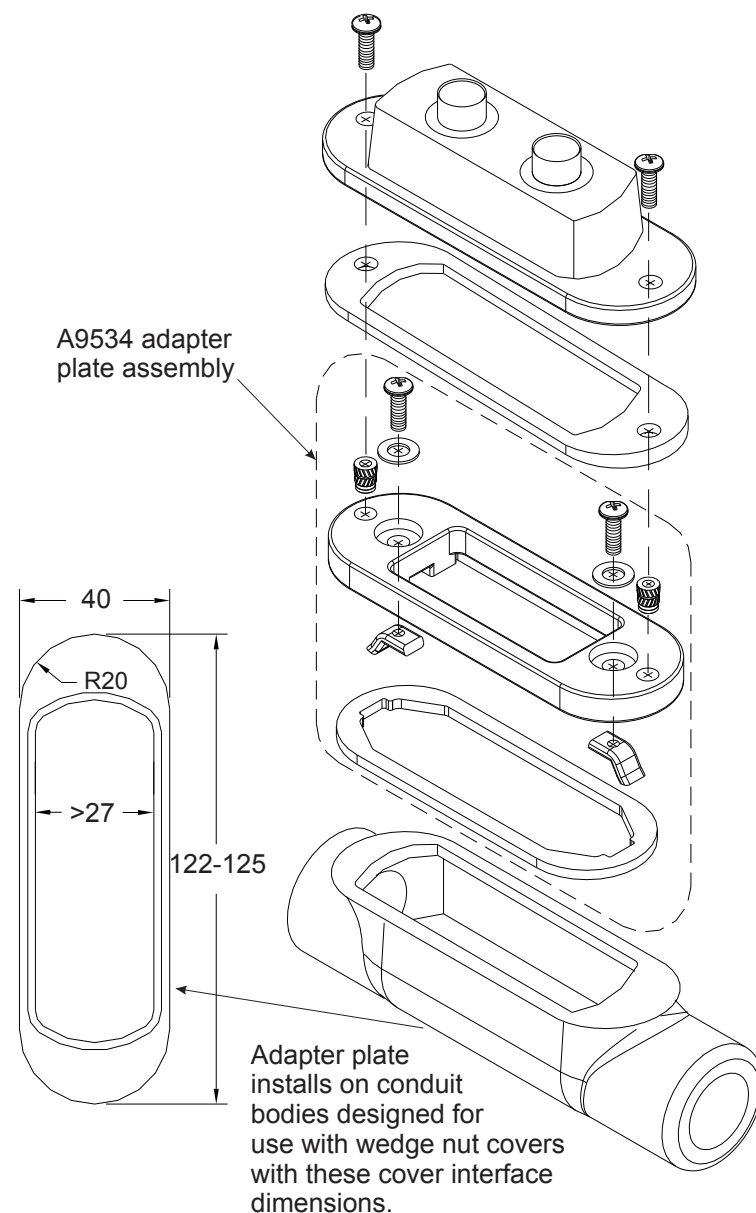


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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	25 of 62



Examples of compatible conduit bodies for direct mounting of CA-... adaptors are 3/4" NPT size of Crouse-Hinds Form 8, Mark 9, and Appleton FM8. Examples of compatible conduit bodies for mounting with A9534 adaptor plates are 3/4" NPT size of Crouse-Hinds Form 7, Appleton FM7, and Killark Duralloy 7.



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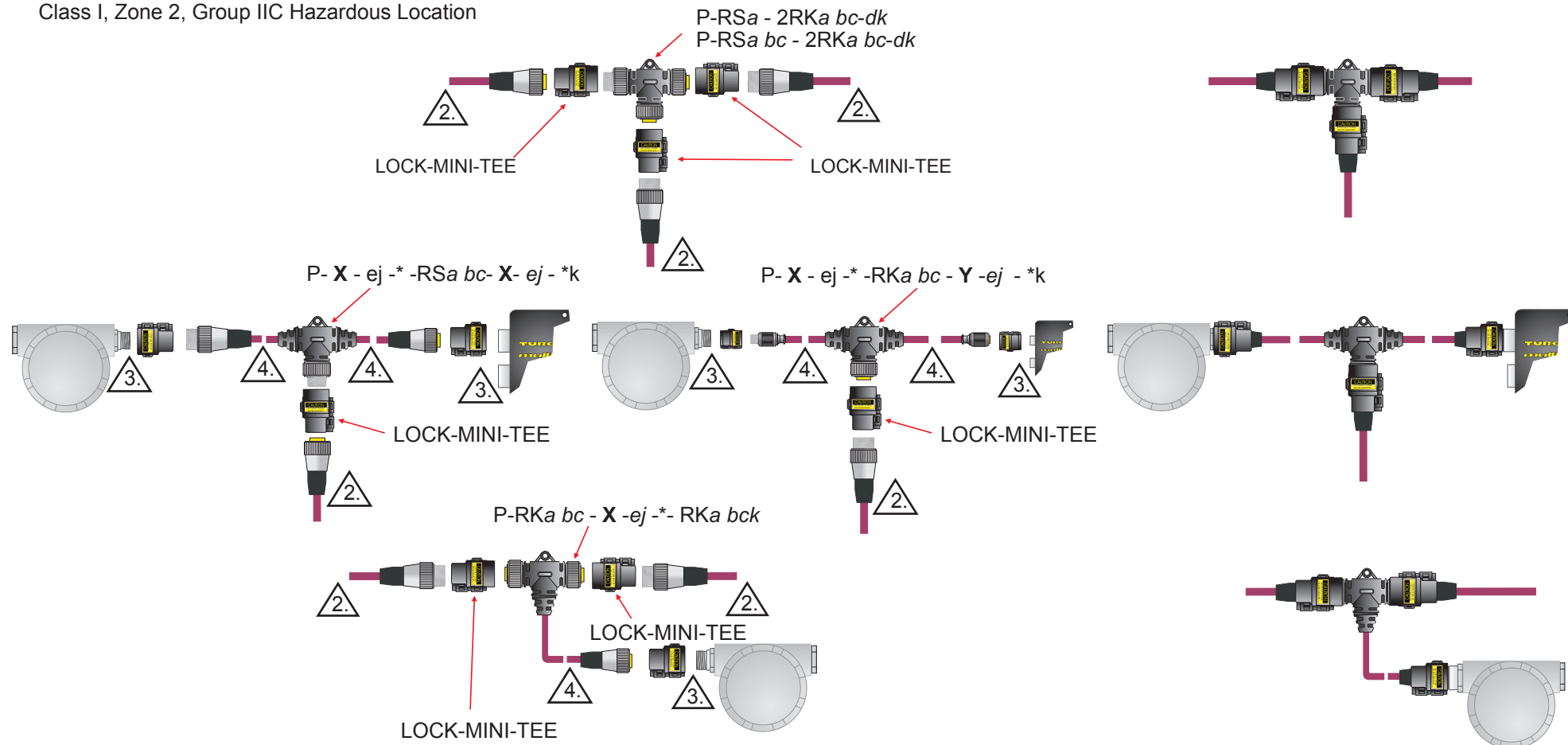
Drawing No. QCF-00147

Rev M

Scale None

Sheet 26 of 62

Class I, Division 2, Group A, B, C, or D; or
Class I, Zone 2, Group IIC Hazardous Location



Notes:

1. Key: a = M or V b = 2, 3, 4, 5, or 6 c = 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99 d = KF, KM, or blank e = 3 or 4-digit ITC or PLTC cable number
f = V or blank g = 4 or 5 h = .1, .2, .3, . . . 99, or blank j = XL or blank k = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 or blank
2. Turck *minifast* Tees may be used in circuit with Turck *minifast* cordsets identified on Sheets 12-15 when installed as shown above or *eurofast* cordsets identified on Sheets 2-4 as appropriate.
3. The cord connectors of Tees with integrally molded cords must be connected only to fixed receptacles. These may be either approved Turck receptacles installed in field devices, or the receptacles of FM approved Turck junctions. *lokfast* guards must be installed per the requirements of Sheet 2 for *eurofast* connectors and Sheet 12 for *minifast* connectors.
4. The integrally molded cords may have any of the following connector types:

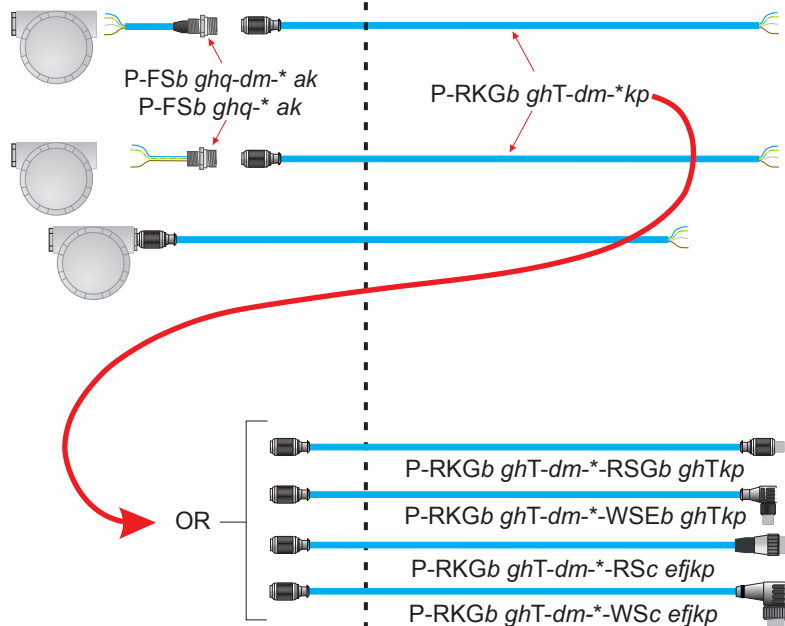
male <i>minifast</i>	female <i>minifast</i>	male <i>minifast</i> RA	female <i>minifast</i> RA	male G-type <i>eurofast</i>	female G-type <i>eurofast</i>
Y = RSa bc	X = RKa bc	Y = WSa bc	X = WKa bc	Y = RSGf gh	X = RKGf gh
5. The installation must be in accordance with the National Electrical Code (NEC), ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.
6. *lokfast* guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.

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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet 27 of 62	

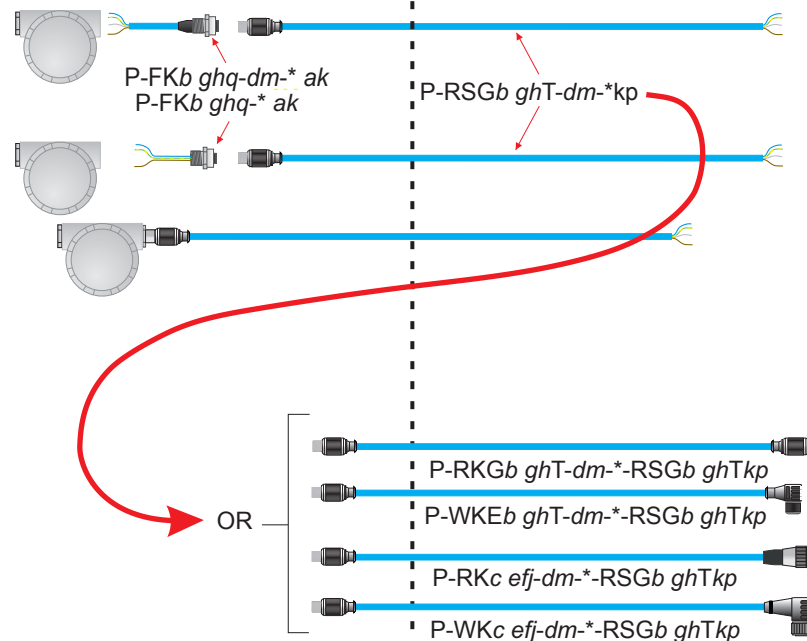
Class I, Division 1, Group A,B,C,D;
Class I, Zone 0, Group IIC;
Class II, Division 1, Group E,F,G;
Class III, Division 1
Hazardous Location

Class I, Division 2, Group A,B,C, or D;
Class I, Zone 2, Group IIC
or Nonhazardous Location



Class I, Division 1, Group A,B,C,D;
Class I, Zone 0, Group IIC;
Class II, Division 1, Group E,F,G;
Class III, Division 1
Hazardous Location

Class I, Division 2, Group A,B,C, or D;
Class I, Zone 2, Group IIC
or Nonhazardous Location



Notes:

- Key: $a = /14.5/NPT, /14.75/NPT, /M20, \text{ or blank}$ $b = V \text{ or blank}$ $c = M \text{ or } V$ $d = 3 \text{ or 4-digit ITC or PLTC cable number}$ $e = 2, 3, 4, 5, \text{ or } 6$
 $f = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $g = 4 \text{ or } 5$ $h = .1, .2, .3, \dots .99, \text{ or blank}$ $j = H \text{ or blank}$ $k = /S1331, /S1599, /S613, /S1658, /S849, \text{ or blank}$
 $m = XL \text{ or blank}$ $n = S \text{ or blank}$ $p = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 \text{ or blank}$ $q = \text{Drain, D or blank}$



= Intrinsically Safe Apparatus, FM approved
for Class I, Division 1 or Class I, Zone 0

- The installation must be in accordance with the National Electrical Code (NEC), ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.

- The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Class I, Divisions 1 and 2. Thus, the cable may cross the boundary from Class I, Division 1 into Class I Division 2 or a nonhazardous location, or may remain entirely within Class I, Division 1.

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Drawing No. QCF-00147

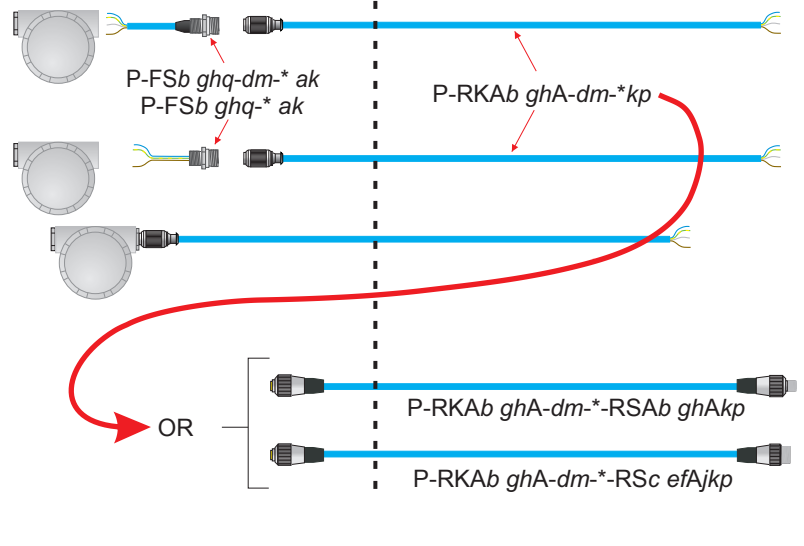
Rev M

Scale None

Sheet 28 of 62

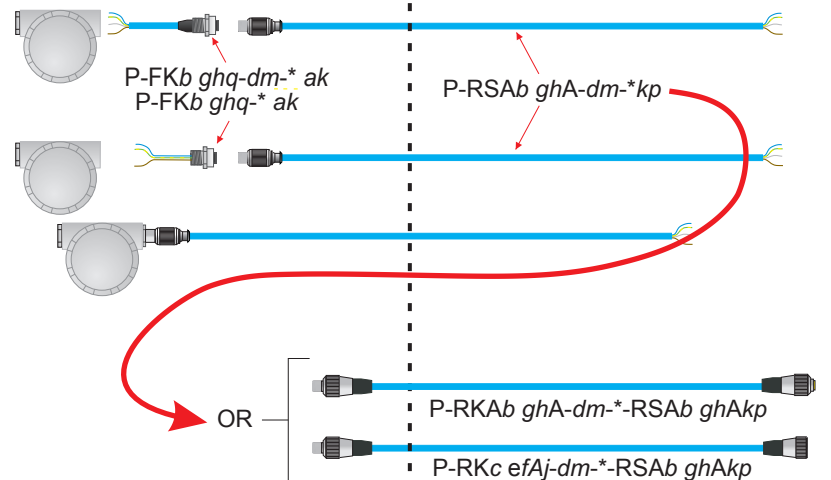
Class I, Division 1, Group A,B,C,D;
Class I, Zone 0, Group IIC;
Class II, Division 1, Group E,F,G;
Class III, Division 1
Hazardous Location

Class I, Division 2, Group A,B,C, or D;
Class I, Zone 2, Group IIC
or Nonhazardous Location



Class I, Division 1, Group A,B,C,D;
Class I, Zone 0, Group IIC;
Class II, Division 1, Group E,F,G;
Class III, Division 1
Hazardous Location

Class I, Division 2, Group A,B,C, or D;
Class I, Zone 2, Group IIC
or Nonhazardous Location



Notes:

- Key: $a = /14.5/\text{NPT}, /14.75/\text{NPT}, /M20, \text{ or blank}$ $b = V \text{ or blank}$ $c = M \text{ or V}$ $d = \text{cable type (3-or 4-digit number)}$ $e = 2, 3, 4, 5, \text{ or } 6$
 $f = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $g = 4 \text{ or } 5$ $h = .1, .2, .3, \dots .99, \text{ or blank}$ $j = H \text{ or blank}$ $k = /S1331, /S1599, /S613, /S1658, /S849, \text{ or blank}$
 $m = XL \text{ or blank}$ $p = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 \text{ or blank}$ $q = \text{Drain, D or blank}$



= Intrinsically Safe Apparatus, FM approved
for Class I, Division 1 or Class I, Zone 0

- The installation must be in accordance with the National Electrical Code (NEC), ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.

- The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Class I, Divisions 1 and 2. Thus, the cable may cross the boundary from Class I, Division 1 into Class I Division 2 or a nonhazardous location, or may remain entirely within Class I, Division 1.

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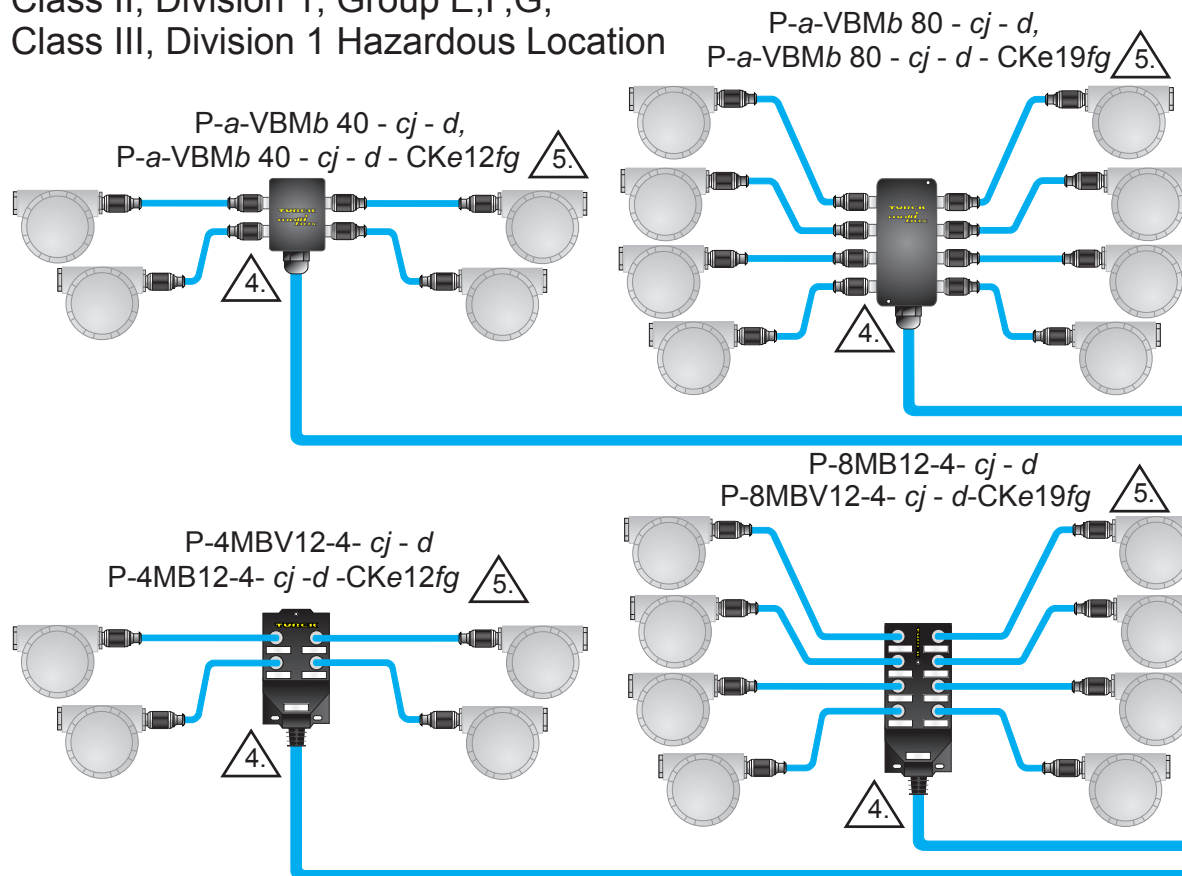
Drawing No. QCF-00147

Rev M

Scale None

Sheet 29 of 62

Class I, Division 1, Group A,B,C,D;
 Class I, Zone 0, Group IIC;
 Class II, Division 1, Group E,F,G;
 Class III, Division 1 Hazardous Location



Nonhazardous Location

- a = Housing material: SS- or blank
- b = Port connector material: V or blank
- c = 3 or 4-digit ITC or PLTC cable number
- d = Cable length in meters
- e = Home-run connector material/locking: L, T, V or blank
- f = Wiring option: 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99 or blank
- g = Armor option: A or blank
- h = /S613 or blank
- j = XL or blank

P-CKFLb ..f - d /h
 P-CKFDb ..f - d /h
 P-CSFLb ..f - d /h
 P-CSFDb ..f - d /h



P-CKFLb ..f - cj - d /h
 P-CKFDb ..f - cj - d /h
 P-CSFLb ..f - cj - d /h
 P-CSFDb ..f - cj - d /h

Associated Apparatus
 with FM approved Entity
 parameters suitable for
 connection to the
 intrinsically safe
 apparatus and the
 junction box. See
 sheets 32-35 for connection
 diagrams.

Notes:

1. Field circuits may be installed using any of the combinations of equipment shown on Sheets 36-40.
2. The Entity Concept allows the interconnection of intrinsically safe apparatus and associated apparatus not specifically examined in combination as a system when the following conditions are met:

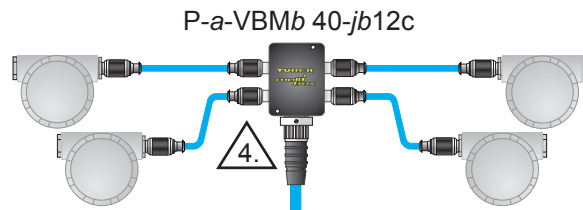
$$V_{\max} \geq V_{oc} \text{ or } V_t \quad I_{\max} \geq I_{sc} \text{ or } I_t \quad C_{i(\text{total})} + C_{\text{cable}} \leq C_a \quad L_{i(\text{total})} + L_{\text{cable}} \leq L_a$$
 Junction box Entity Parameters (per circuit):

$$V_{\max} = 30V \quad I_{\max} = 600mA \quad C_i = 0 \quad L_i = 0$$
3. The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.
4. The potted-in construction of the integral home-run cable and the gas/vaportight continuous sheath of the cable meets the requirements of the NEC, Article 501, cable seals in Class I, Divisions 1 and 2.
5. A Turck multifast connector may be molded to the end of the home-run cable.
6. WARNING: the P-.VBM.40 and P-.VBM.80 junction box enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.
7. Parts of the P-4MB.12-.. and P-8MB.12-... junction box enclosures are constructed from plastic. To prevent the risk of electrostatic sparking, the plastic should only be cleaned with a damp cloth.

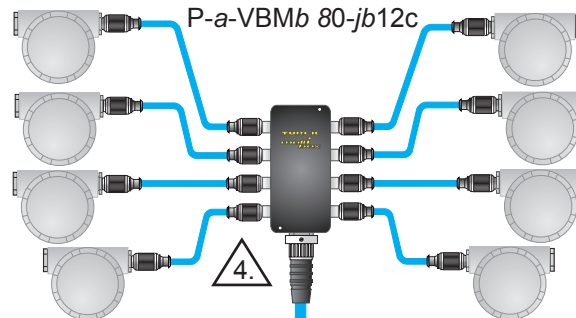
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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	30 of 62

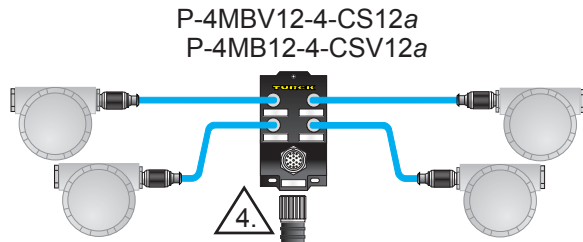
Class I, Division 1, Group A,B,C,D;
 Class I, Zone 0, Group IIC;
 Class II, Division 1, Group E,F,G;
 Class III, Division 1 Hazardous Location



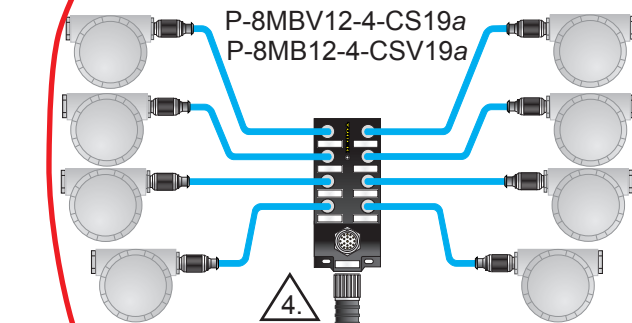
P-CSMg CKMg 12cd- en - fm,
 P- kSb12d kKb 12cd - en - f Mm



P-CSMg CKMg 19cd- en - fm
 P- kSb19d kKb 19cd - en - f Mm



P-CSMg CKMg 12cd- en - fm



P-CSMg CKMg 19cd- en - fm

Nonhazardous Location

- a = Housing material: SS- or blank
- b = Port connector material: V or blank
- c = Wiring option: 0, 1, 2, 3, . . . 9, 01,02, 03, . . . 99 or blank
- d = Armor: A or blank
- e = 3 or 4-digit ITC or PLTC cable number
- f = Cable length in meters
- g = Home-run connector mat'l/locking: L, T, V or blank
- h = /S613 or blank
- j = Home-run connector: CS or RSF k = R or W
- m = /S1599 or blank n = XL or blank
- P-CKFLb- ..c-en- f /h, P-CSFLb- ..c-en- f /h,
 P-CKFDb- ..c-en- f /h, P-CSFDb- ..c-en- f /h

Associated Apparatus
 with FM approved Entity
 parameters suitable for
 connection to the
 intrinsically safe
 apparatus and the
 junction box. See
 sheets 32-35 for
 connection diagrams.

P-CKFLb ..c-f/h
 P-CKFDb ..c-f/h
 P-CSFLb ..c-f/h
 P-CSFDb ..c-f/h

P-CKFLb ..c-en- f /h
 P-CKFDb ..c-en- f /h
 P-CSFLb ..c-en- f /h
 P-CSFDb ..c-en- f /h

Notes:

1. Field circuits may be installed using any of the combinations of equipment shown on sheets 36-40.
2. The Entity Concept allows the interconnection of intrinsically safe apparatus and associated apparatus not specifically examined in as a system when the following conditions are met:

$$V_{\max} \geq V_{oc} \text{ or } V_t \quad I_{\max} \geq I_{sc} \text{ or } I_t \quad C_{i(\text{total})} + C_{\text{cable}} \leq C_a \quad L_{i(\text{total})} + L_{\text{cable}} \leq L_a$$

Junction box Entity Parameters (per circuit):
 $V_{\max} = 30V \quad I_{\max} = 600mA \quad C_i = 0 \quad L_i = 0$

3. The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.

4. The molded construction of the home-run cable and the gas/vaportight continuous sheath of the cable meets the requirements of the NEC, Article 501 for cable seals in Class I, Divisions 1 & 2 P-CKM home-run connectors must either be securely connected to the junction box or plugged using a Turck CS-CC closure cap.

5. multifast home-run cordsets and receptacles are illustrated above. minifast home-run cordsets are used with junction with j = RSG and installed per Turck control drawing Ni-2.407.

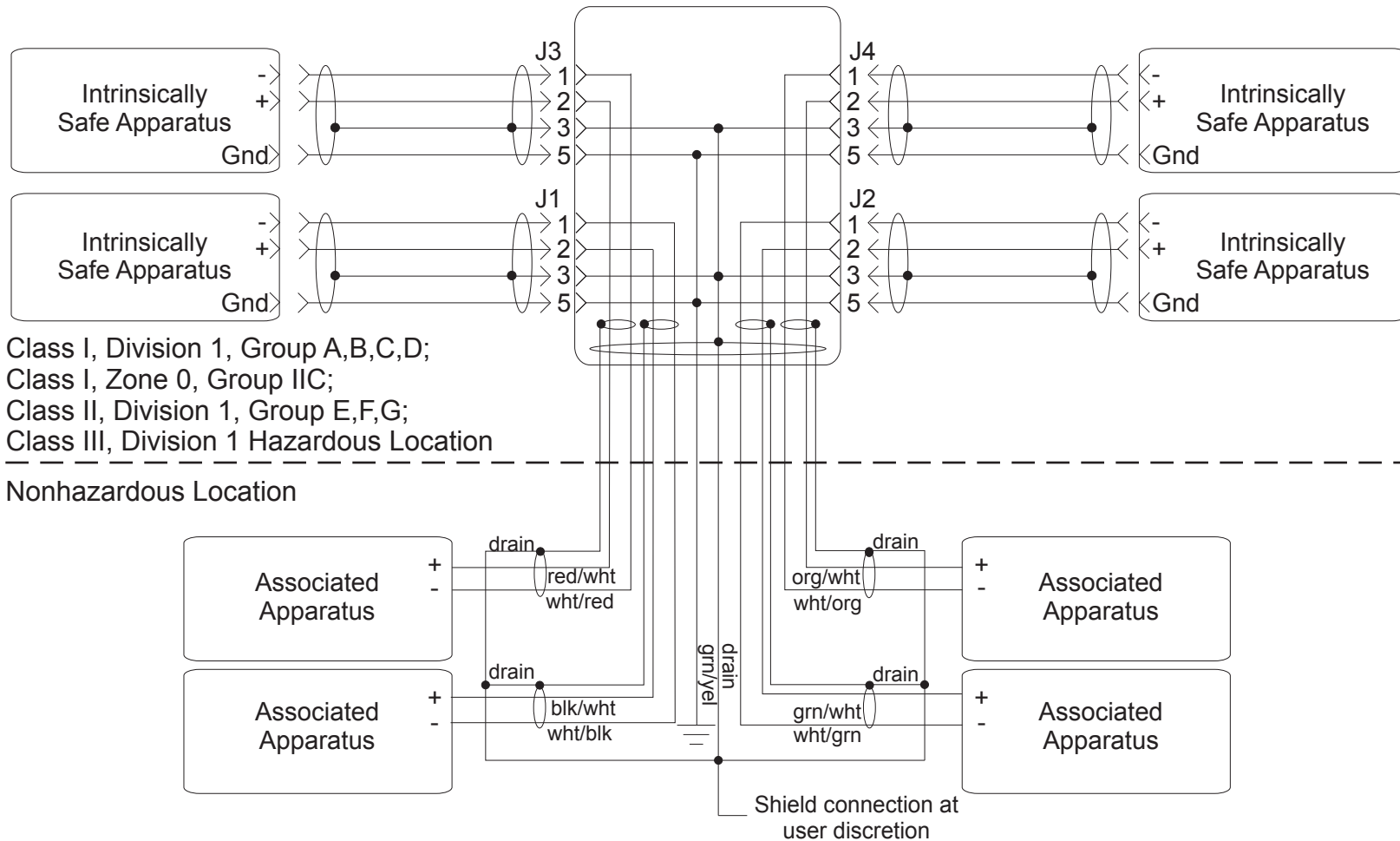
6. WARNING: the P-.VBM.40 and P-.VBM.80 junction box enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.

7. Parts of the P-4MB.12-.. and P-8MB.12-... junction box enclosures are constructed from plastic. To prevent the risk of electrostatic sparking, the plastic should only be cleaned with a damp cloth.

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Drawing No. QCF-00147		Rev M	
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P - 4MB 12 - 4 - . . . - *, P - 4MBV 12 - 4 - . . . - *,
P - VBM 40 - . . . - *, P - VBMV 40 - . . . - *



Intrinsically Safe Apparatus: Any FM approved device with Entity Concept parameters

$V_{max} \geq V_{oc}$ of the Associated Apparatus

$I_{max} \geq I_{sc}$ of the Associated Apparatus

$C_i + C_{cable} \leq C_a$ of the Associated Apparatus

$L_i + L_{cable} \leq L_a$ of the Associated Apparatus

$P_i \geq P_o$ of the Associated Apparatus

Associated Apparatus: Any FM approved device with Entity Concept parameters:

$V_{oc} \leq V_{max}$ of the Intrinsically Safe Apparatus and $\leq 30V$

$I_{sc} \leq I_{max}$ of the Intrinsically Safe Apparatus and $\leq 600mA$

$C_a \geq C_i$ of the Intrinsically Safe Apparatus + C_{cable}

$L_a \geq L_i$ of the Intrinsically Safe Apparatus + L_{cable}

$P_o \leq P_i$ of the Intrinsically Safe Apparatus and $\leq 4.5W$

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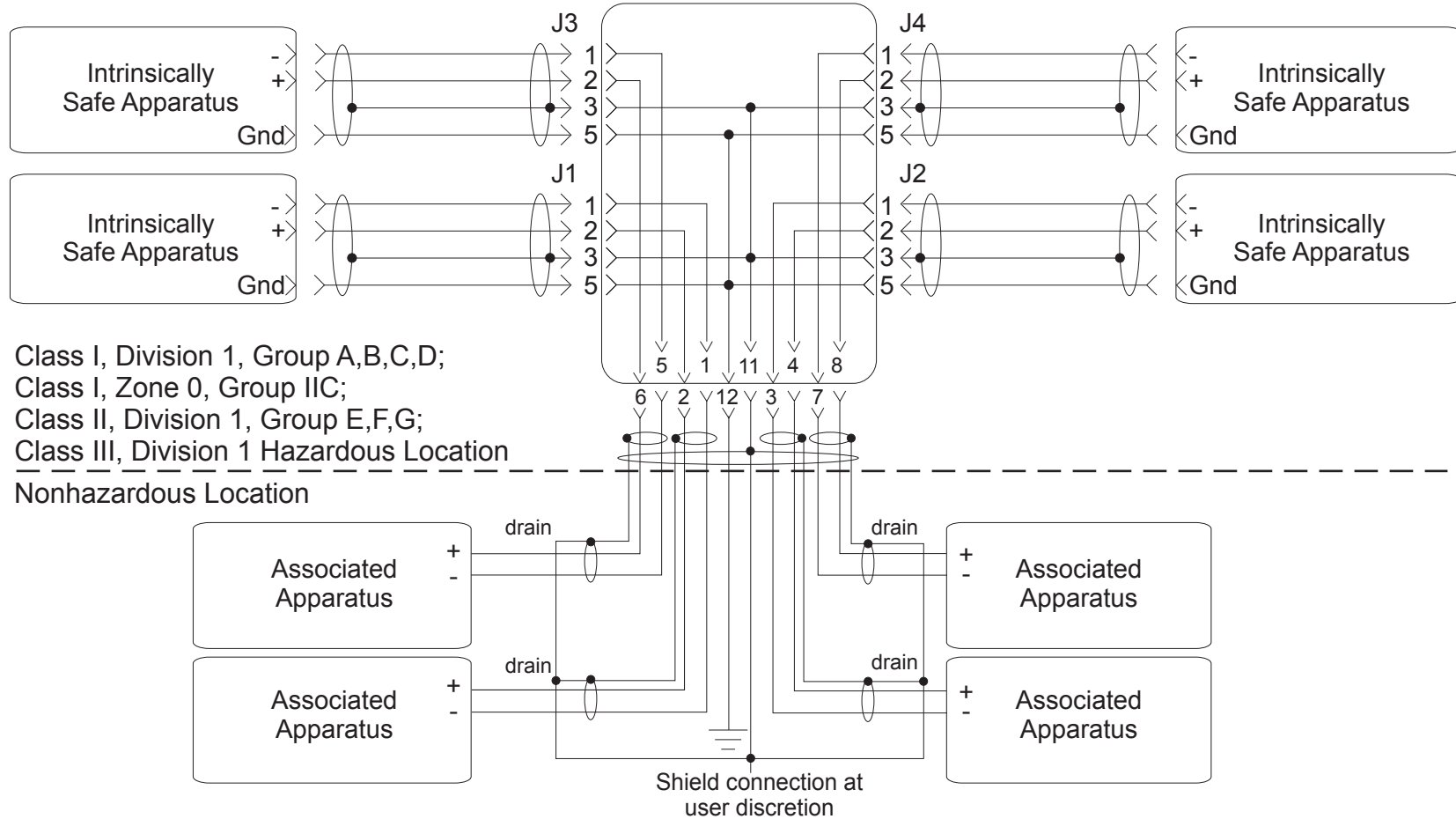
Drawing No. QCF-00147

Rev M

Scale None

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P - 4MB 12 - 4 - CS12, P - 4MBV 12 - 4 - CSV12,
P - VBM 40 - CS12, P - VBMV 40 - CSV12



Intrinsically Safe Apparatus: Any FM approved device with Entity Concept parameters

$V_{max} \geq V_{oc}$ of the Associated Apparatus

$I_{max} \geq I_{sc}$ of the Associated Apparatus

$C_i + C_{cable} \leq C_a$ of the Associated Apparatus

$L_i + L_{cable} \leq L_a$ of the Associated Apparatus

$P_i \geq P_o$ of the Associated Apparatus

Associated Apparatus: Any FM approved device with Entity Concept parameters:

$V_{oc} \leq V_{max}$ of the Intrinsically Safe Apparatus and $\leq 30V$

$I_{sc} \leq I_{max}$ of the Intrinsically Safe Apparatus and $\leq 600mA$

$C_a \geq C_i$ of the Intrinsically Safe Apparatus + C_{cable}

$L_a \geq L_i$ of the Intrinsically Safe Apparatus + L_{cable}

$P_o \leq P_i$ of the Intrinsically Safe Apparatus and $\leq 4.5W$

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Drawing No. QCF-00147

Rev M

Scale None

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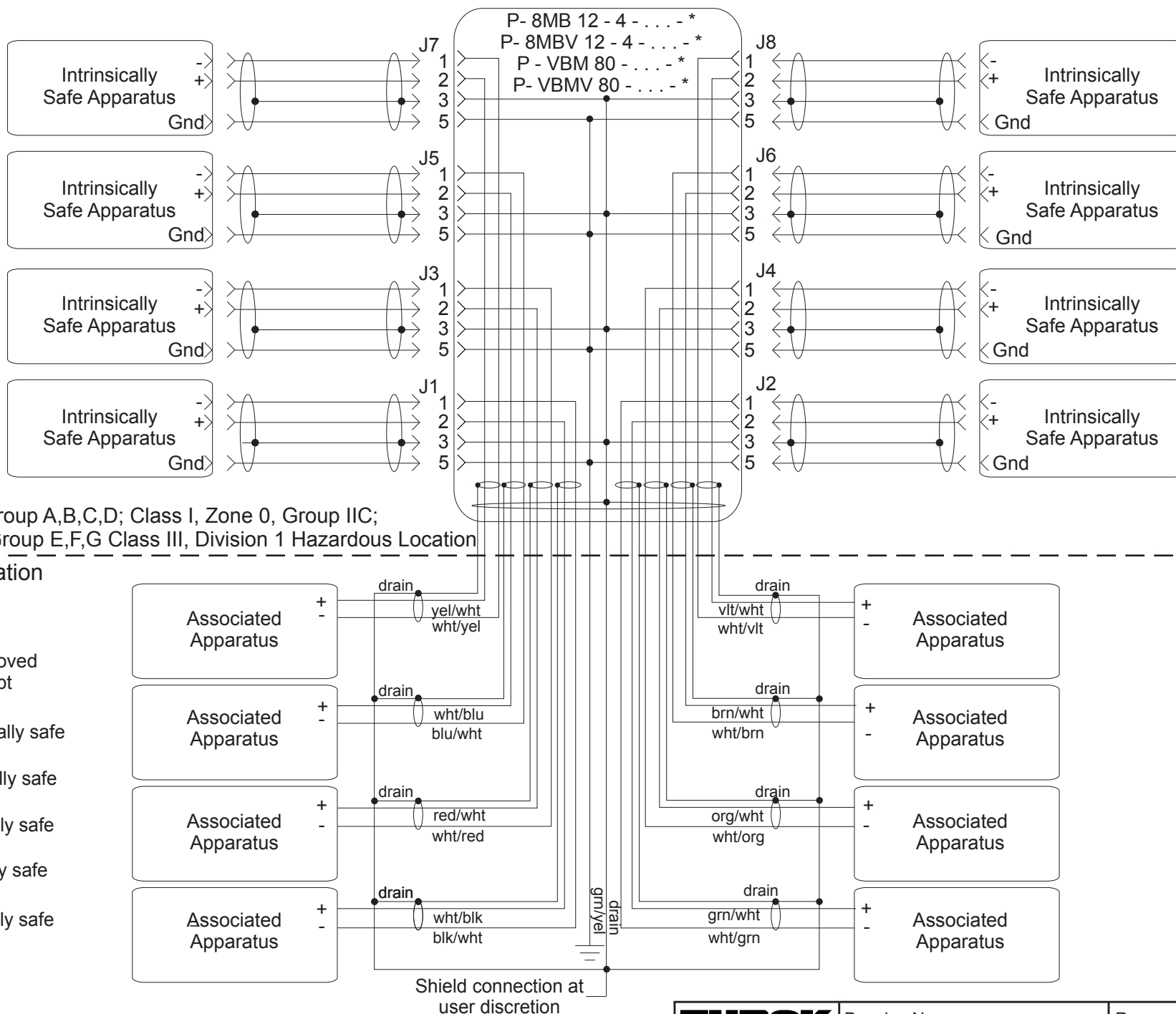
Intrinsically Safe Apparatus:
Any FM approved device with Entity Concept parameters:

$V_{max} \geq V_{oc}$ of the associated apparatus
 $I_{max} \geq I_{sc}$ of the associated apparatus
 $C_i + C_{cable} \leq C_a$ of the associated apparatus
 $L_i + L_{cable} \leq L_a$ of the associated apparatus
 $P_i \geq P_o$ of the associated apparatus

Class I, Division 1, Group A,B,C,D; Class I, Zone 0, Group IIC;
Class II, Division 1, Group E,F,G Class III, Division 1 Hazardous Location
Nonhazardous Location

Associated Apparatus:
Any Factory Mutual approved device with Entity Concept parameters:

$V_{oc} \leq V_{max}$ of the intrinsically safe apparatus and $\leq 30V$
 $I_{sc} \leq I_{max}$ of the intrinsically safe apparatus and $\leq 600mA$
 $C_a \geq C_i$ of the intrinsically safe apparatus + C_{cable}
 $L_a \geq L_i$ of the intrinsically safe apparatus + L_{cable}
 $P_o \leq P_i$ of the intrinsically safe apparatus and $< 4.5W$



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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	34 of 62

Intrinsically Safe Apparatus:
Any FM approved device with Entity Concept parameters:

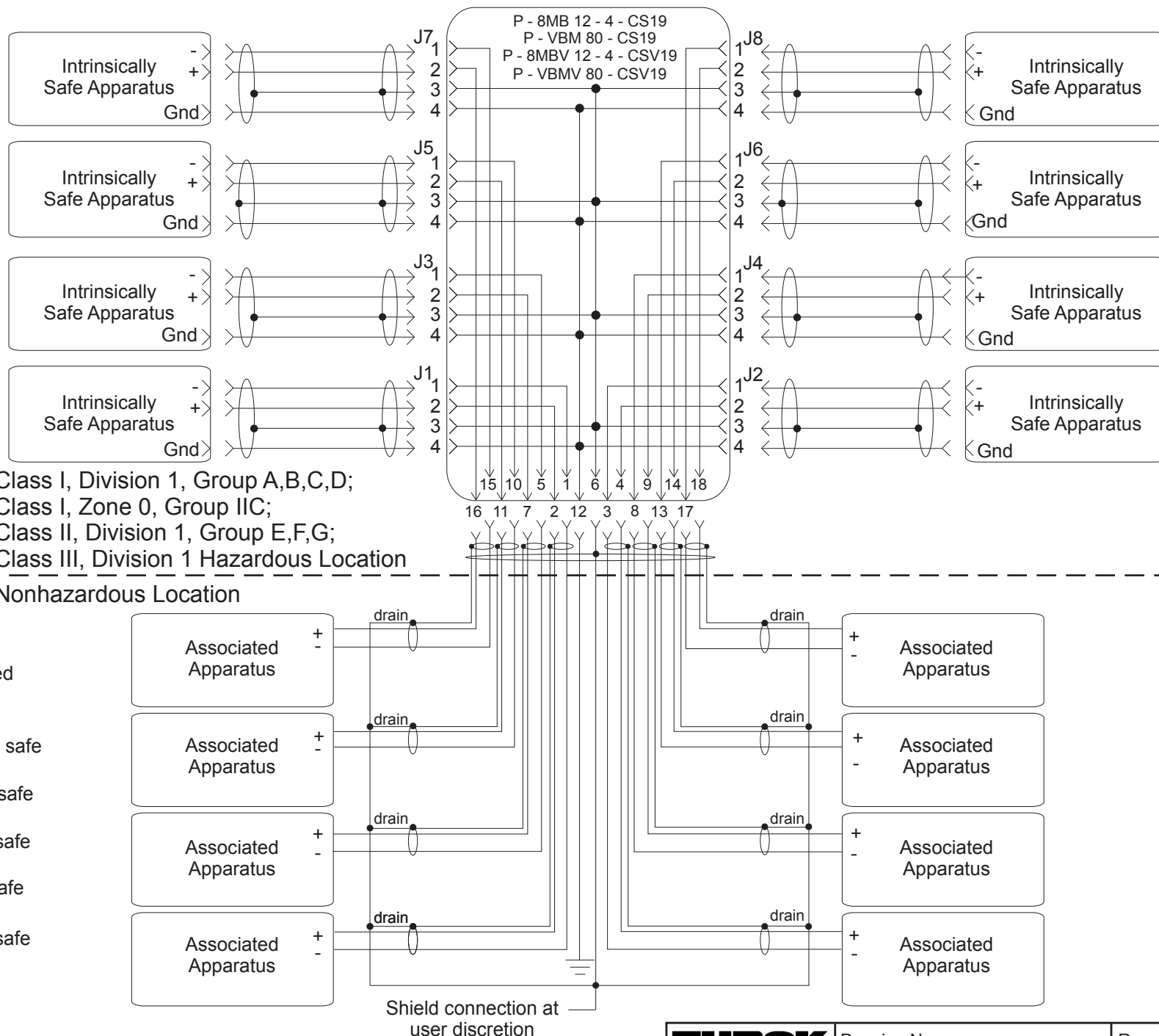
$V_{max} \geq V_{oc}$ of the associated apparatus
 $I_{max} \geq I_{sc}$ of the associated apparatus
 $C_i + C_{cable} \leq C_a$ of the associated apparatus
 $L_i + L_{cable} \leq L_a$ of the associated apparatus
 $P_i \geq P_o$ of the associated apparatus

Associated Apparatus:
Any Factory Mutual approved device with Entity Concept parameters:

$V_{oc} \leq V_{max}$ of the intrinsically safe apparatus and $\leq 30V$
 $I_{sc} \leq I_{max}$ of the intrinsically safe apparatus and $\leq 600mA$
 $C_a \geq C_i$ of the intrinsically safe apparatus + C_{cable}
 $L_a \geq L_i$ of the intrinsically safe apparatus + L_{cable}
 $P_o \leq P_i$ of the intrinsically safe apparatus and $< 4.5W$

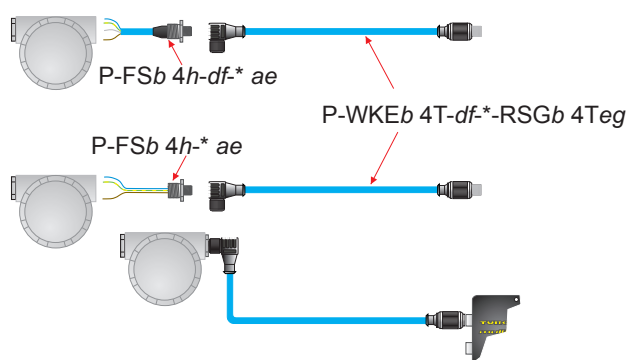
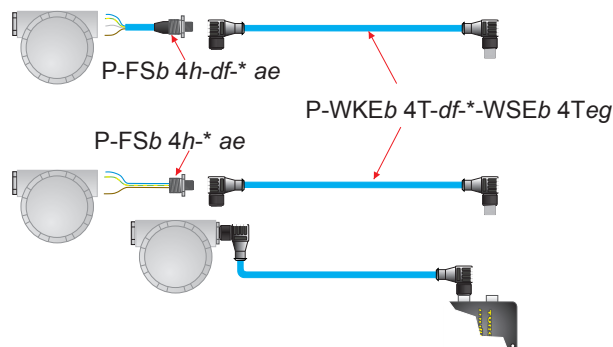
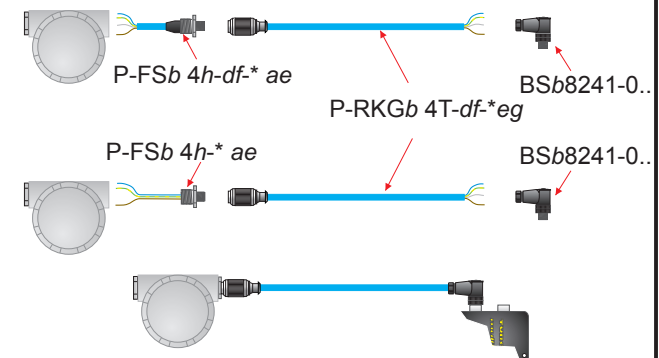
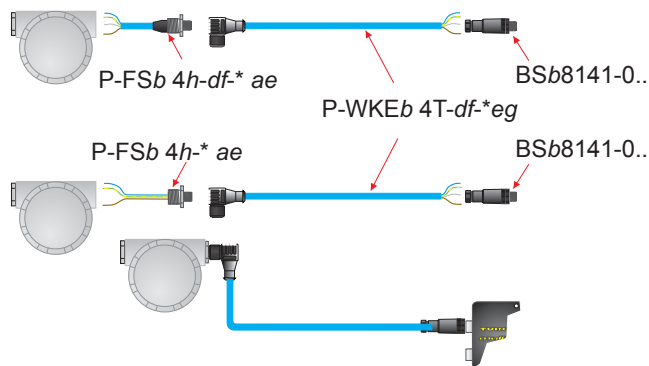
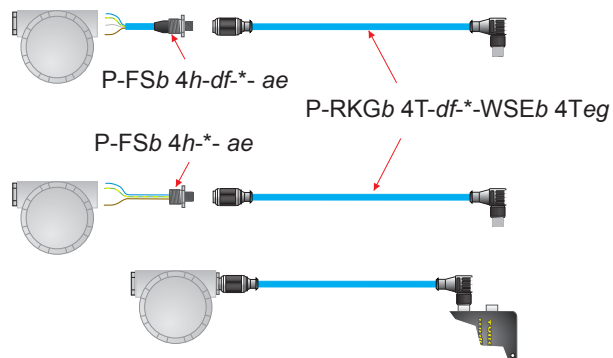
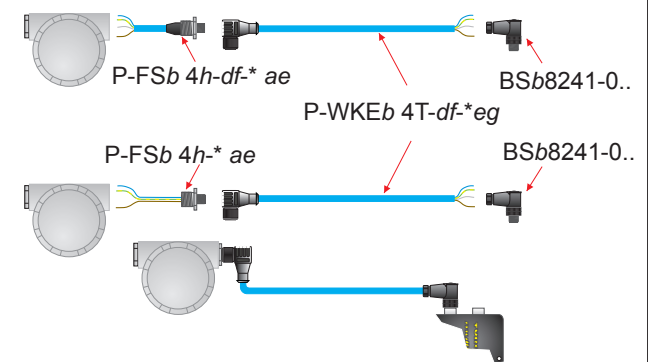
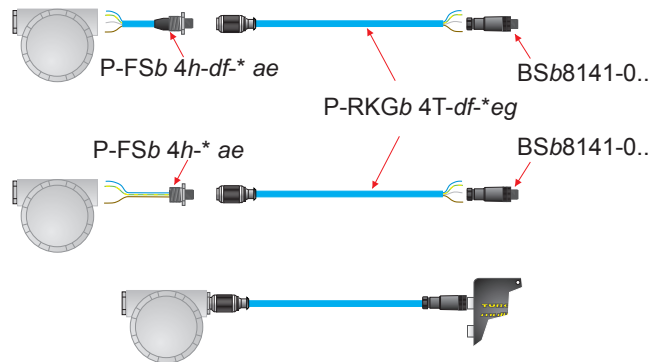
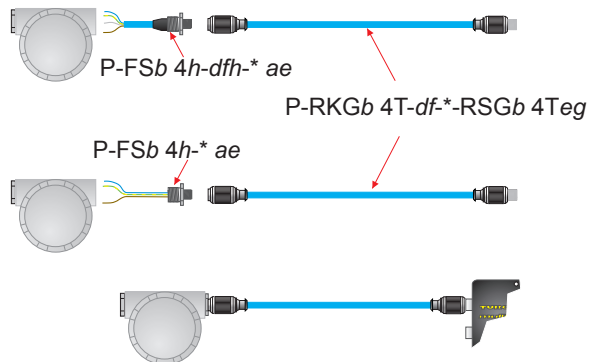
Class I, Division 1, Group A,B,C,D;
 Class I, Zone 0, Group IIC;
 Class II, Division 1, Group E,F,G;
 Class III, Division 1 Hazardous Location

 Nonhazardous Location



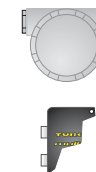
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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	35 of 62



KEY

a = /14.5/NPT, /14.75/NPT, /M20, or blank
 b = V or blank
 c = M or V
 d = 3 or 4-digit ITC or PLTC cable number
 e = /S1331, /S1599, /S613, /S849, or blank
 f = XL or blank
 g = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 or blank
 h = D or blank

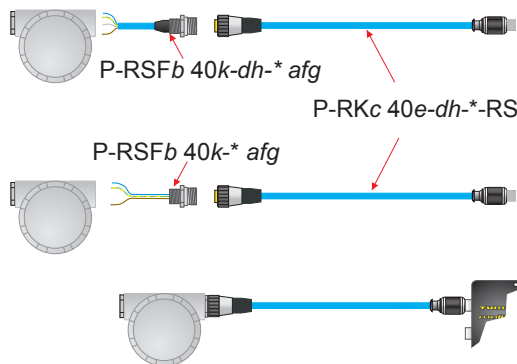


= Intrinsically Safe Apparatus, FM approved for Class I, Division 1 or Class I, Zone 0

= Turck multibox with *eurofast* port connectors, part numbers identified on Sheets 30-31.

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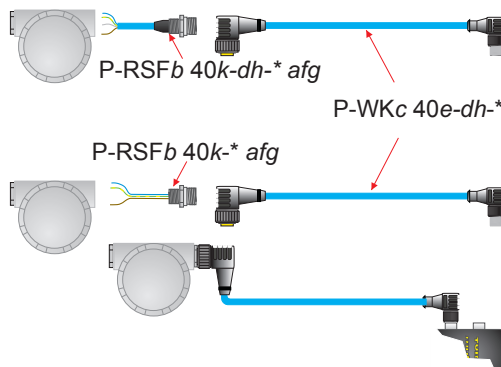
Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	36 of 62



P-RS**Fb** 40**k-dh**-* *afg*

P-R**Kc** 40**e-dh**-**-RSGb* 4**Tgj**

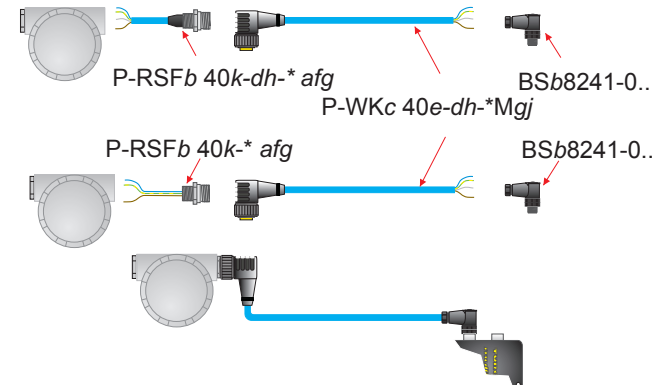
P-RS**Fb** 40**k**-* *afg*



P-RS**Fb** 40**k-dh**-* *afg*

P-W**Kc** 40**e-dh**-**-WSEb* 4**Tgj**

P-RS**Fb** 40**k**-* *afg*

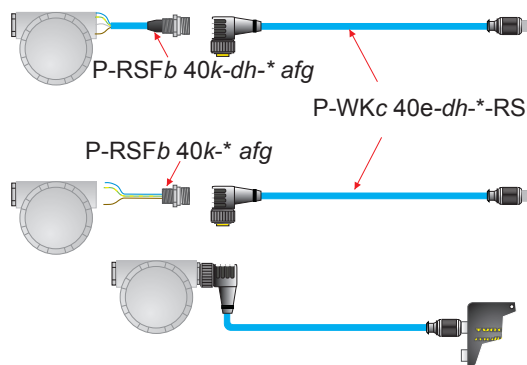


P-RS**Fb** 40**k-dh**-* *afg*

BS**b**8241-0..
P-W**Kc** 40**e-dh**-**Mgj*

P-RS**Fb** 40**k**-* *afg*

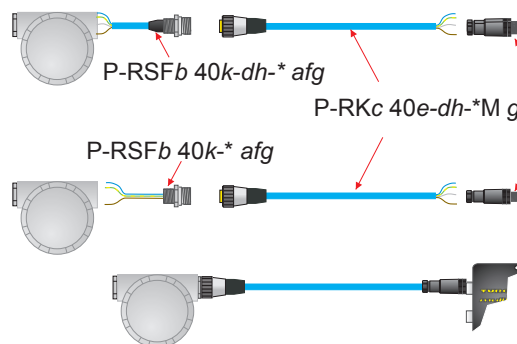
BS**b**8241-0..



P-RS**Fb** 40**k-dh**-* *afg*

P-W**Kc** 40**e-dh**-**-RSGb* 4**Tgj**

P-RS**Fb** 40**k**-* *afg*



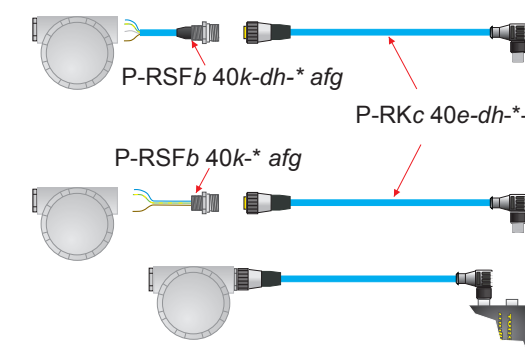
P-RS**Fb** 40**k-dh**-* *afg*

BS**b**8141-0..

P-R**Kc** 40**e-dh**-**M gj*

P-RS**Fb** 40**k**-* *afg*

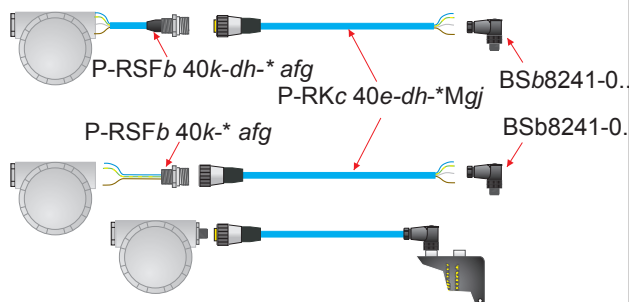
BS**b**8141-0..



P-RS**Fb** 40**k-dh**-* *afg*

P-R**Kc** 40**e-dh**-**-WSEb* 4**Tgj**

P-RS**Fb** 40**k**-* *afg*

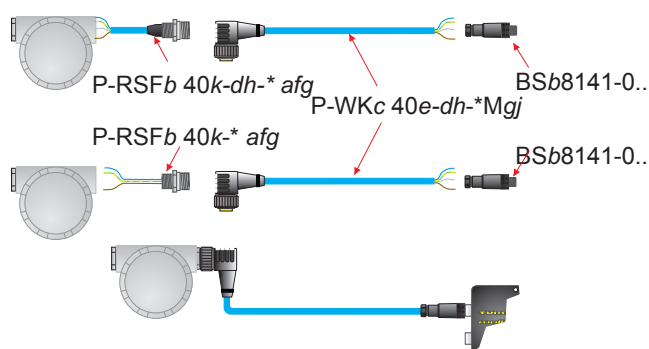


P-RS**Fb** 40**k-dh**-* *afg*

P-R**Kc** 40**e-dh**-**Mgj* BS**b**8241-0..

P-RS**Fb** 40**k**-* *afg*

BS**b**8241-0..



P-RS**Fb** 40**k-dh**-* *afg*

BS**b**8141-0..

P-W**Kc** 40**e-dh**-**Mgj*

P-RS**Fb** 40**k**-* *afg*

BS**b**8141-0..

KEY

a = /14.5/NPT, /14.75/NPT, /M20, or blank

b = V or blank

c = M or V

d = 3 or 4-digit ITC or PLTC cable number

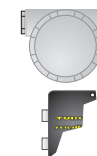
e = H or blank *f* = /S3256 or blank

g = /S1331, /S1599, /S613, /S1658, /S849, or blank

h = XL or blank

j = /S679, /S771, /S1055, /S1057, /S1126,
/S3001, /S3034 or blank

k = D or blank



= Intrinsically Safe Apparatus, FM approved
for Class I, Division 1 or Class I, Zone 0

= Turck multibox with *euromax* port connectors,
part numbers identified on Sheets 30-31.

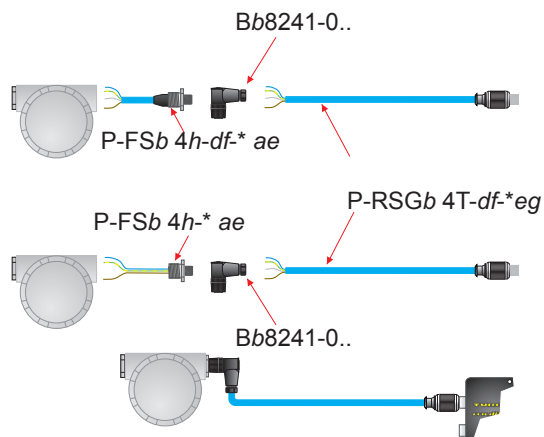
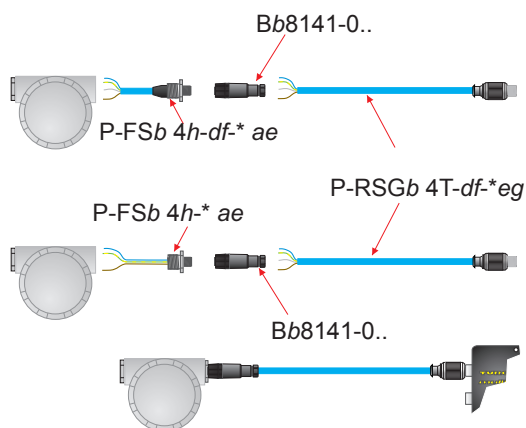
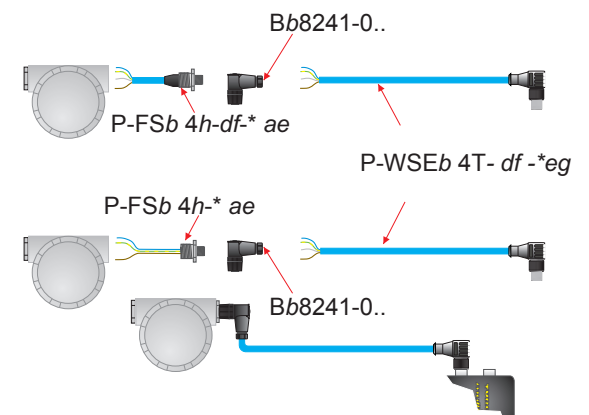
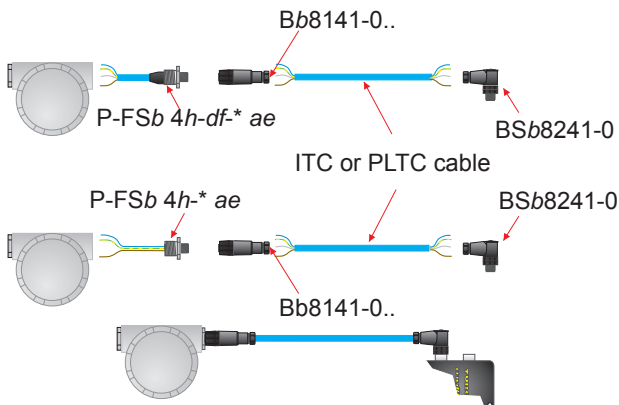
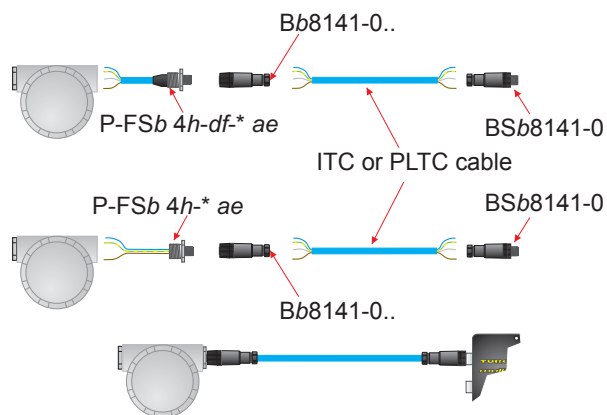
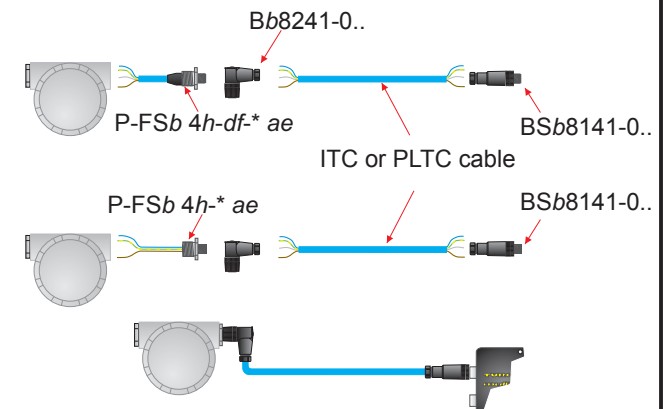
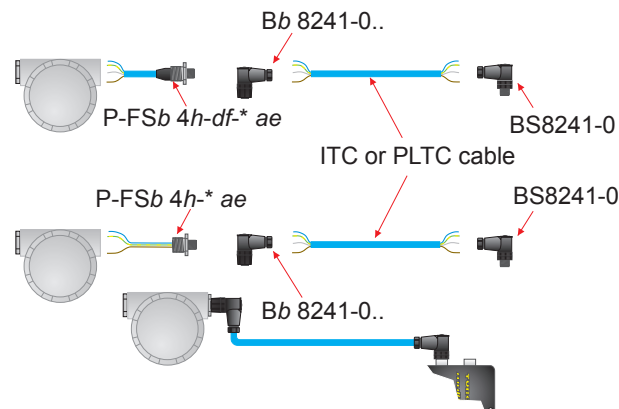
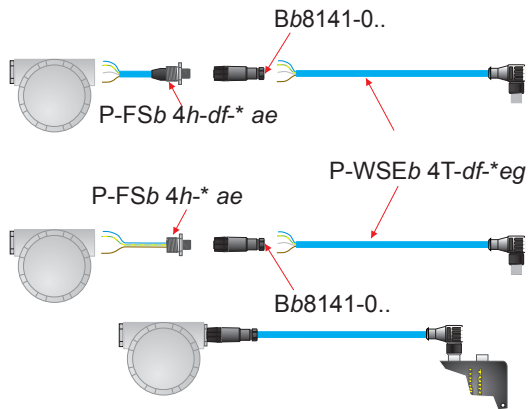
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Drawing No. QCF-00147

Rev M

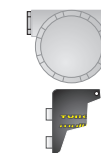
Scale None

Sheet 37 of 62



KEY

a = /14.5/NPT, /14.75/NPT, /M20, or blank
b = V or blank
c = M or V
d = 3 or 4-digit ITC or PLTC cable number
e = /S1331, /S1599, /S613, /S849, or blank
f = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 or blank
g = XL or blank
h = D or blank



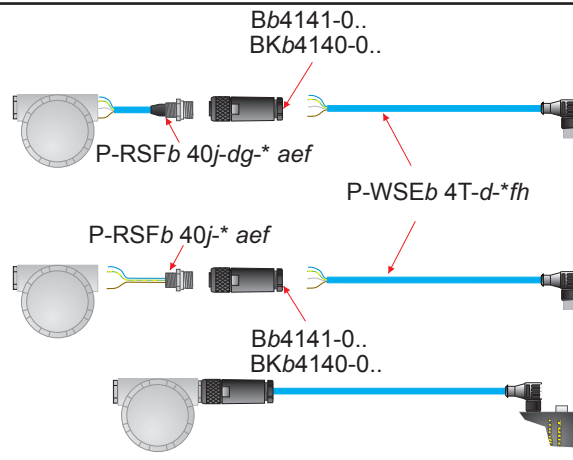
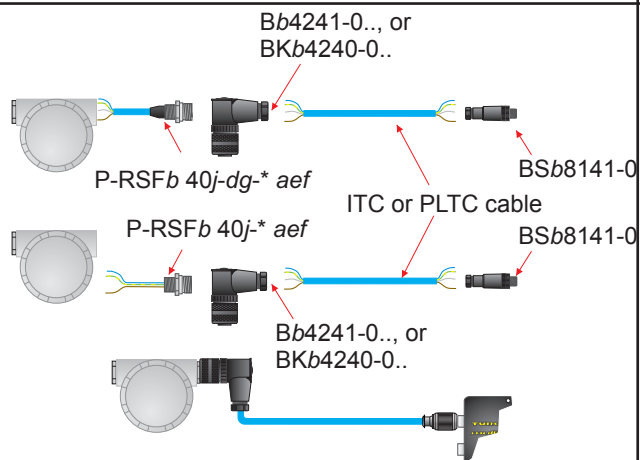
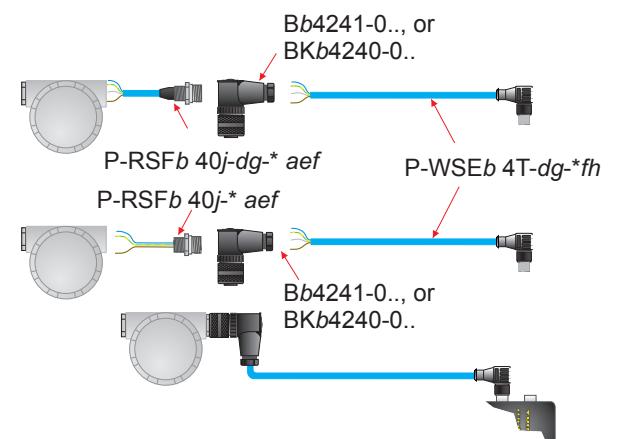
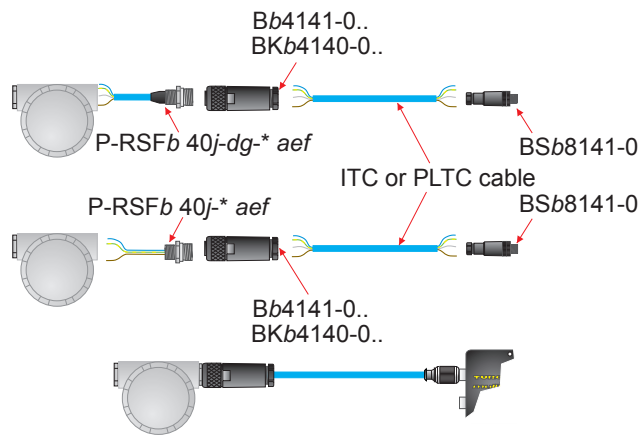
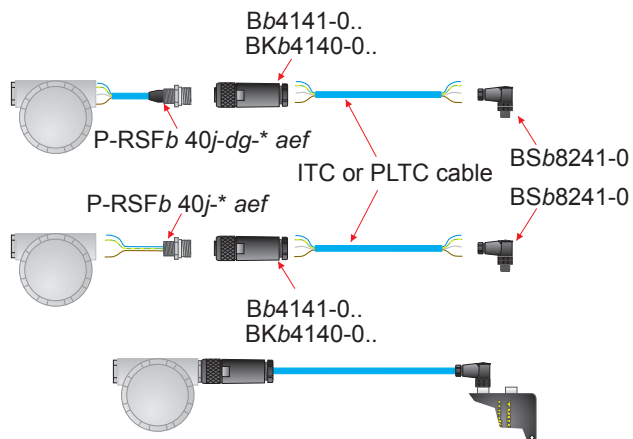
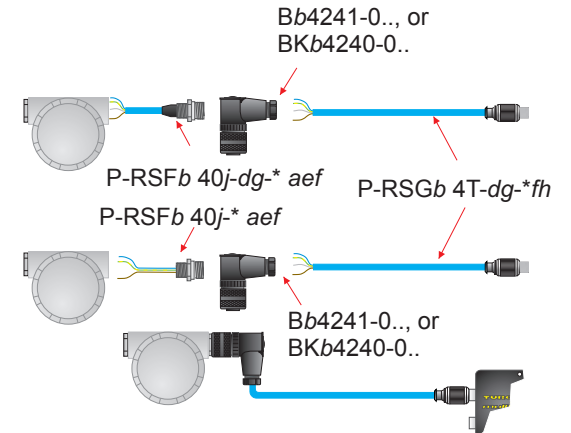
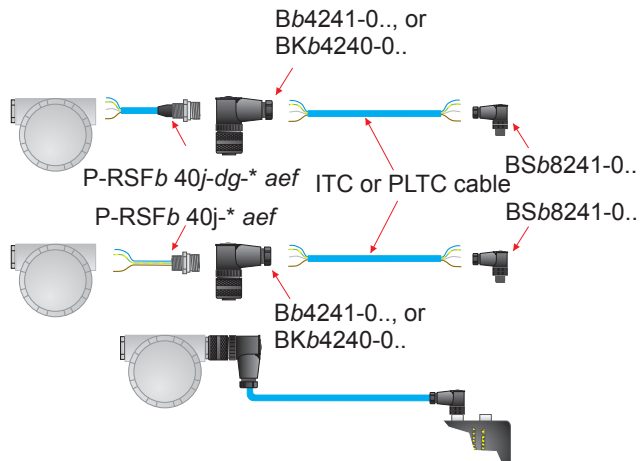
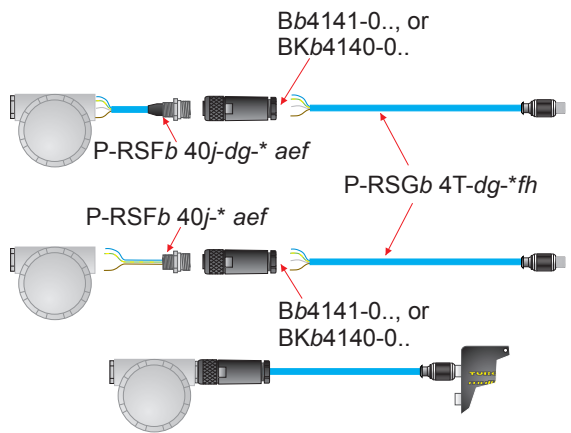
= Intrinsically Safe Apparatus, FM approved for Class I, Division 1 or Class I, Zone 0



= Turck multibox with eurofast port connectors, part numbers identified on Sheets 30-31.

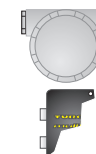
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Drawing No. QCF-00147		Rev M
Scale	None	Sheet 38 of 62



KEY

a = /14.5/NPT, /14.75/NPT, /M20, or blank
b = V or blank c = M or V
d = 3 or 4-digit ITC or PLTC cable number
e = /S3256 or blank
f = /S1331, /S1599, /S613, /S849, or blank
g = /S679, /S771, /S1055, /S1057, /S1126,
/S3001, /S3034 or blank
h = XL or blank j = D or blank



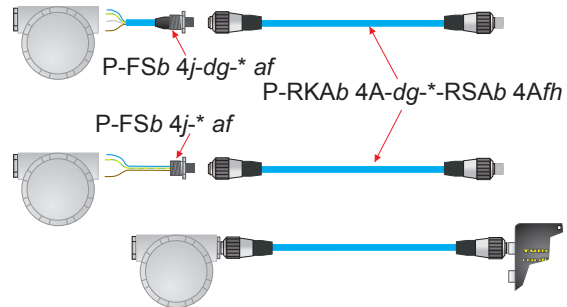
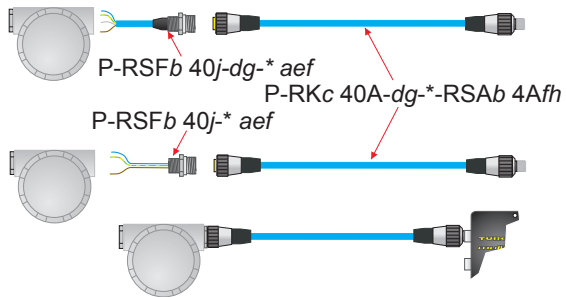
= Intrinsically Safe Apparatus, FM approved
for Class I, Division 1 or Class I, Zone 0



= Turck multibox with eurofast port connectors,
part numbers identified on Sheets 30-31.

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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	39 of 62



KEY

a = /14.5/NPT, /14.75/NPT, /M20, or blank

b = V or blank

c = M or V

d = 3 or 4-digit ITC or PLTC cable number

e = /S3256 or blank

f = /S1331, /S1599, /S613, /S849, or blank

g = XL or blank

h = /S679, /S771, /S1055, /S1057, /S1126,
/S3001, /S3034 or blank

j = D or blank



= Intrinsically Safe Apparatus, FM approved
for Class I, Division 1 or Class I, Zone 0



= Turck multibox with *eurofast* port connectors,
part numbers identified on Sheets 30-31.

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Drawing No. QCF-00147

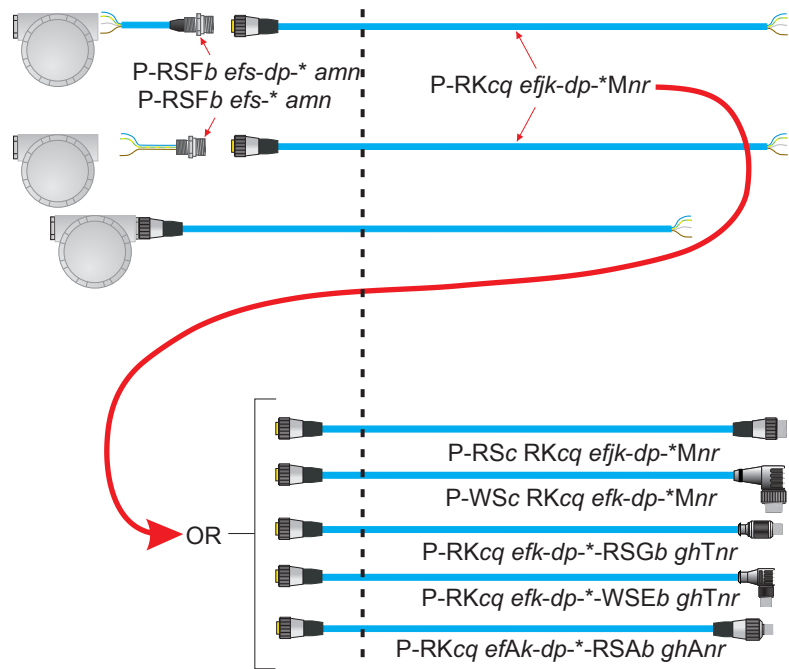
Rev M

Scale None

Sheet 40 of 62

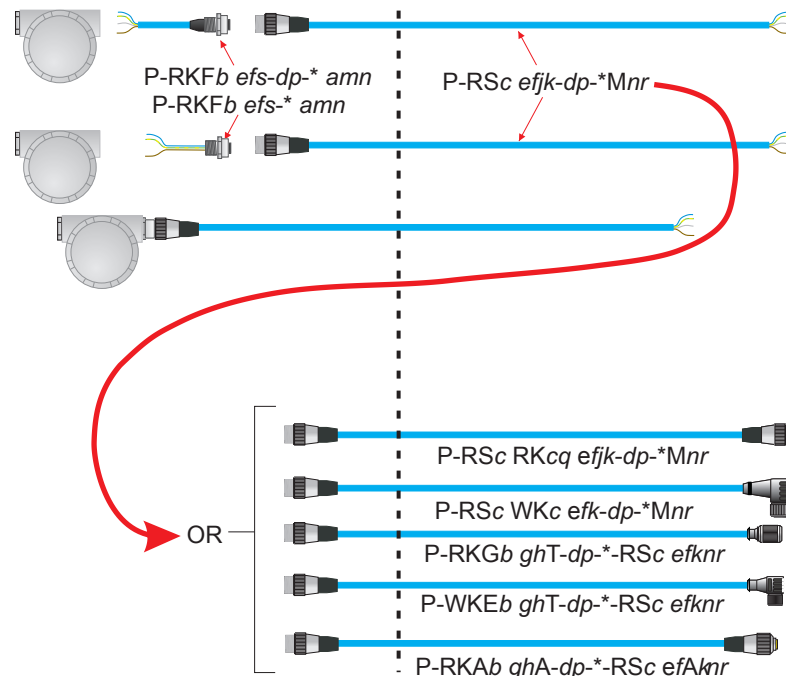
Class I, Division 1, Group A,B,C,D;
Class I, Zone 0, Group IIC;
Class II, Division 1, Group E,F,G;
Class III, Division 1
Hazardous Location

Class I, Division 2, Group A,B,C, or D;
Class I, Zone 2, Group IIC
or Nonhazardous Location



Class I, Division 1, Group A,B,C,D;
Class I, Zone 0, Group IIC;
Class II, Division 1, Group E,F,G;
Class III, Division 1
Hazardous Location

Class I, Division 2, Group A,B,C, or D;
Class I, Zone 2, Group IIC
or Nonhazardous Location



Notes:

- Key: $a = /14.5/NPT, /14.75/NPT, /M20, \text{ or blank}$ $b = V \text{ or blank}$ $c = M \text{ or V}$ $d = 3 \text{ or 4-digit ITC or PLTC cable number}$ $e = 2, 3, 4, 5, \text{ or } 6$
 $f = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $g = 4 \text{ or } 5$ $h = .1, .2, .3, \dots .99, \text{ or blank}$ $j = A \text{ or blank}$ $k = H \text{ or blank}$ $m = /S3256 \text{ or blank}$
 $n = /S1331, /S1599, /S613, /S1658, /S849, \text{ or blank}$ $p = XL \text{ or blank}$ $q = S \text{ or blank}$ $r = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 \text{ or blank}$
 $s = D \text{ or blank}$



= Intrinsically Safe Apparatus, FM approved
for Class I, Division 1 or Class I, Zone 0

- The installation must be in accordance with the National Electrical Code (NEC), ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.



- The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Class I, Divisions 1 and 2. Thus, the cable may cross the boundary from Class I, Division 1 into Class I Division 2 or a nonhazardous location, or may remain entirely within Class I, Division 1.

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Drawing No. QCF-00147

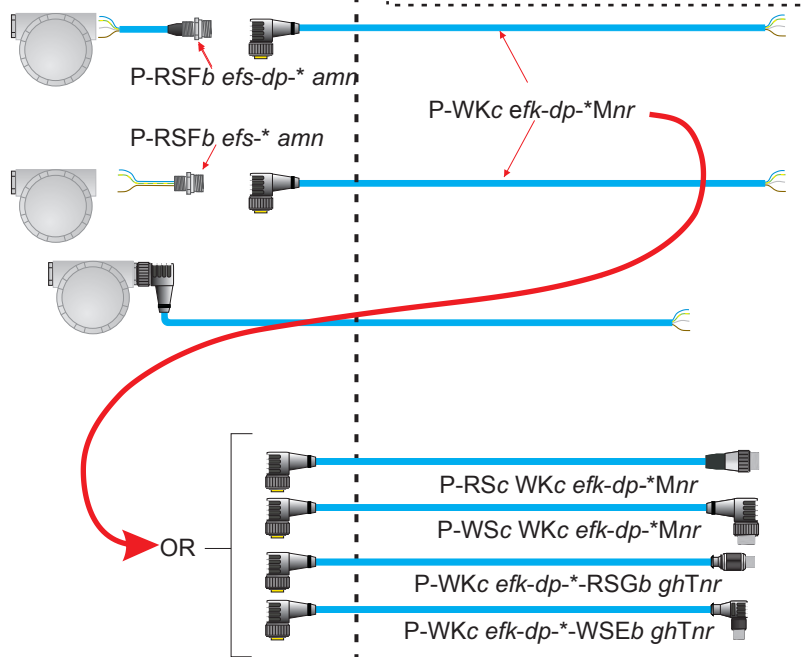
Rev M

Scale None

Sheet 41 of 62

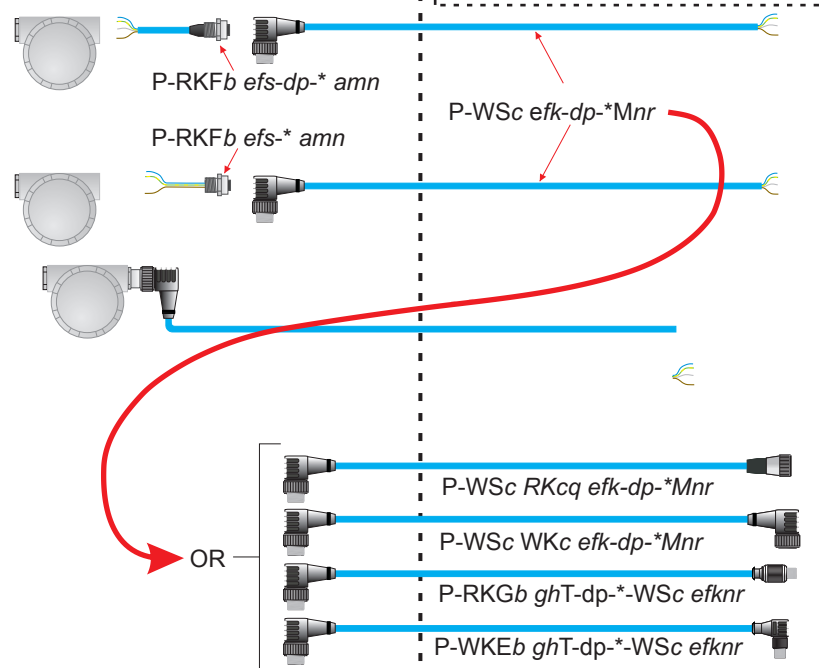
Class I, Division 1, Group A,B,C,D;
Class I, Zone 0, Group IIC;
Class II, Division 1, Group E,F,G;
Class III, Division 1
Hazardous Location

Class I, Division 2, Group A,B,C, or D;
Class I, Zone 2, Group IIC
or Nonhazardous Location



Class I, Division 1, Group A,B,C,D;
Class I, Zone 0, Group IIC;
Class II, Division 1, Group E,F,G;
Class III, Division 1
Hazardous Location

Class I, Division 2, Group A,B,C, or D;
Class I, Zone 2, Group IIC
or Nonhazardous Location



Notes:

- Key: a = /14.5/NPT, /14.75/NPT, /M20, or blank b = V or blank c = M or V d = 3 or 4-digit ITC or PLTC cable number e = 2, 3, 4, 5, or 6
f = 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99 g = 4 or 5 h = .1, .2, .3,99, or blank k = H or blank m = /S3256 or blank
n = /S1331, /S1599, /S613, /S1658, /S849, or blank p = XL or blank q = S or blank r = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 or blank
s = D or blank



= Intrinsically Safe Apparatus, FM approved
for Class I, Division 1 or Class I, Zone 0

- The installation must be in accordance with the National Electrical Code (NEC), ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.

- The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Class I, Divisions 1 and 2. Thus, the cable may cross the boundary from Class I, Division 1 into Class I Division 2 or a nonhazardous location, or may remain entirely within Class I, Division 1.

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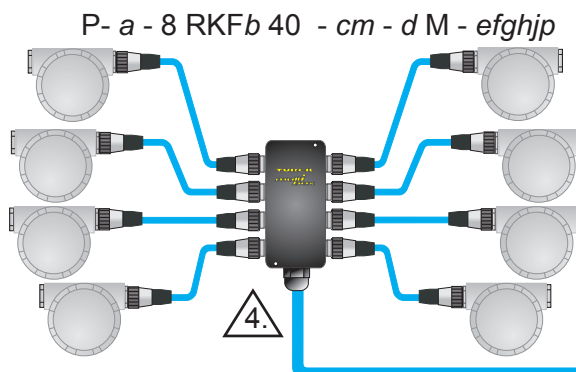
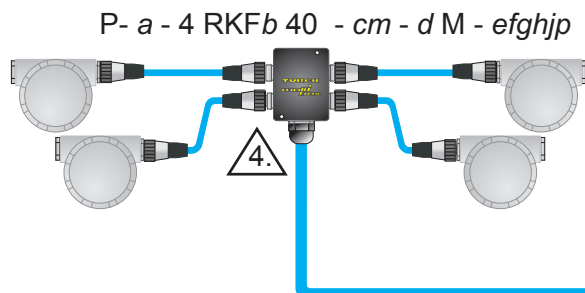
Drawing No. QCF-00147

Rev M

Scale None

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Class I, Division 1, Group A,B,C,D;
 Class I, Zone 0, Group IIC;
 Class II, Division 1, Group E,F,G;
 Class III, Division 1 Hazardous Location



a = Housing material: SS or blank
b = Port connector material: V or blank
c = 3 or 4-digit ITC or PLTC cable number
d = Cable length in meters
e = Molded home-run connector type: CSM, CSWM, CKM, CKWM, CSSM or blank
f = Home-run connector material/locking: L, T, V or blank
g = Number of home-run connector conductors: 12 or 19
h = Wiring option: 1, 2, 3, . . . 9, 01, 02, 03, . . . 99 or blank
j = Armor: A or blank
k = /S613 or blank
m = XL or blank
p = /S1331, /S1599, or blank

Notes:

- Field circuits may be installed using any of the combinations of equipment shown on Sheets 51-55.
- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation or PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.
- The Entity Concept allows the interconnection of intrinsically safe apparatus and associated apparatus not specifically examined in combination as a system when the following conditions are met:

$$V_{\max} \geq V_{oc} \text{ or } V_t \quad I_{\max} \geq I_{sc} \text{ or } I_t \quad C_{i \text{ (total)}} + C_{\text{cable}} \leq C_a \quad L_{i \text{ (total)}} + L_{\text{cable}} \leq L_a$$

Junction box Entity Parameters (per circuit):

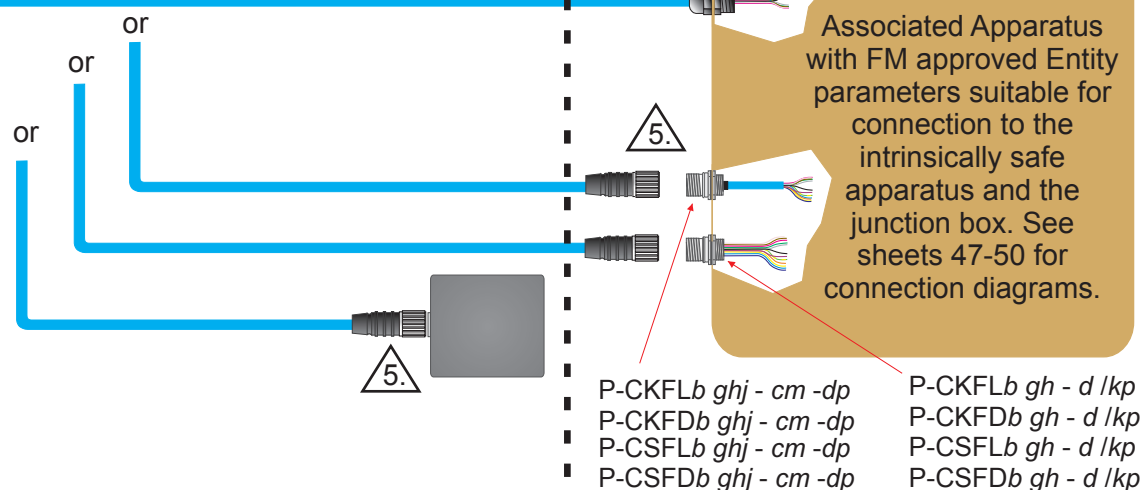
$$V_{\max} = 30V \quad I_{\max} = 600mA \quad C_i = 0 \quad L_i = 0$$

4. The potted-in construction of the integral home-run cable and the gas/vaportight continuous sheath of the cable meets the requirements of the NEC, Article 501, for cable seals in Class I, Divisions 1 and 2.

5. When *e* = CSM..., CKM..., CSSM..., or CXM..., a connector is molded to the end of the home-run cable.

6. WARNING: The P-4 RKFB and P-8 RKFB junction box enclosures contain aluminum and are considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.

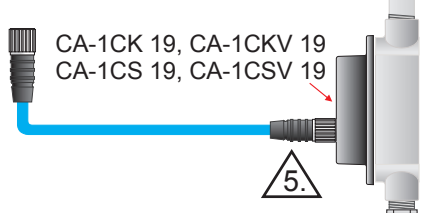
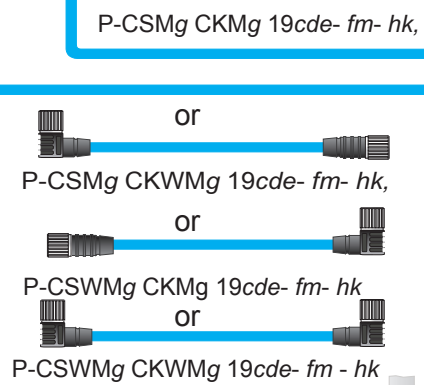
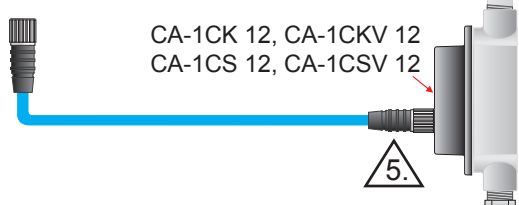
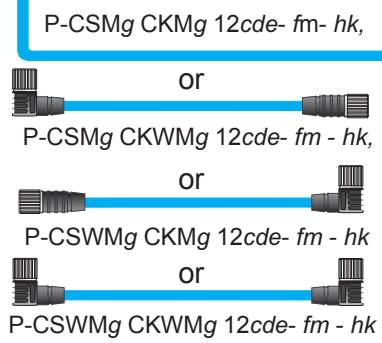
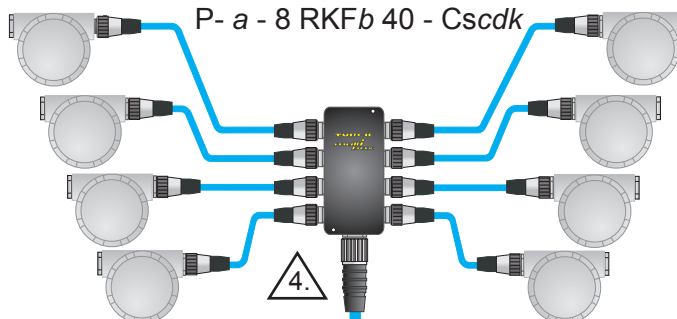
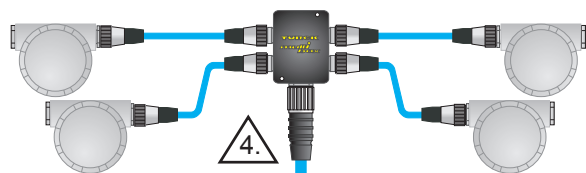
Nonhazardous Location



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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	43 of 62

Class I, Division 1, Group A,B,C,D;
 Class I, Zone 0, Group IIC;
 Class II, Division 1, Group E,F,G;
 Class III, Division 1 Hazardous Location



Nonhazardous Location

Associated Apparatus with FM approved Entity parameters suitable for connection to the intrinsically safe apparatus and the junction box. See sheets 47-50 for connection diagrams.

P-CKFLb cde - fm - hk
 P-CKFDb cde - fm- hk
 P-CSFLb cde - fm - hk
 P-CSFDb cde - fm - hk

P-CKFLb cd - h / jk
 P-CKFDb cd - h / jk
 P-CSFLb cd - h / jk
 P-CSFDb cd - h / jk

a = Housing Material: SS or blank
 b = Port connector material: V or blank
 c = 12 or 19
 d = 1, 2, 3, . . . 9, 01, 02, 03, . . . 99 or blank
 e = A or blank
 f = 3 or 4-digit ITC or PLTC cable number
 g = L, T, V or blank
 h = Cable length in meters
 j = /S613 or blank
 k = /S1331, /S1599 or blank m = XL or blank

Notes:

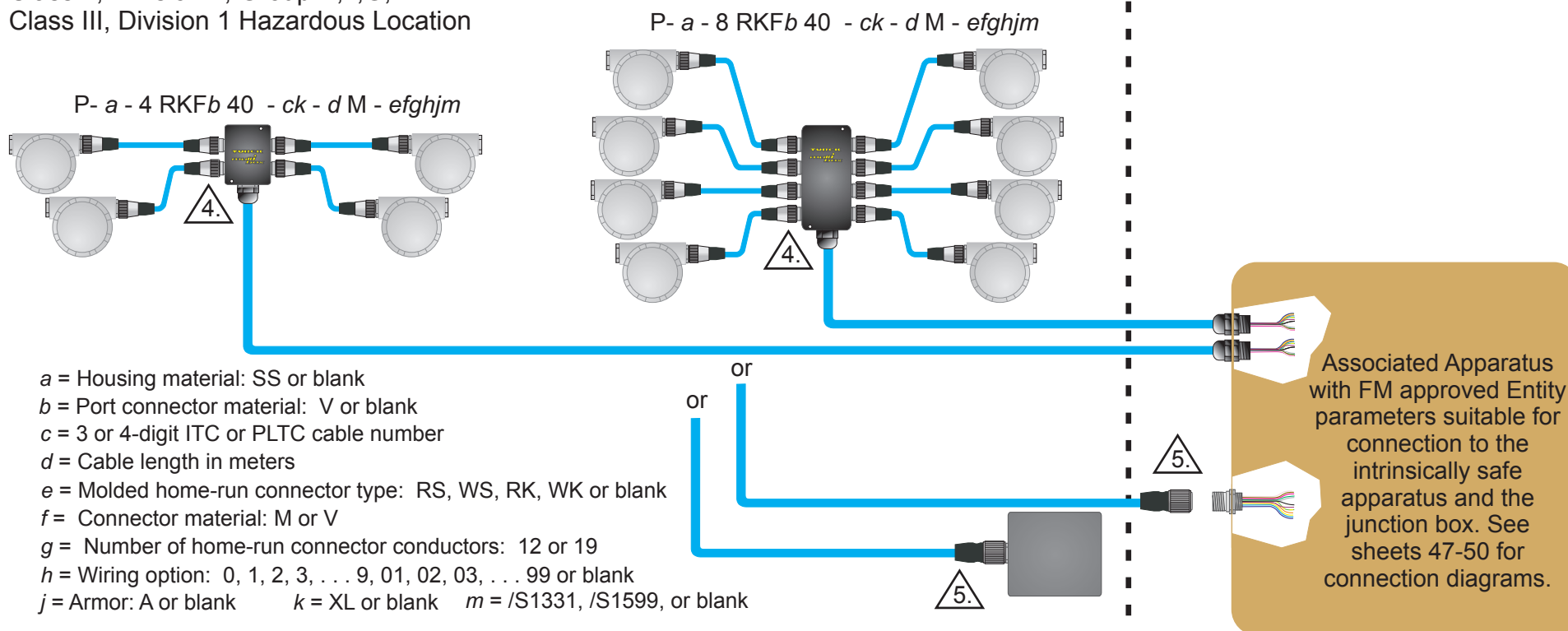
- Field circuits may be installed using any of the combinations of equipment shown on Sheets 51-55..
- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation or PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.
- The Entity Concept allows the interconnection of intrinsically safe apparatus and associated apparatus not specifically examined in combination as a system when the following conditions are met:

$$V_{max} \geq V_{oc} \text{ or } V_t \quad I_{max} \geq I_{sc} \text{ or } I_t \quad C_i \text{ (total)} + C_{cable} \leq C_a \quad L_i \text{ (total)} + L_{cable} \leq L_a$$
 Junction box Entity Parameters (per circuit):

$$V_{max} = 30V \quad I_{max} = 600mA \quad C_i = 0 \quad L_i = 0$$
- The molded construction of the home-run cable and the gas/vaportight continuous sheath of the cable meets the requirements of the NEC, Article 501, for cable seals in Class I, Divisions 1 and 2. P-CKM... home run connectors must either be securely connected to the junction box or plugged using a Turck CS-CC closure cap.
- See Sheet 26 for installation of CA-... conduit body adaptors.
- WARNING: The P-- 4 RKF.. and P-- 8 RKF.. junction box enclosures contain aluminum and are considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.
- Parts of the CA-1CK.. conduit adaptor enclosures are constructed from plastic. To prevent the risk of electrostatic sparking, the plastic should only be cleaned with a damp cloth.

Class I, Division 1, Group A,B,C,D;
 Class I, Zone 0, Group IIC;
 Class II, Division 1, Group E,F,G;
 Class III, Division 1 Hazardous Location

Nonhazardous Location



Notes:

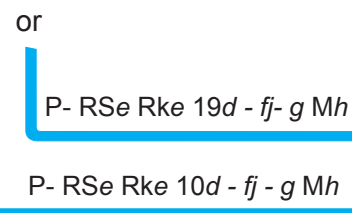
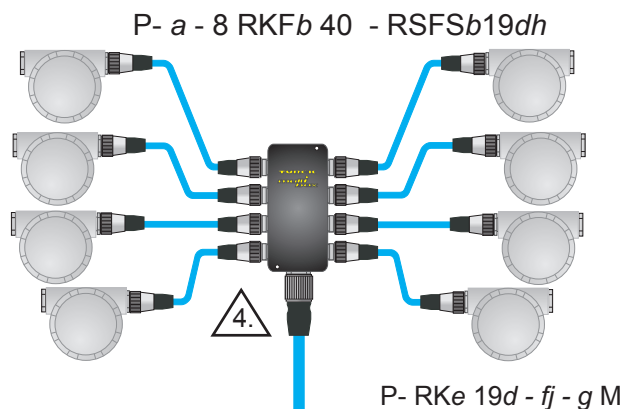
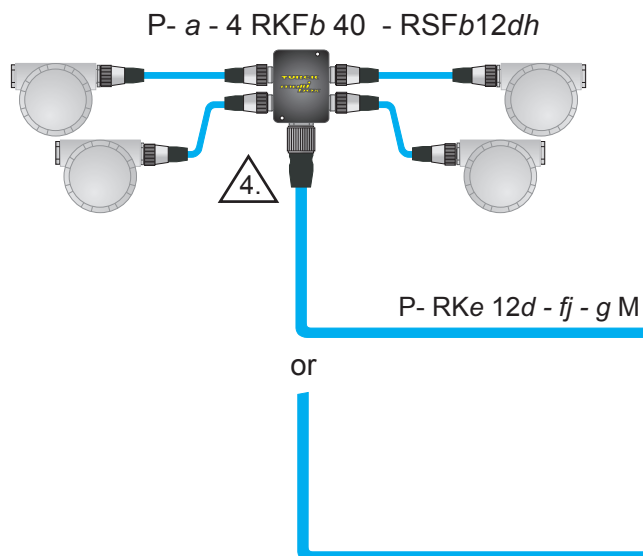
- Field circuits may be installed using any of the combinations of equipment shown on Sheets 51-55.
- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation or PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.
- The Entity Concept allows the interconnection of intrinsically safe apparatus and associated apparatus not specifically examined in combination as a system when the following conditions are met:

$$V_{\max} \geq V_{oc} \text{ or } V_t \quad I_{\max} \geq I_{sc} \text{ or } I_t \quad C_{i \text{ (total)}} + C_{\text{cable}} \leq C_a \quad L_{i \text{ (total)}} + L_{\text{cable}} \leq L_a$$
 Junction box Entity Parameters (per circuit):

$$V_{\max} = 30V \quad I_{\max} = 600mA \quad C_i = 0 \quad L_i = 0$$
- The potted-in construction of the integral home-run cable and the gas/vaportight continuous sheath of the cable meets the requirements of the NEC, Article 501, for cable seals in Class I, Divisions 1 and 2.
- When e = RS, WS, RK or WK, a minifast B- or C-size connector is molded to the end of the home-run cable for installation per Turck control drawing Ni-2.407.
- WARNING: The P-.-4 RKF.. and P-.-8 RKF.. junction box enclosures contain aluminum and are considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.
- Parts of the CA-1CK.. conduit adaptor enclosures are constructed from plastic. To prevent the risk of electrostatic sparking, the plastic should only be cleaned with a damp cloth.

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	Scale None	Sheet 45 of 62		

Class I, Division 1, Group A,B,C,D;
 Class I, Zone 0, Group IIC;
 Class II, Division 1, Group E,F,G;
 Class III, Division 1 Hazardous Location



a = Housing material: SS or blank
 b = Port connector material: V or blank
 c = Number of home-run conductors: 7, 8, 9, 10, 12 or 19
 d = Wiring option: 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99 or blank
 e = Coupling nut material: M or V

f = 3 or 4-digit ITC or PLTC cable number
 g = Cable length in meters
 h = /S1331, /S1599 or blank
 j = XL or blank

Nonhazardous Location

Associated Apparatus with FM approved Entity parameters suitable for connection to the intrinsically safe apparatus and the junction box. See sheets 47-50 for connection diagrams.

Notes:

- Field circuits may be installed using any of the combinations of equipment shown on sheets 51-55.
- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation or PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.
- The Entity Concept allows the interconnection of intrinsically safe apparatus and associated apparatus not specifically examined in combination as a system when the following conditions are met:

$$V_{\max} \geq V_{oc} \text{ or } V_t \quad I_{\max} \geq I_{sc} \text{ or } I_t \quad C_i(\text{total}) + C_{\text{cable}} \leq C_a \quad L_i(\text{total}) + L_{\text{cable}} \leq L_a$$

Junction box Entity Parameters (per circuit):

$$V_{\max} = 30V \quad I_{\max} = 600mA \quad C_i = 0 \quad L_i = 0$$

4. The molded construction of the home-run cable and the gas/vaportight continuous sheath of the cable meets the requirements of the NEC, Article 501, for cable seals in Class I, Divisions 1 and 2. P-CKM... home run connectors must either be securely connected to the junction box or plugged using a Turck CS-CC closure cap.

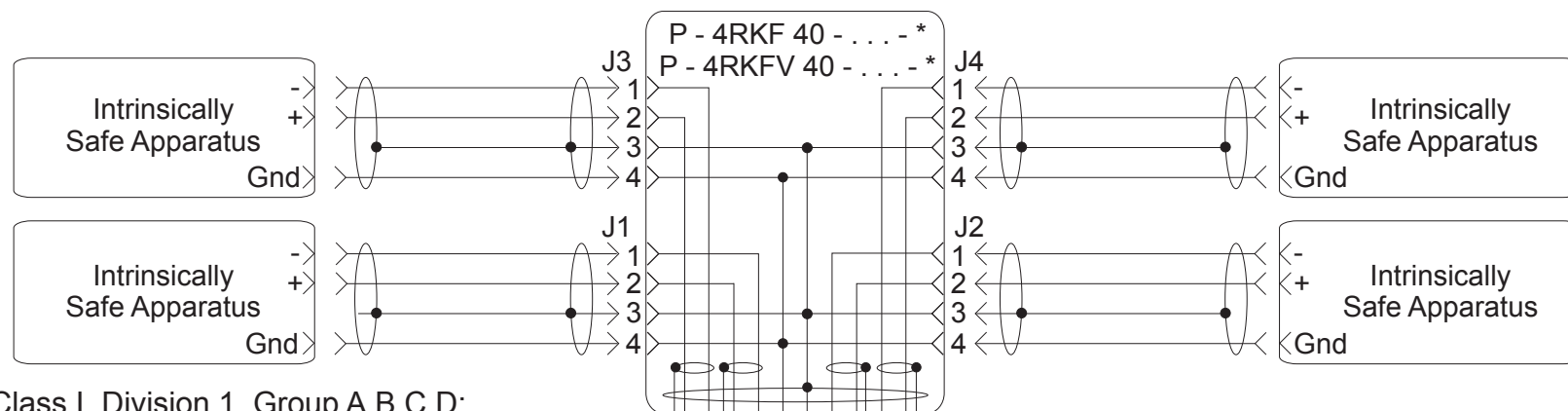
5. B- and C-size *minifast* home-run cables and receptacles may be installed per Turck control drawing Ni-2.407.

6. WARNING: The P-.4 RKF.. and P-.8 RKF.. junction box enclosures contain aluminum and are considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.

7. Parts of the CA-1CK.. conduit adaptor enclosures are constructed from plastic. To prevent the risk of electrostatic sparking, the plastic should only be cleaned with a damp cloth.

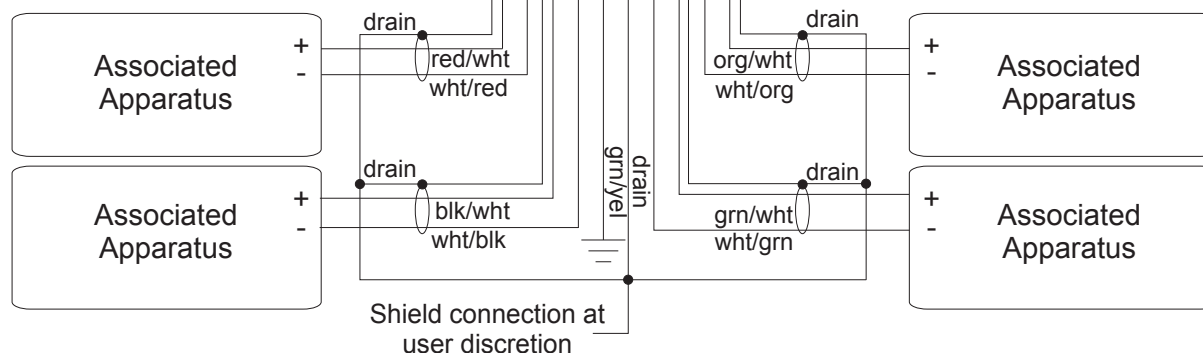
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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	46 of 62



Class I, Division 1, Group A,B,C,D;
 Class I, Zone 0, Group IIC;
 Class II, Division 1, Group E,F,G;
 Class III, Division 1 Hazardous Location

 Nonhazardous Location



Intrinsically Safe Apparatus: Any FM approved device with Entity Concept parameters

$V_{max} \geq V_{oc}$ of the Associated Apparatus

$I_{max} \geq I_{sc}$ of the Associated Apparatus

$C_i + C_{cable} \leq C_a$ of the Associated Apparatus

$L_i + L_{cable} \leq L_a$ of the Associated Apparatus

$P_i \geq P_o$ of the Associated Apparatus

Associated Apparatus: Any FM approved device with Entity Concept parameters:

$V_{oc} \leq V_{max}$ of the Intrinsically Safe Apparatus and $\leq 30V$

$I_{sc} \leq I_{max}$ of the Intrinsically Safe Apparatus and $\leq 600mA$

$C_a \geq C_i$ of the Intrinsically Safe Apparatus + C_{cable}

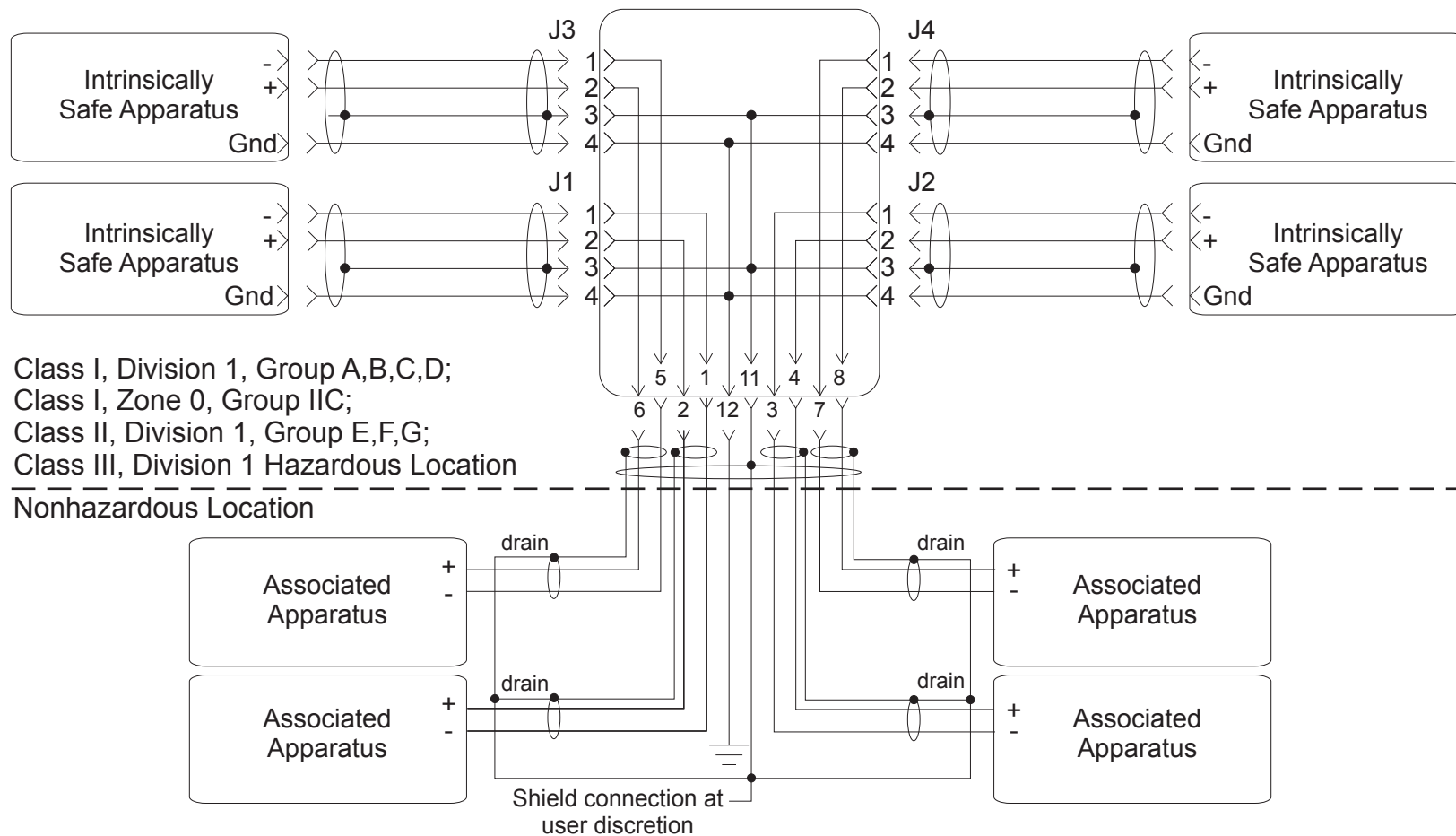
$L_a \geq L_i$ of the Intrinsically Safe Apparatus + L_{cable}

$P_o \leq P_i$ of the Intrinsically Safe Apparatus and $\leq 4.5W$

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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	47 of 62

P-4RK F 40 - CS12, P - 4RK FV 40 - CSV12,
P - 4MBMA - 4 - CS12, P - 4MBMVA 40 - CSV12



Intrinsically Safe Apparatus: Any FM approved device with Entity Concept parameters

$V_{max} \geq V_{oc}$ of the Associated Apparatus

$I_{max} \geq I_{sc}$ of the Associated Apparatus

$C_i + C_{cable} \leq C_a$ of the Associated Apparatus

$L_i + L_{cable} \leq L_a$ of the Associated Apparatus

$P_i \geq P_o$ of the Associated Apparatus

Associated Apparatus: Any FM approved device with Entity Concept parameters:

$V_{oc} \leq V_{max}$ of the Intrinsically Safe Apparatus and $\leq 30V$

$I_{sc} \leq I_{max}$ of the Intrinsically Safe Apparatus and $\leq 600mA$

$C_a \geq C_i$ of the Intrinsically Safe Apparatus + C_{cable}

$L_a \geq L_i$ of the Intrinsically Safe Apparatus + L_{cable}

$P_o \leq P_i$ of the Intrinsically Safe Apparatus and $\leq 4.5W$

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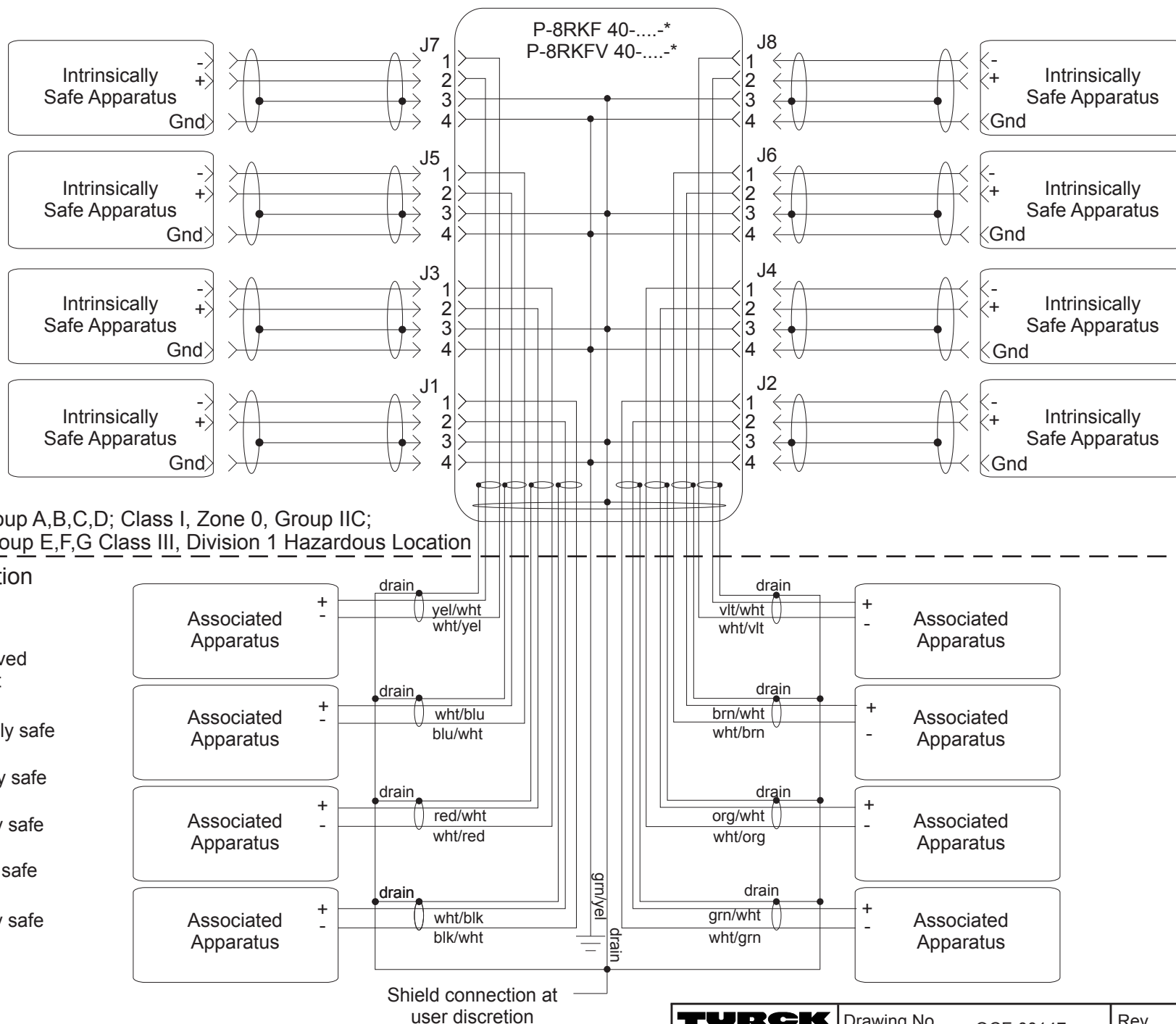
Intrinsically Safe Apparatus:
Any FM approved device with Entity Concept parameters:

$V_{max} \geq V_{oc}$ of the associated apparatus
 $I_{max} \geq I_{sc}$ of the associated apparatus
 $C_i + C_{cable} \leq C_a$ of the associated apparatus
 $L_i + L_{cable} \leq L_a$ of the associated apparatus
 $P_i \geq P_o$ of the associated apparatus

Class I, Division 1, Group A,B,C,D; Class I, Zone 0, Group IIC;
Class II, Division 1, Group E,F,G Class III, Division 1 Hazardous Location
Nonhazardous Location

Associated Apparatus:
Any Factory Mutual approved device with Entity Concept parameters:

$V_{oc} \leq V_{max}$ of the intrinsically safe apparatus and $\leq 30V$
 $I_{sc} \leq I_{max}$ of the intrinsically safe apparatus and $\leq 600mA$
 $C_a \geq C_i$ of the intrinsically safe apparatus + C_{cable}
 $L_a \geq L_i$ of the intrinsically safe apparatus + L_{cable}
 $P_o \leq P_i$ of the intrinsically safe apparatus and $< 4.5W$



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Scale	None	Sheet	49 of 62

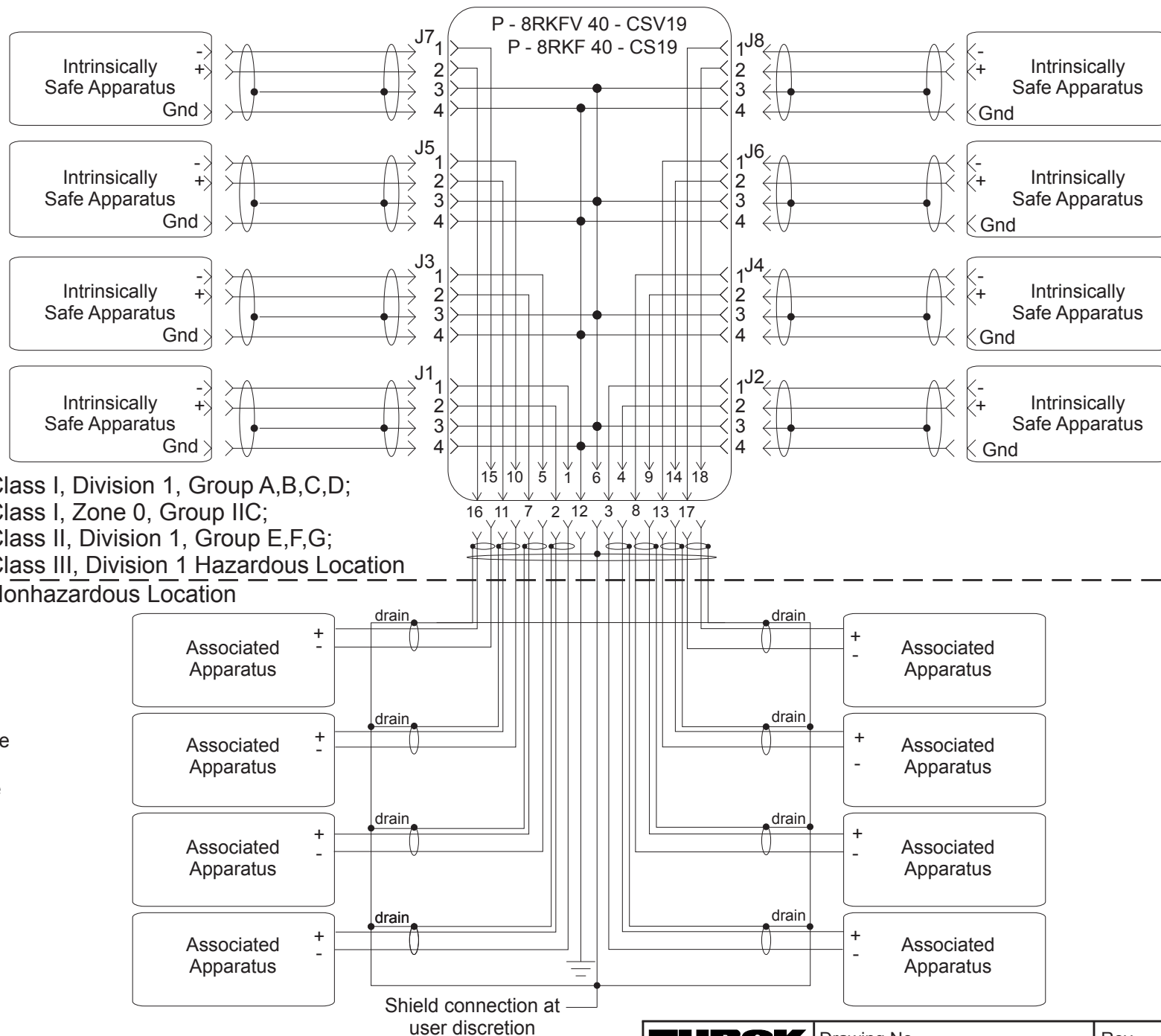
Intrinsically Safe Apparatus:
Any FM approved device with Entity Concept parameters:

$V_{max} \geq V_{oc}$ of the associated apparatus
 $I_{max} \geq I_{sc}$ of the associated apparatus
 $C_i + C_{cable} \leq C_a$ of the associated apparatus
 $L_i + L_{cable} \leq L_a$ of the associated apparatus
 $P_i \geq P_o$ of the associated apparatus

Associated Apparatus:
Any Factory Mutual approved device with Entity Concept parameters:

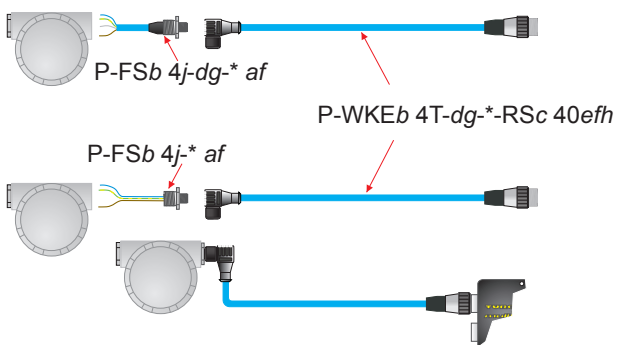
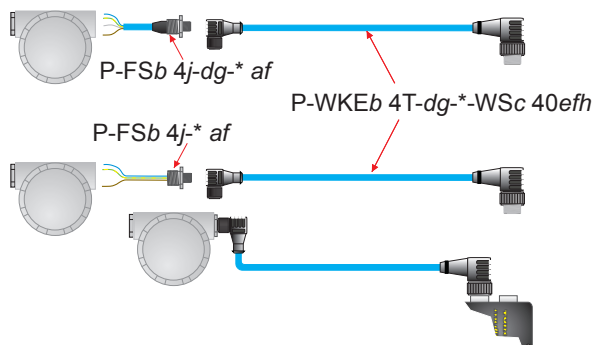
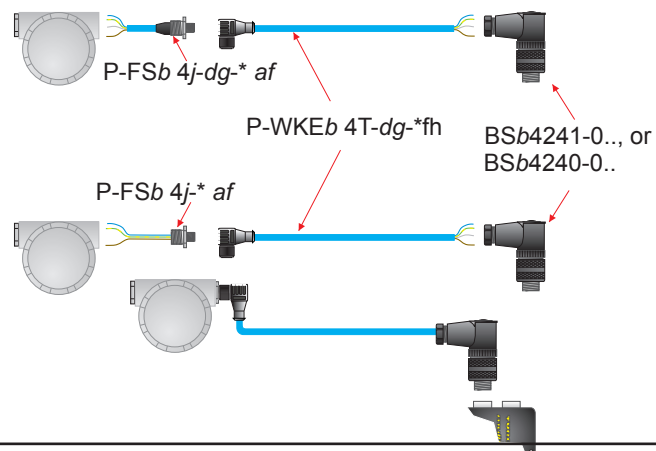
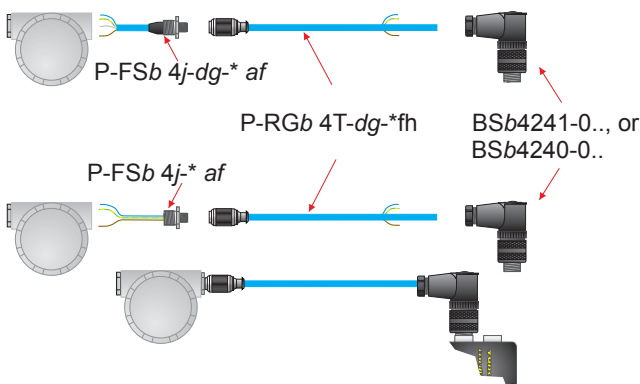
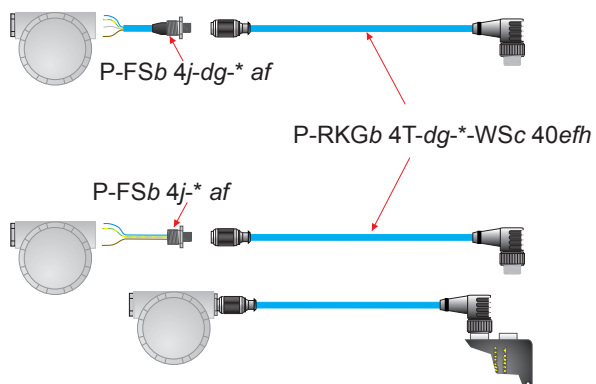
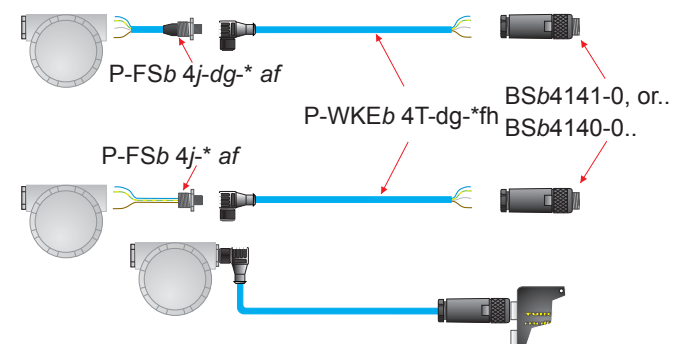
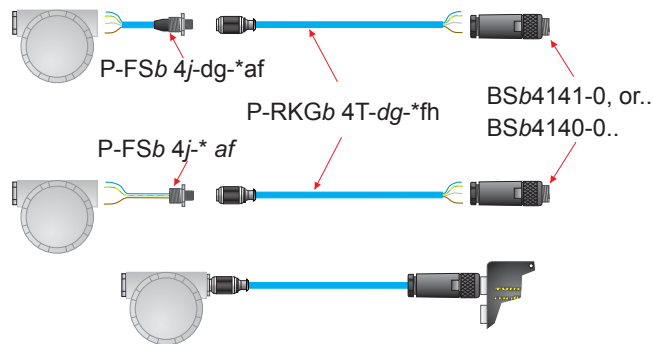
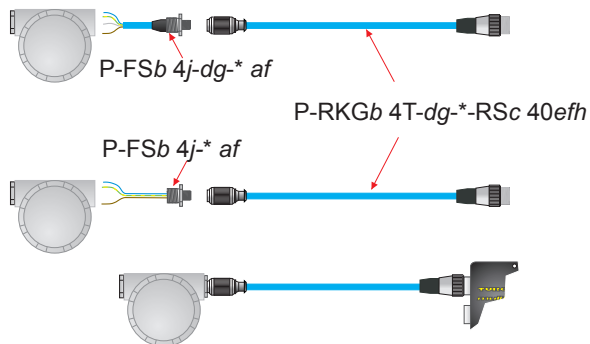
$V_{oc} \leq V_{max}$ of the intrinsically safe apparatus and $\leq 30V$
 $I_{sc} \leq I_{max}$ of the intrinsically safe apparatus and $\leq 600mA$
 $C_a \geq C_i$ of the intrinsically safe apparatus + C_{cable}
 $L_a \geq L_i$ of the intrinsically safe apparatus + L_{cable}
 $P_o \leq P_i$ of the intrinsically safe apparatus and $< 4.5W$

Class I, Division 1, Group A,B,C,D;
 Class I, Zone 0, Group IIC;
 Class II, Division 1, Group E,F,G;
 Class III, Division 1 Hazardous Location
 Nonhazardous Location



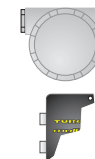
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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet	50 of 62



KEY

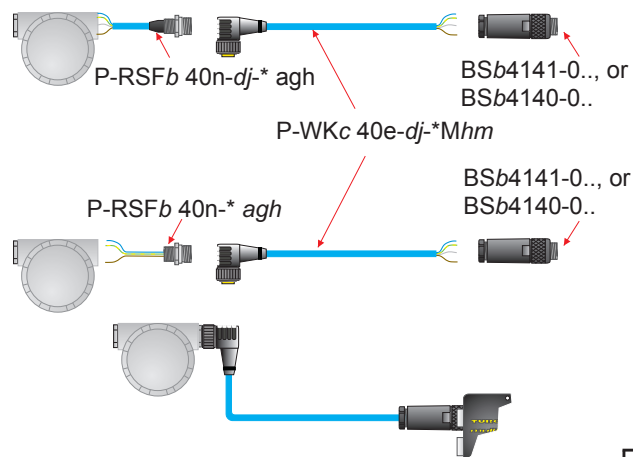
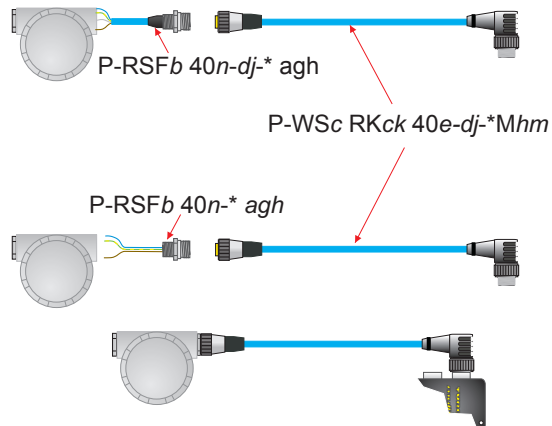
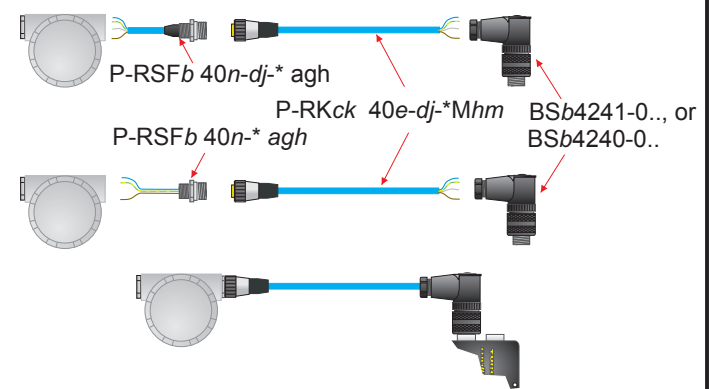
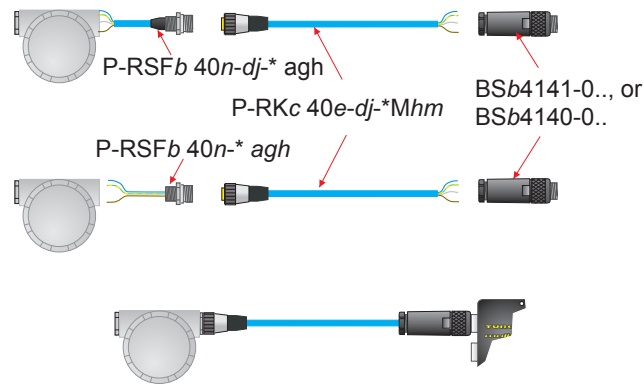
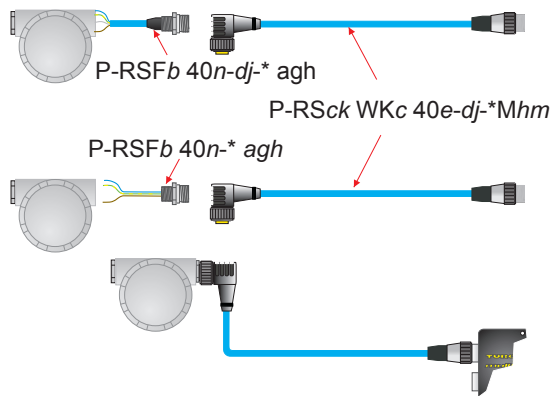
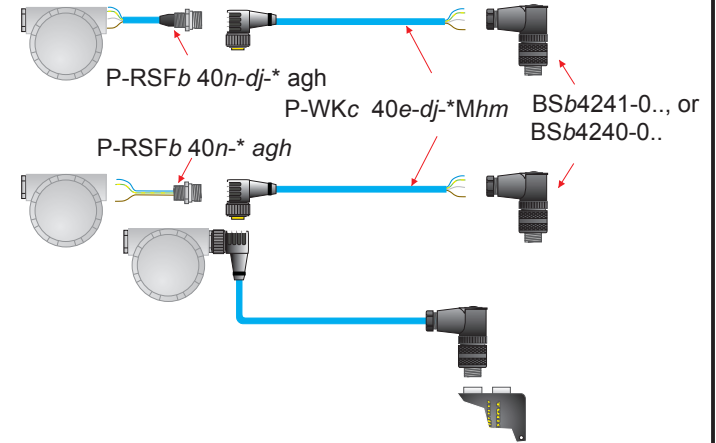
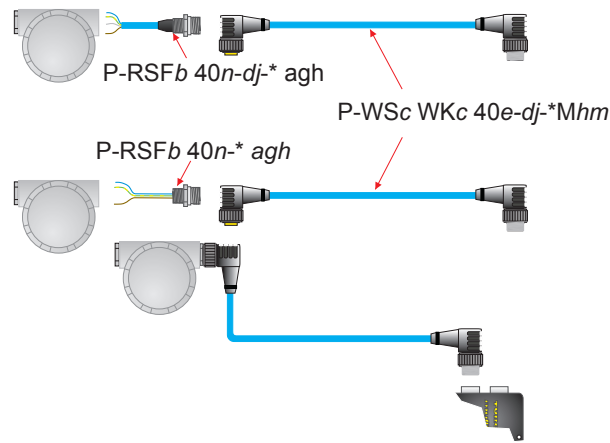
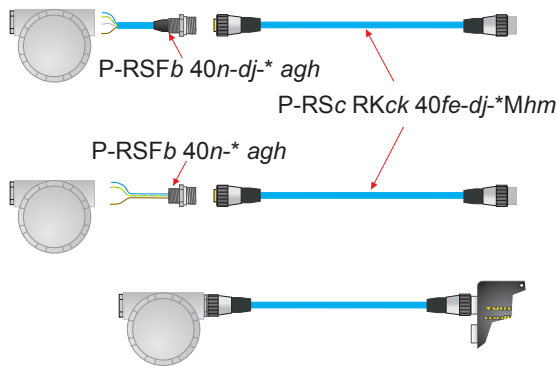
a = /14.5/NPT, /14.75/NPT, /M20, or blank
b = V or blank *c* = M or V
d = 3- or 4-digit ITC or PLTC cable number
e = H or blank
f = /S1331, /S1599, /S613, /S1658, /S849, or blank
g = XL or blank
h = /S679, /S771, /S1055, /S1057, /S1126,
 /S3001, /S3034 or blank
j = D or blank



= Intrinsically Safe Apparatus, FM approved for Class I, Division 1 or Class I, Zone 0
 = Turck multibox with *minifast* port connectors, part numbers identified on Sheets 43-46.

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Drawing No. QCF-00147		Rev M	
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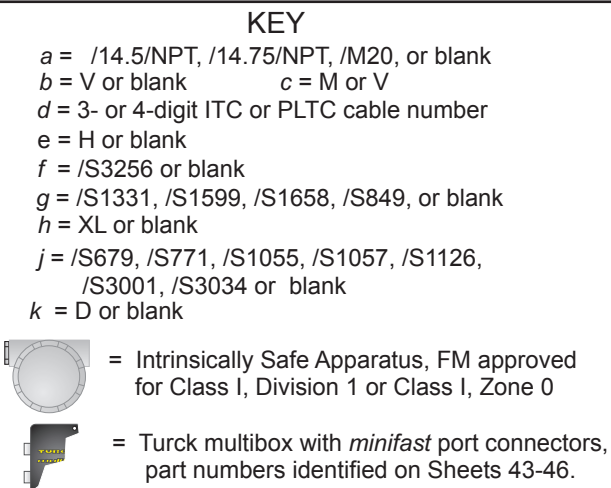
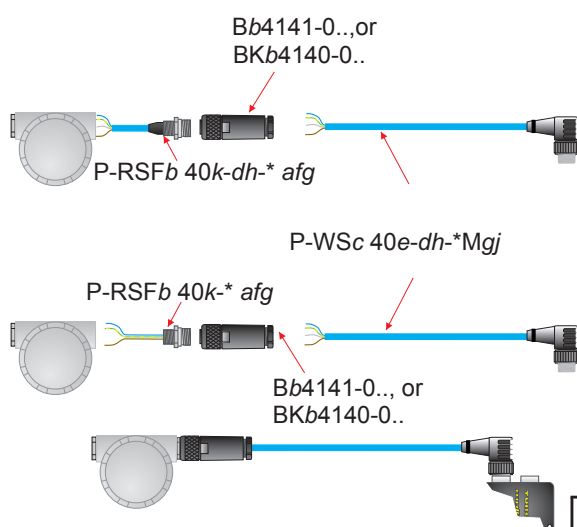
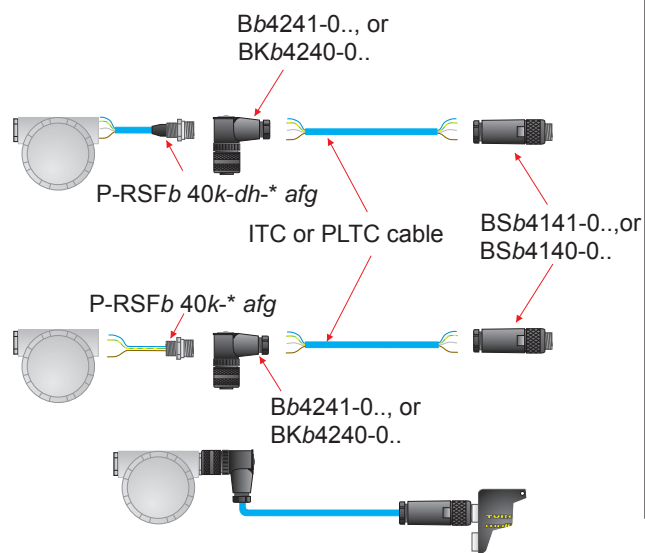
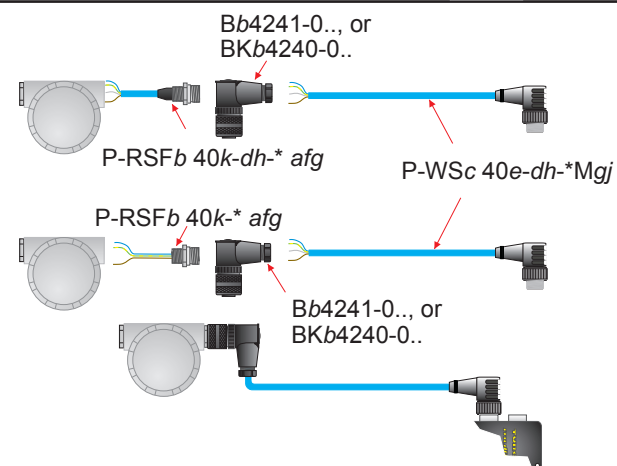
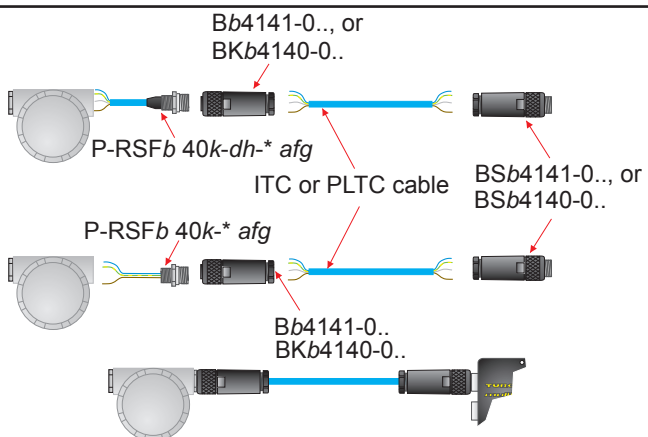
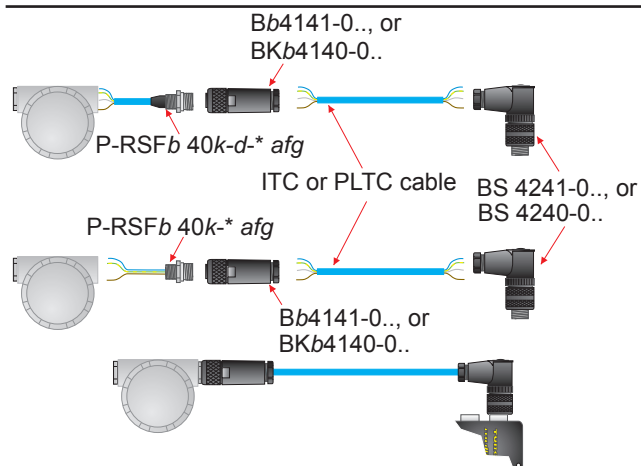
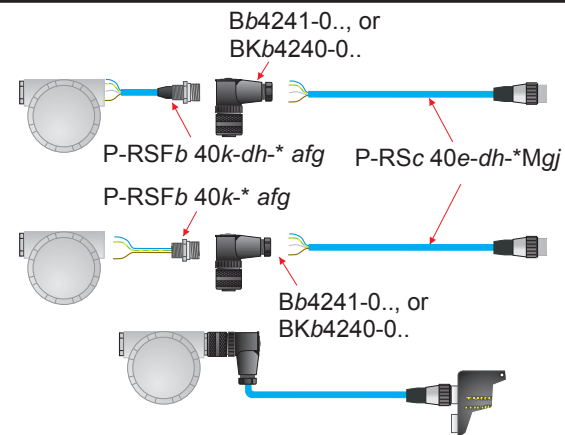
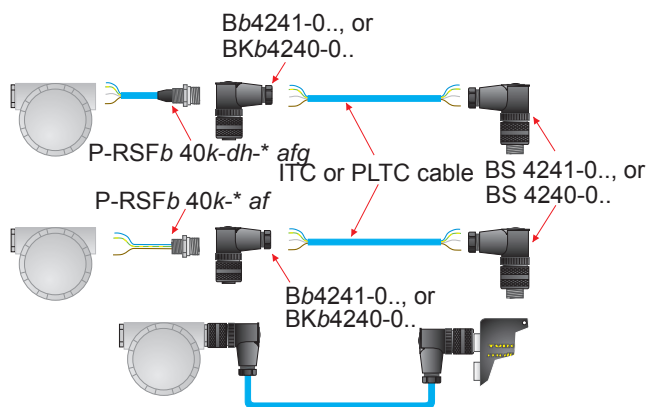
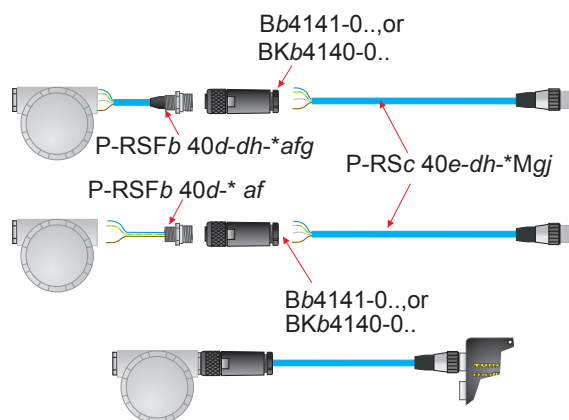
KEY

a = /14.5/NPT, /14.75/NPT, /M20, or blank
b = V or blank *c* = M or V
d = 3- or 4-digit ITC or PLTC cable number
e = H or blank
f = A or blank
g = /S3256 or blank
h = /S1331, /S1599, /S1658, /S849, or blank
j = XL or blank *k* = S or blank
m = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 or blank
n = D or blank

 = Intrinsically Safe Apparatus, FM approved for Class I, Division 1 or Class I, Zone 0
 = Turck multibox with *minifast* port connectors, part numbers identified on Sheets 43-46.

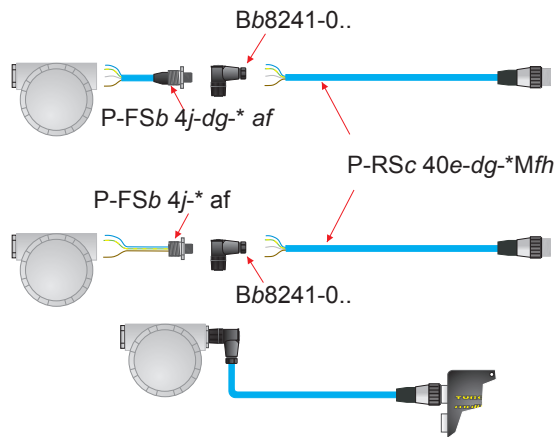
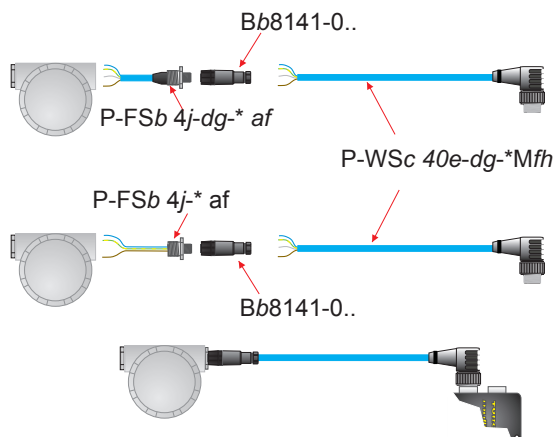
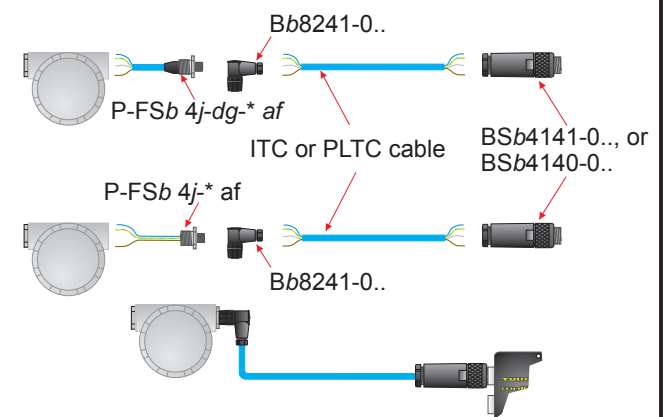
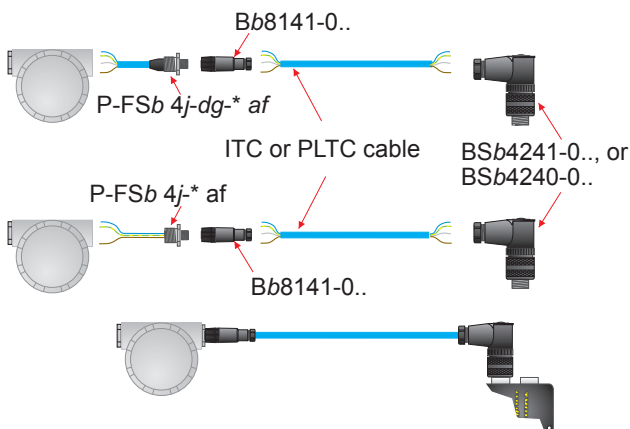
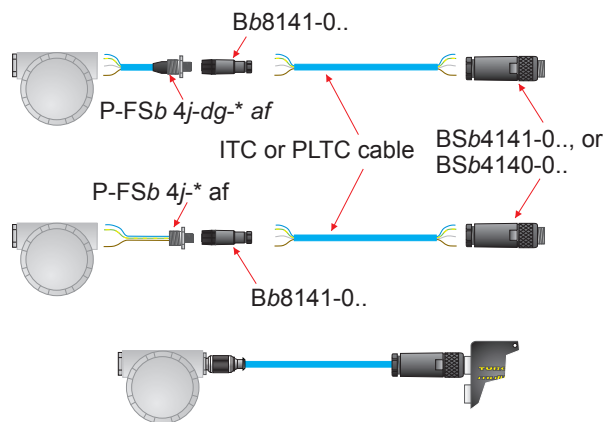
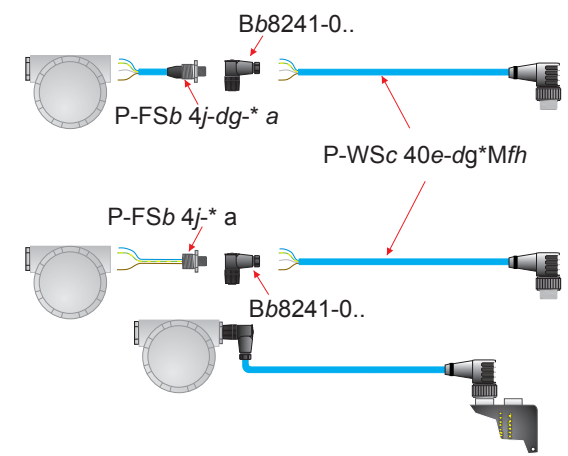
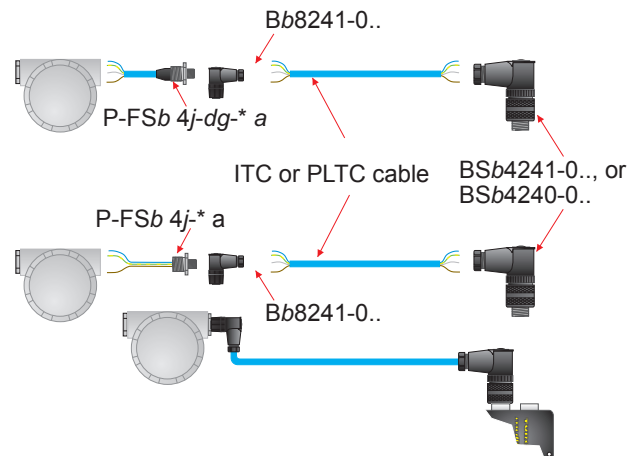
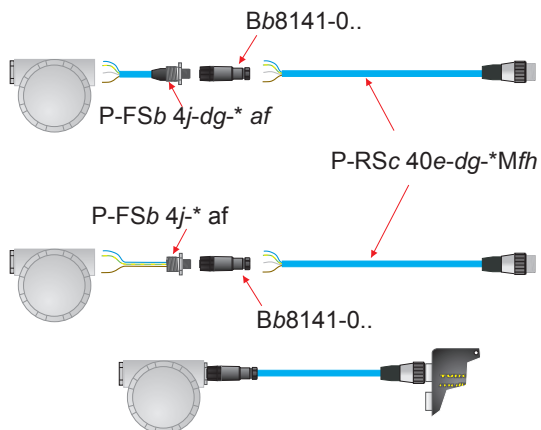
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Drawing No. QCF-00147		Rev M	
Scale	None	Sheet 53	of 62



KEY

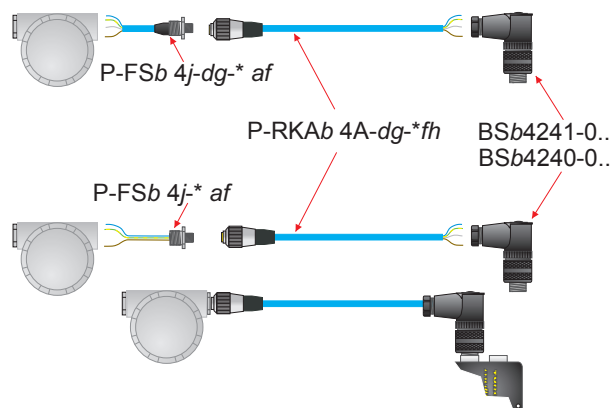
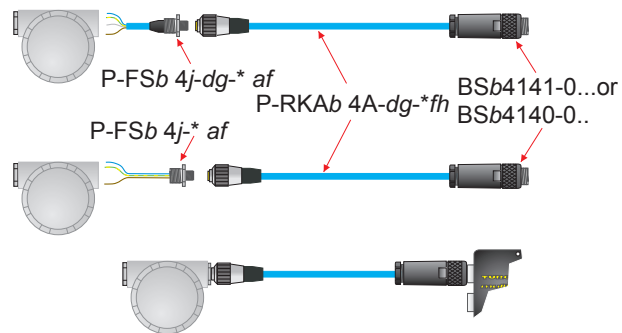
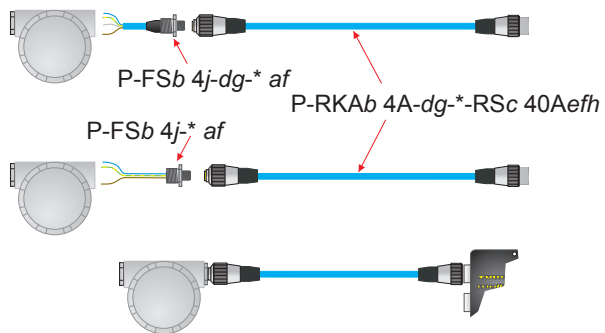
a = /14.5/NPT, /14.75/NPT, /M20, or blank
b = V or blank c = M or V
d = 3- or 4-digit ITC or PLTC cable number
e = H or blank
f = /S1331, /S1599, /S1658, /S849, or blank
g = XL or blank
h = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 or blank
j = D or blank



= Intrinsically Safe Apparatus, FM approved for Class I, Division 1 or Class I, Zone 0
= Turck multibox with minifast port connectors, part numbers identified on Sheets 43-46.

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Scale	None	Sheet	54 of 62



KEY

a = /14.5/NPT, /14.75/NPT, /M20, or blank
b = V or blank
c = M or V
d = 3- or 4-digit ITC or PLTC cable number
e = H or blank
f = /S1331, /S1599, /S613, /S1658, /S849, or blank
g = XL or blank
h = /S679, /S771, /S1055, /S1057, /S1126,
 /S3001, /S3034 or blank
j = D or blank



= Intrinsically Safe Apparatus, FM approved for Class I, Division 1 or Class I, Zone 0



= Turck multibox with *minifast* port connectors, part numbers identified on Sheets 43-46.

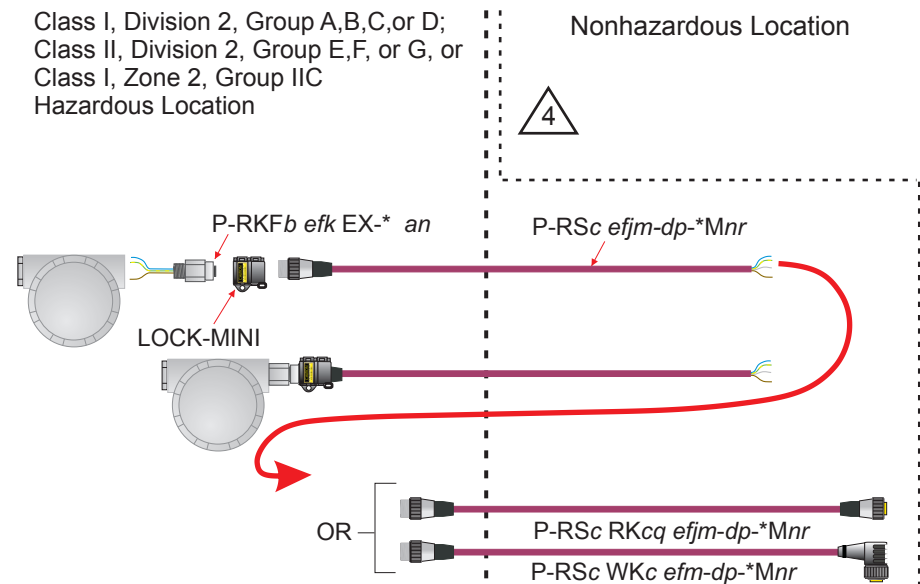
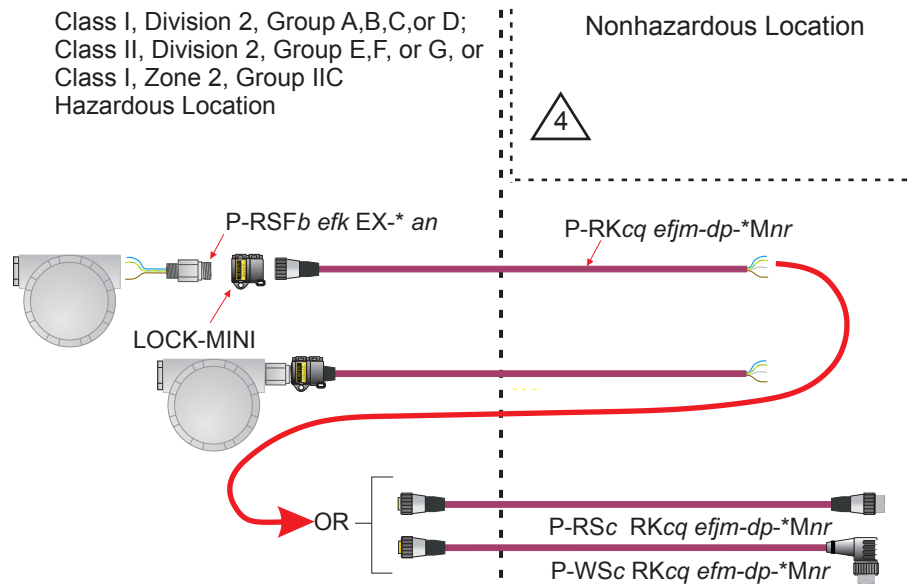
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Minneapolis, MN
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Drawing No. QCF-00147

Rev M

Scale None

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Notes:

- Key: $a = /14.5/\text{NPT}$ or $/14.75/\text{NPT}$ $b = \text{V}$ or blank $c = \text{M}$ or V $d = 3\text{- or }4\text{-digit ITC or PLTC cable number}$ $e = 2, 3, 4, 5, \text{ or } 6$
 $f = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $g = 4$ or 5 $h = .1, .2, .3, \dots .99, \text{ or blank}$ $j = \text{A}$ or blank $k = \text{D}$ or blank $m = \text{H}$ or blank
 $n = /S1331, /S1599, /S1658, /S849, \text{ or blank}$ $p = \text{XL}$ or blank $q = \text{S}$ or blank $r = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 \text{ or blank}$



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2; or FM approved explosionproof equipment installed in Division 2 or Class I, Zone 2.

- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.
- lokfast guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.

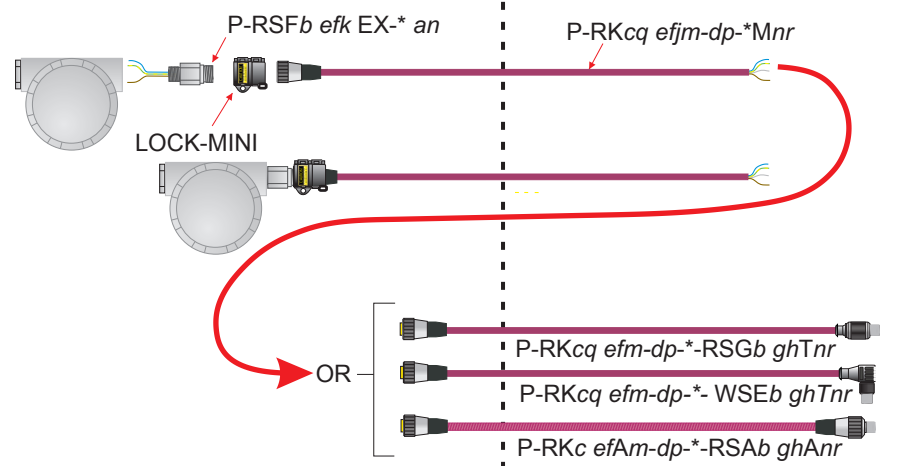
- The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

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Drawing No. QCF-00147		Rev M	
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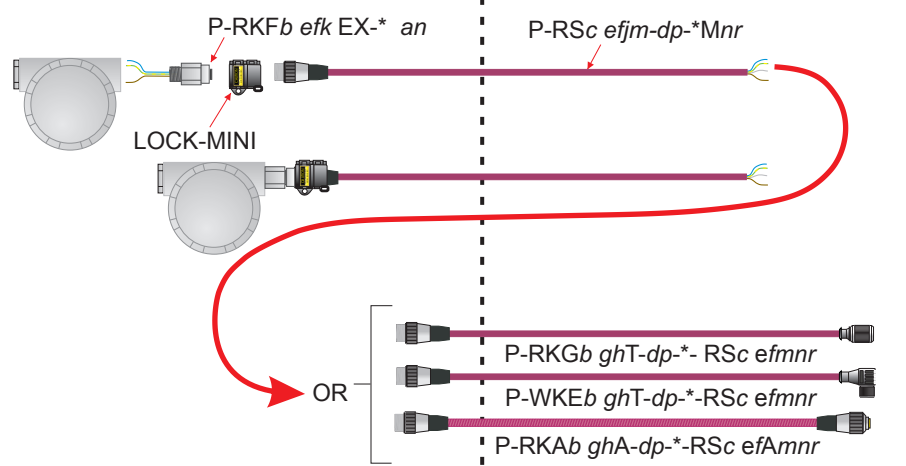
Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Class I, Division 2, Group A,B,C, or D; or
Class I, Zone 2, Group IIC
Hazardous Location

Nonhazardous Location



Notes:

- Key: $a = /14.5/NPT$ or $/14.75/NPT$ $b = V$ or blank $c = M$ or V $d = 3-$ or $4-$ digit ITC or PLTC cable number $e = 2, 3, 4, 5,$ or 6
 $f = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $g = 4$ or 5 $h = .1, .2, .3, \dots .99,$ or blank $j = A$ or blank $k = D$ or blank $m = H$ or blank
 $n = /S1331, /S1599, /S613, /S1658, /S849,$ or blank $p = XL$ or blank $q = S$ or blank $r = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034$ or blank



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2; or FM approved explosionproof equipment installed in Division 2 or Class I, Zone 2.

- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.
- lokfast* guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.

4. The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

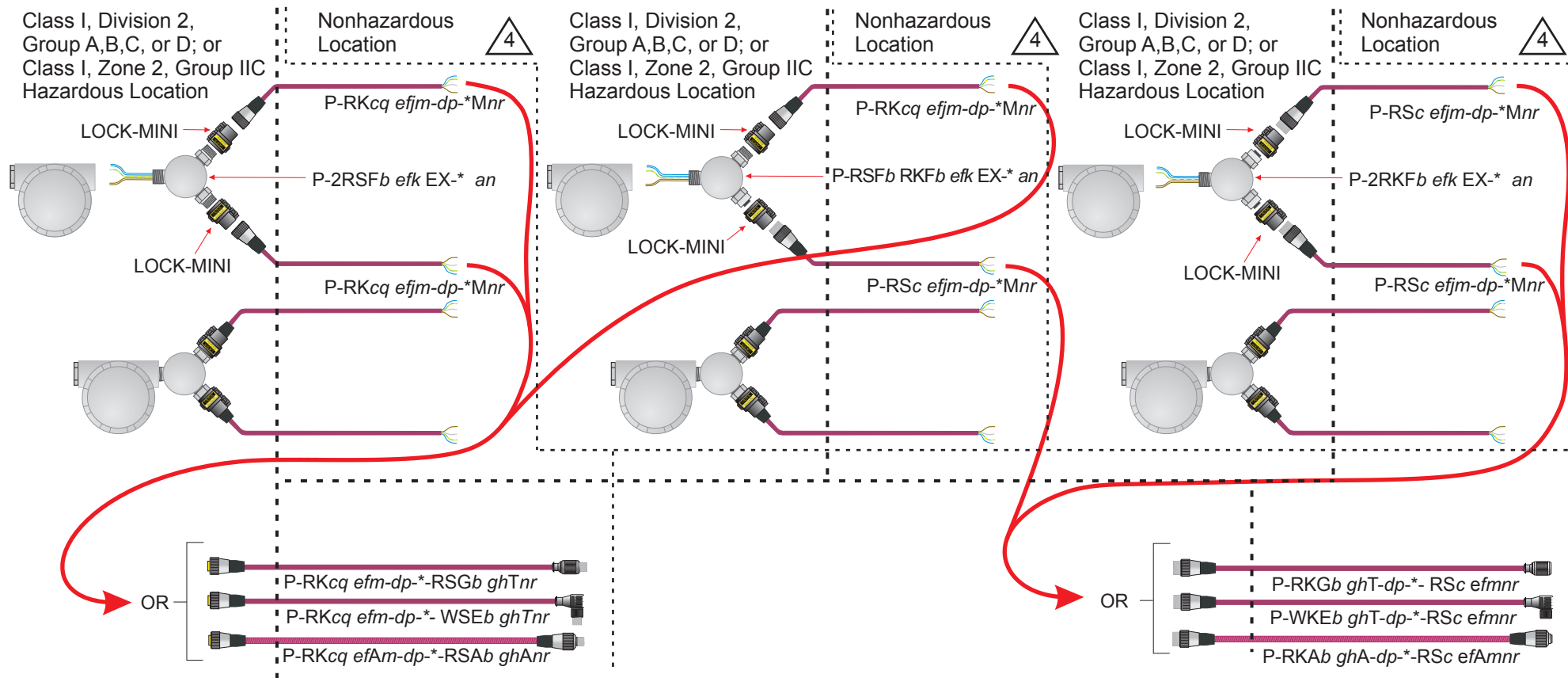
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Drawing No. QCF-00147

Rev M

Scale None

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Notes:

- Key: $a = /14.5/\text{NPT}, /14.75/\text{NPT}$ or $/\text{M20}$ $b = \text{V}$ or blank $c = \text{M}$ or V $d = 3\text{- or }4\text{-digit ITC or PLTC cable number}$ $e = 2, 3, 4, 5, \text{ or } 6$
 $f = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $g = 4$ or 5 $h = .1, .2, .3, \dots .99, \text{ or blank}$ $j = \text{A}$ or blank $k = \text{B}$ or blank $m = \text{H}$ or blank
 $n = /S1331, /S1599, /S613, /S1658, /S849, \text{ or blank}$ $p = \text{XL}$ or blank $q = \text{S}$ or blank $r = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 \text{ or blank}$



= Nonincendive equipment, FM approved for installation in Class I, Division 2 or Class I, Zone 2; or FM approved explosionproof equipment installed in Division 2 or Class I, Zone 2.

- The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70. Specific requirements for the installation of PLTC rated and ITC rated cable may be found in Article 501, Article 725 and Article 727.

- lokfast* guards on quick-disconnects require a tool to disconnect, rendering the connection not normally arcing.

- The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seal in Division 2. Thus, the cable may cross the boundary from Class I, Division 2 into the nonhazardous location, or may remain entirely within Class I, Division 2.

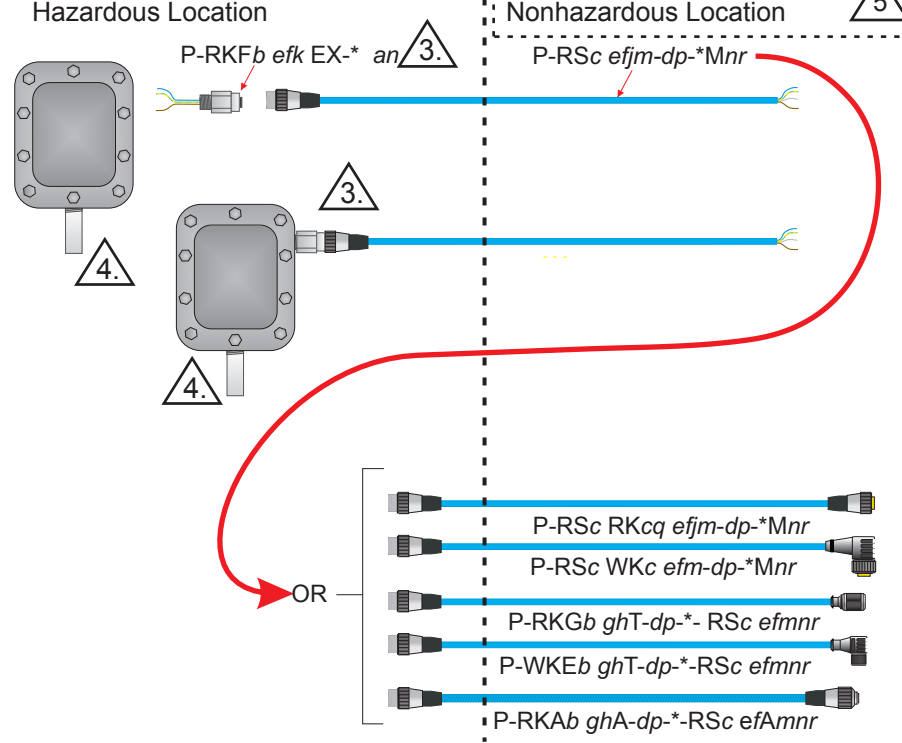
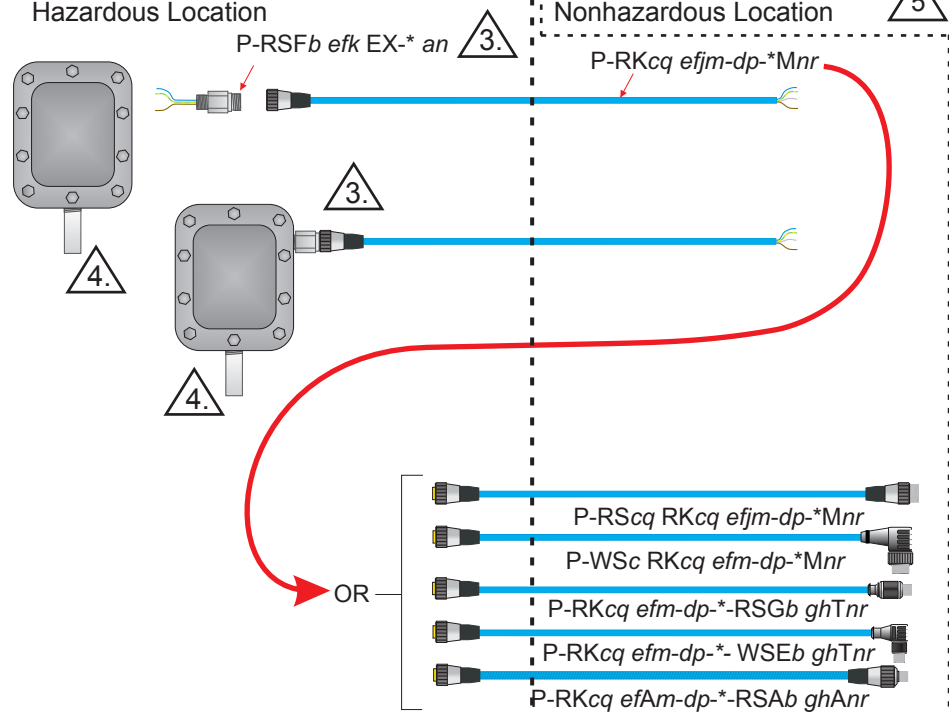
TURCK 3000 Campus Drive Minneapolis, MN 55441-2656	Drawing No. QCF-00147		Rev M
	Scale None	Sheet 59	of 62

Class I, Division 1, Group A,B,C,D; or
Class I, Zone 1, Group IIC or
Hazardous Location

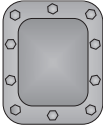
Class I, Division 2, Group A,B,C,D, or
Class I, Zone 2, Group IIC or
Nonhazardous Location

Class I, Division 1, Group A,B,C,D; or
Class I, Zone 1, Group IIC or
Hazardous Location

Class I, Division 2, Group A,B,C,D, or
Class I, Zone 2, Group IIC or
Nonhazardous Location



Notes:

1. Key:
- | | | | | |
|---|------------------------|--|--|-----------------------------|
| <i>a</i> = /14.5/NP or /14.75/NPT | <i>b</i> = V or blank | <i>c</i> = M or V | <i>d</i> = 3- or 4-digit ITC or PLTC cable number | <i>e</i> = 2, 3, 4, 5, or 6 |
| <i>f</i> = 0, 1, 2, 3, . . . 9, 01, 02, 03, . . . 99 | <i>g</i> = 4 or 5 | <i>h</i> = .1, .2, .3,99, or blank | <i>j</i> = A or blank | <i>k</i> = D or blank |
| <i>n</i> = /S1331, /S1599, /S613, /S1658, /S849, or blank | <i>p</i> = XL or blank | <i>q</i> = S or blank | <i>r</i> = /S679, /S771, /S1055, /S1057, /S1126, /S3001, /S3034 or blank | |
-  = FM approved explosionproof equipment with an FM approved intrinsically safe circuit.

2. The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70 and the control drawing of the FM approved equipment.

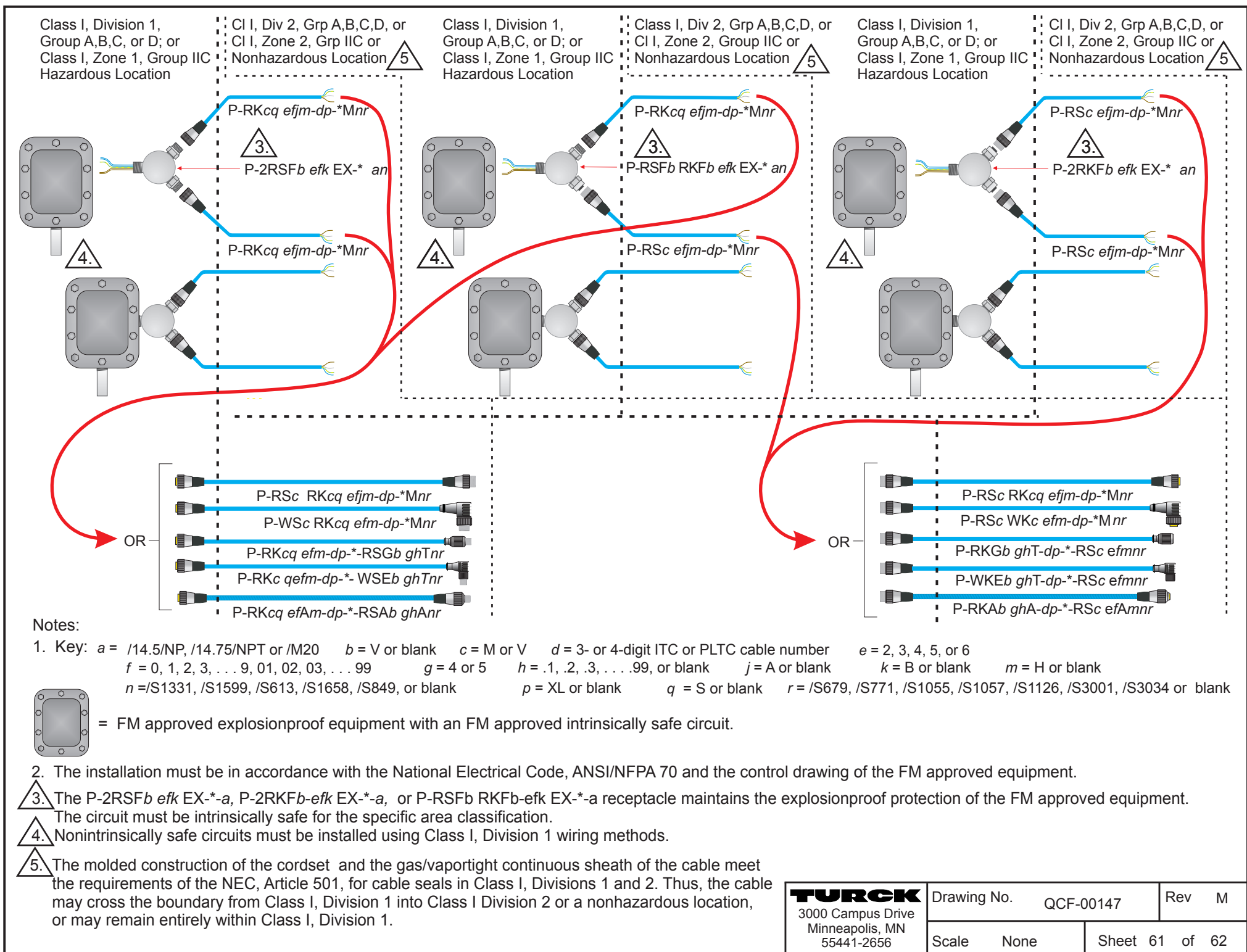
3. The P-RSFb efk EX-*a or P-RKfb-efk EX-*a receptacle maintains the explosionproof protection of the FM approved equipment. The circuit must be intrinsically safe for the specific area classification.

4. Nonintrinsically safe circuits must be installed using Class I, Division 1 wiring methods.

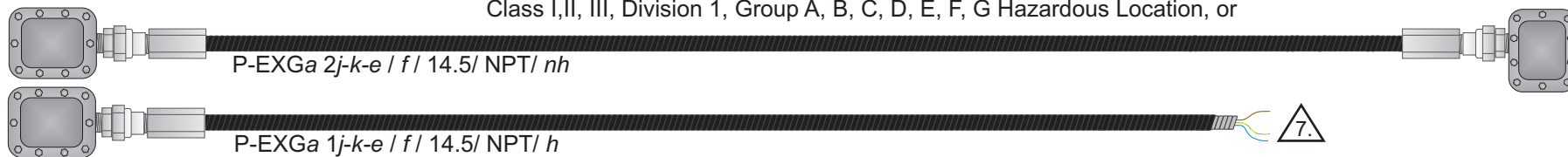
5. The molded construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Class I, Divisions 1 and 2. Thus, the cable may cross the boundary from Class I, Division 1 into Class I Division 2 or a nonhazardous location, or may remain entirely within Class I, Division 1.

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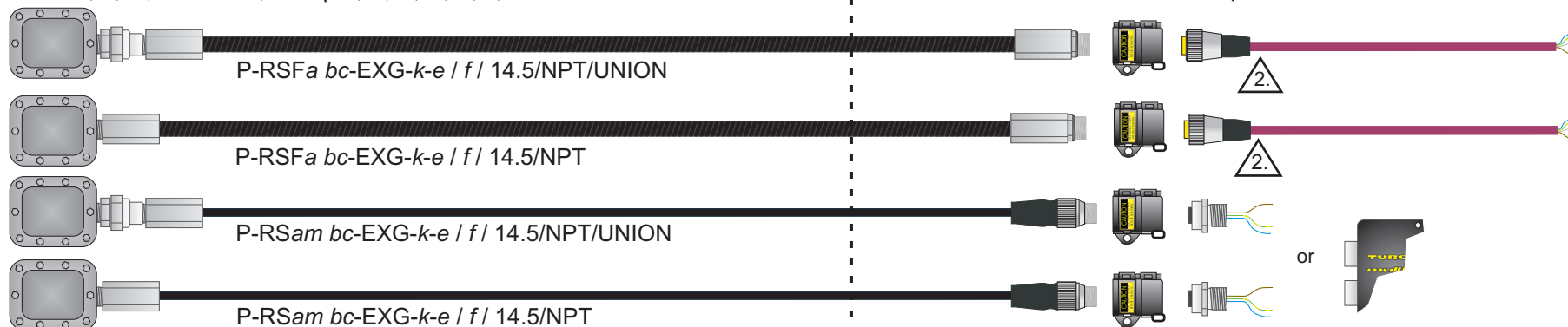


Class I, II, III, Division 1, Group A, B, C, D, E, F, G Hazardous Location, or



Class I, II, III, Division 1, Group A, B, C, D, E, F, G Hazardous Location

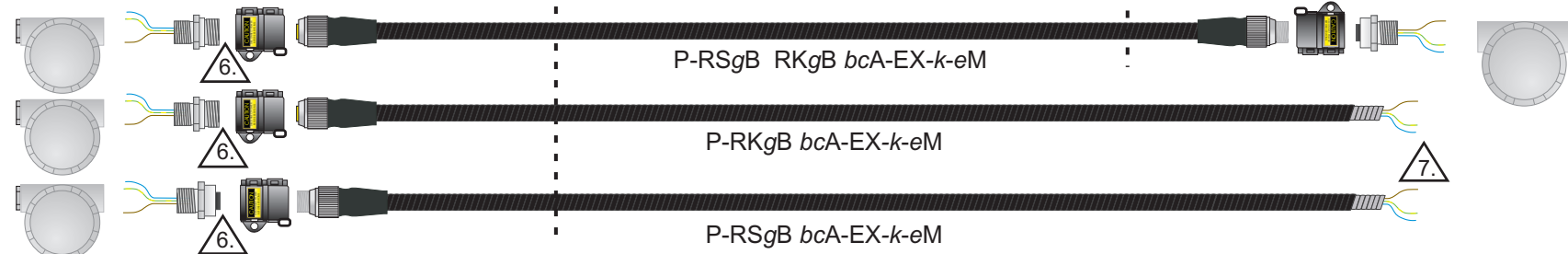
Class I, II, Division 2, Group A, B, C, D, E, F, G Hazardous Location



Class I, Division 2, Group A, B, C, D,
Class I, Zone 2, Group IIC
Hazardous Location

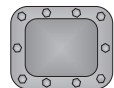
Class I, II, III, Division 1, Group A, B, C, D, E, F, G
Hazardous Location

Class I, Division 2, Group A, B, C, D,
Class I, Zone 2, Group IIC
Hazardous Location



Notes:

1. Key: $a = V$ or blank $b = 2, 3, 4, 5, 6, 7, 8, 9, 10, \text{ or } 12$ $c = 0, 1, 2, 3, \dots 9, 01, 02, 03, \dots 99$ $e = \text{cable length in meters}$ $f = \text{lead length in meters}$ $g = M$ or V
 $h = \text{UNION}$ or blank $j = \text{Configuration code A1, A2, A3, } \dots \text{Z9}$ or blank $k = 4\text{-digit MC-HL, or TC-ER-HL cable number}$ $m = B$ or blank $n = 1$ or blank



= Equipment FM approved for installation
in Class I, Division 1



= Nonincendive equipment, FM approved
for installation in Class I, Division 2



= Turck junction box, FM approved
for installation in Class I, Division 2

2. *minifast* cords listed and installed as shown on Sheets 10 and 11.
3. The installation must be in accordance with the National Electrical Code, ANSI/NFPA 70 and the control drawing of the FM approved equipment.
4. The P-RSFa bc-EXG-d*M/14.5/NPT receptacle maintains the explosionproof protection of the FM approved explosionproof equipment. The *minifast* connector end of the receptacle must be installed in a Class I, Division 2 or nonhazardous location.
5. The construction of the cordset and the gas/vaportight continuous sheath of the cable meet the requirements of the NEC, Article 501, for cable seals in Class I, Divisions 1 and 2.
6. Mating receptacles and lokfast guards per sheets 12-15.
7. Terminated using methods permitted for MC-HL, or TC-ER-HL cable, as appropriate in the specific hazardous location. Reference NEC Article 501.10 for specific permitted uses of TC-ER-HL cable.

TURCK
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Minneapolis, MN
55441-2656

Drawing No.	QCF-00147	Rev	M
Scale	None	Sheet 62 of 62	