



Certificate of Compliance

Certificate:	2352860	Master Contract:	205557
Project:	80292135	Date Issued:	2026-06-02
Issued to:	Endress+Hauser Conducta GmbH & Co. KG Dieselstraße 24 Gerlingen, Baden- Württemberg 70839 Germany	Issued by:	<i>Anil Sodhi</i> Anil Sodhi, P. Eng.

Attention: Henryk Hofmann

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



PRODUCTS

Class 2258 03 PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations

Class 2258 83 PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations - Certified to US Standards

Class I, Division 2, Groups A, B, C and D:

Field housing transmitters

1. Liquiline, type xM442-abcdefghij. Field-housing transmitter for liquid analysis. Input rated 100-230Vac, 50/60Hz, 55VA (AC Version) or 24Vac, 50/60Hz, 55VA, 24Vdc, 22Watts (24Vac/dc Version); One set of relay contacts rated 250Vac, 0.5 Amps (alarm contacts) another 2 or 4 sets rated 250Vac, 2 Amps, 2 or 4 4-20mA signal circuits, probe and sensor connections all SELV, communication (HART, PROFIBUS DP, Modbus, EtherNet/IP, PROFINET) set of 2 digital inputs and 2 digital outputs (passive),



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with auxiliary voltage 24V DC (max. 50mA). Temperature Code T4A. $-20^{\circ}\text{C} \leq \text{Tamb} \leq +60^{\circ}\text{C}$. Provides non-incendive field wiring connection to field sensors when installed per control drawing 961006059. Enclosure Type 4X, IP66/67.

xM442 Approved Order code options:

Note: Prefix x = C or O or OC

a = approval = CD

b = sensor input = M1, M2, N1, N2

c = communication = A1, A2, A3, A4, B6, B7, B8, B9, CA, CB, CC, CD, CE, CF, CG, CH, CJ, CK

d = additional features = FA, FD, F0, F2, F4

e = power supply = 1, 6, 7

f = cable entry = 0, 1, 2

g = cable entry set = A, B

h = Edge connectivity = UC, UE

i = Edge functionality = UP

j = *** Non-Critical for Hazloc

2. Liquiline, type xM444-abcdefghijkl, xM448-abcdefghijkl. Field-housing transmitter for liquid analysis. Input rated 100-230Vac, 50/60Hz, 73VA (AC Version) or 24Vdc, max. 68Watts (24Vdc Version); One set of relay contacts rated 250Vac, 0.5 Amps (alarm contacts) another 2 or 4 sets rated 250Vac, 2 Amps, 2 or 4 4-20mA signal circuits, probe and sensor connections all SELV, communication (HART, PROFIBUS DP, Modbus, EtherNet/IP, PROFINET) or 2 sets of 2 digital inputs and 2 digital outputs (passive), with auxiliary voltage 24V DC (max. 50mA). Temperature Code T4A, $-20^{\circ}\text{C} \leq \text{Tamb} \leq +55^{\circ}\text{C}$, and $-20^{\circ}\text{C} \leq \text{Tamb} \leq +50^{\circ}\text{C}$ (for selected packages). Provides non-incendive field wiring connection to field sensors when installed per control drawing 961006059. Enclosure Type 4X, IP66/67.

xM444 Approved Order code options:

Note: Prefix x = C or O or OC

a = approval = CD

b = sensor input = M2, M4, N2, N4

c = digital communication = A, B, C, D, J, 0, 1, 2, 3

d = analog output = A0, A1, A3, A5, A7

e = additional features = FA, FE, FF, FG, FH, FI, FK, FM, F0, F2, F4

f = power supply = 1, 6

g = cable entry = 0, 1, 2

h = female jack Fieldbus communication = BA, BB, BC

i = cable entry set = A, B

j = Edge connectivity = UC, UE

k = Edge functionality = UP

l = *** Non-Critical for Hazloc

xM448 Approved Order Code options:

a = approval = CD

b = digital communication = A, B, C, D, J, 0, 1, 2, 3

c = digital sensor output/input = 2A6, 2A7, 6AA, 6A1, 6A3, 6A5, 6A6, 6A7, 6A8, 8A2, 8A3, 8A4, 8A5

d = power supply = 1, 6

e = cable entry housing, sensor = AA, AB, AC, AD, AE, AF

f = female jack Fieldbus communication = BA, BB, BC

g = cable entry set + female jack = A, B

h = Edge connectivity = UC, UE

i = Edge functionality = UP



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j = *** Non-Critical for Hazloc

3. Liquiline, type xM44P-abcdefghijklmno (FIH option). Input rated 100-230Vac, 50/60Hz, max. 73VA (AC Version) or 24Vdc, max. 68 Watts (24Vdc Version). One set of relay contacts rated 250V ac, 0.5 Amps (alarm contacts) another 2 or 4 sets rated 250Vac, 2 Amps. 2 or 4 4-20mA signal circuits, probe and sensor connections all SELV, communication (HART, PROFIBUS DP, Modbus, EtherNet/IP, PROFINET), 1 or 2 sets of 2 digital inputs and 2 digital outputs (passive), with auxiliary voltage 24V DC (max. 50mA); Temperature Code T4A, $-20^{\circ}\text{C} \leq T_a \leq 50^{\circ}\text{C}$; Provides non-incendive field wiring connection to field sensors when installed per control drawing 961006059. External power supply is in hazardous location. Enclosure Type 4X, IP66/67.

xM44P (FIH) Approved Order Code options:

Note: Prefix x = C or O or OC

a = approval = CD

b = housing = FIH

c = optional sensor input = P1, P2, S1

d = sensor input = M0, M2, M4, N2, N4

e = digital communication = A, B, C, D, J, 0, 1, 2, 3

f = analog output = A0, A1, A3, A5, A7

g = additional features = FA, FE, FF, FG, FH, FI, FK, FM, F0, F2, F4

h = power supply = 1, 6

i = cable entry housing = 0, 1, 2, 5

j = female jack Fieldbus communication = BA, BB, BC

k = cable entry set = A, B, E

l = calibration = A, B

m = Edge connectivity = UC, UE

n = Edge functionality = UP

o = *** Non-Critical for Hazloc

Rail mount transmitters:

1. Liquiline, type xM442R-abcdehij, Rail-mount transmitter for liquid analysis. Input rated 100-230Vac, 50/60Hz, 55VA (AC Version) or 24Vac, 50/60Hz, 55VA, 24Vdc, 22Watts (24Vac/dc Version). One set of relay contacts rated 250Vac, 0.5 Amps (alarm contacts) another 2 or 4 sets rated 250Vac, 2 Amps, 2 or 4 4-20mA signal circuits, probe and sensor connections all SELV, communication (HART, PROFIBUS DP, Modbus, EtherNet/IP, PROFINET) set of 2 digital inputs and 2 digital outputs (passive), with auxiliary voltage 24V DC (max. 50mA). Temperature Code T4A, $0^{\circ}\text{C} \leq T_{amb} \leq +60^{\circ}\text{C}$. Provides non-incendive field wiring connection to field sensors when installed per control drawing 961006059. Installed in a cabinet connected to an external graph display, cabinet 71185295 or 71749101 in hazardous location. External power supply is in hazardous location.

xM442R Approved Order code options:

Note: Prefix x = C or O or OC

a = Approval = CD

b = Sensor Input = M1, M2

c = Communication = A1, A2, A3, A4, B6, B8, CA, CC, CE, CG, CJ

d = Additional Features = FA, FD, F0, F2, F4

e = Power Supply = 1, 6, 7

h = Edge Connectivity = UC, UE

i = Edge Functionality = UP

j = *** Non-Critical for Hazloc

2. Liquiline, type xM444R-abcdefgkl, xM448R-abcdehij, Rail-mount transmitter for liquid analysis. Input rated, 24Vdc, max. 50Watts.



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One set of relay contacts rated 250Vac, 0.5 Amps (alarm contacts) another 2 or 4 sets rated 250Vac, 2 Amps, 2 or 4 4-20mA signal circuits, probe and sensor connections all SELV, communication (HART, PROFIBUS DP, Modbus, EtherNet/IP, PROFINET) or 2 sets of 2 digital inputs and 2 digital outputs (passive), with auxiliary voltage 24V DC (max. 50mA). Temperature Code T4A, $0^{\circ}\text{C} \leq T_{\text{amb}} \leq +55^{\circ}\text{C}$ and $0^{\circ}\text{C} \leq T_{\text{amb}} \leq +50^{\circ}\text{C}$ (for selected packages). Provides non-incendive field wiring connection to field sensors when installed per control drawing 961006059. Installed in a cabinet connected to an external graph display, cabinet 71185295 or 71749101 in hazardous location. External power supply is in hazardous location.

xM444R Approved Order code options:

Note: Prefix x = C or O or OC

a = Approval = CD

b = Sensor Input = M2, M4

c = Digital Communication = A, B, C, D, J, 0, 1, 2, 3

d = Analog Output = A0, A1, A3, A5, A7

e = Additional Features = FA, FE, FF, FG, FH, FI, FK, FM, F0, F2, F4

f = Power Supply = 1, 6

j = Edge Connectivity = UC, UE

k = Edge Functionality = UP

l = *** Non-Critical for Hazloc

xM448R Approved Order Code options:

a = Approval = CD

b = Digital Communication = A, B, C, D, J, 0, 1, 2, 3

c = Digital Sensor; Output; input = 2A6, 2A7, 6AA, 6A1, 6A3, 6A5, 6A6, 6A7, 6A8, 8A2, 8A3, 8A4, 8A5

d = Power Supply = 1, 6

h = Edge Connectivity = UC, UE

i = Edge Functionality = UP

j = *** Non-Critical for Hazloc

3. Liquiline, type xM44P-abcdefghlmno (DIN option). Input rated 24Vdc, max. 50 Watts. One set of relay contacts rated 250V ac, 0.5 Amps (alarm contacts) another 2 or 4 sets rated 250Vac, 2 Amps, 2 or 4 4-20mA signal circuits, probe and sensor connections all SELV, communication (HART, PROFIBUS DP, Modbus, EtherNet/IP, PROFINET) or 2 sets of 2 digital inputs and 2 digital outputs (passive), with auxiliary voltage 24V DC (max. 50mA); Temperature Code T4A, $0^{\circ}\text{C} \leq T_{\text{a}} \leq 50^{\circ}\text{C}$; Provides non-incendive field wiring connection to field sensors when installed per control drawing 961006059. Installed in a cabinet connected to an external graph display, cabinet 71185295 or 71749101 in hazardous location. External power supply is in hazardous location.

xM44P (DIN) Approved Order Code options:

Note: Prefix x = C or O or OC

a = Approval = CD

b = Housing = DIN

c = Optical Sensor Input = P1, P2, S1

d = Sensor Input = M0, M2, M4, N2, N4

e = Digital Communication = A, B, C, D, J, 0, 1, 2, 3

f = Analog Output = A0, A1, A3, A5, A7

g = Additional Features = FA, FE, FF, FG, FH, FI, FK, FM, F0, F2, F4

h = Power Supply = 1, 6

l = Calibration = A, B

m = Edge Connectivity = UC, UE

n = Edge Functionality = UP

o = *** Non-Critical for Hazloc



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Approved cabinets for use with the transmitters above

1. External graph display, cabinet 71185295 or 71749101 for xM442R, xM444R, xM448R ambient temperature -20 to 60°C; IP66/Type 4X enclosure. Installed as per control drawing 961006059.

Conditions of Acceptability:

- Power to rail mount controllers xM444R, xM448R, and xM44P to be supplied by power supplies certified for Class I, Division 2, GP A, B, C and D.
- The xM442R, xM444R, xM448R, and xM44P (DIN) version shall be completely installed inside a suitable Type rated enclosure, appropriate for the end application, and acceptable to the Authority Having Jurisdiction (AHJ).

Class I, Division 2, Groups A, B, C and D, T4A;

Associated Intrinsically Safe outputs to Class I Division 1, Group A, B, C, D [Ex ia Ga] IIC

Field housing transmitters

1. Liquiline, type xM442-abcdefghij, Field-housing transmitter for liquid analysis. Input rated 100-230Vac, 50/60Hz, 55VA (AC Version) or 24Vac, 50/60Hz, 55VA, 24Vdc, 22Watts (24Vac/dc Version); One set of relay contacts rated 250Vac, 0.5 Amps (alarm contacts), two 4-20mA signal circuits, probe and sensor connections all SELV, communication (HART, PROFIBUS DP, Modbus, EtherNet/IP, PROFINET) Temperature Code T4A. $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +50^{\circ}\text{C}$. Provides associated Intrinsically Safe connection to field sensors from installed 2DS Ex I modules (terminals 87i, 88i, 97i, 98i) when installed per control drawing 961006059. Enclosure Type 4X, IP66/67.

xM442 Approved Order Code options:

Note: Prefix x = C or O or OC

a = Approval = CL

b = Sensor Input = M2

c = Communication = CA, CB, CC, CD, CE, CF, CG, CH, CJ, CK

d = Additional Features = F0

e = Power Supply = 1, 6, 7

f = Cable Entry = 0, 1, 2

g = cable entry set = A, B

h = Edge Connectivity = UC, UE

i = Edge Functionality = UP

j = *** Non-Critical for Hazloc

2. Liquiline, type xM444-abcdefghijkl, xM448-abcdefghij, Field-housing transmitter for liquid analysis. Input rated 100-230Vac, 50/60Hz, 73VA (AC Version) or 24Vdc, max. 68Watts (24Vdc Version); One set of relay contacts rated 250Vac, 0.5 Amps (alarm contacts) another 2 or 4 sets rated 250Vac, 2 Amps, 2 or 4 4-20mA signal circuits, probe and sensor connections all SELV, communication (HART, PROFIBUS DP, Modbus, EtherNet/IP, PROFINET) or 2 sets of 2 digital inputs and 2 digital outputs (passive), with auxiliary voltage 24Vdc (max. 50mA). Temperature Code T4A, $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +50^{\circ}\text{C}$. Provides associated Intrinsically Safe connection to field sensors from installed 2DS Ex I modules (terminals 87i, 88i, 97i, 98i) when installed per control drawing 961006059. Enclosure Type 4X, IP66/67.

xM444 Approved Order Code options:

Note: Prefix x = C or O or OC

a = Approval = CL

b = Sensor Input = M2, M4



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c = Digital Communications = A, B, C, D, J, 0, 1, 2, 3
d = Analog Output = A0, A1, A3, A5, A7
e = Additional Features = FA, FE, FF, FG, FH, FI, FK, FM, F0, F2, F4
f = Power Supply = 1, 6
g = Cable Entry = 0, 1
h = Female Jack Fieldbus Communication = BA, BB, BC
i = Cable Entry Set = A, B
j = Edge Connectivity = UC, UE
k = Edge Functionality = UP
l = *** Non-Critical for Hazloc

xM448 Approved Order Code options:

a = Approval = CL
b = Digital Communication = A, B, C, D, J, 0, 1, 2, 3
c = Digital Sensor; Output; Input = 2A6, 6AA, 6A1, 6A3, 6A5, 6A6, 6A7, 6A8
d = Power Supply = 1, 6
e = Cable Entry Housing, Sensor = AA, AB
f = Female Jack Fieldbus Communication = BA, BB, BC
g = Cable Entry Set+Female Jack = A, B
h = Edge Connectivity = UC, UE
i = Edge Functionality = UP
j = *** Non-Critical for Hazloc

3. Liquiline, type xM44P-abcdefghijklmno (FIH option). Input rated 100-230Vac, 50/60Hz, max. 73VA (AC Version) or 24Vdc, max. 68 Watts (24Vdc Version). One set of relay contacts rated 250Vac, 0.5 Amps (alarm contacts) another 2 or 4 sets rated 250Vac, 2 Amps. two or 4 4-20mA signal circuits, probe and sensor connections all SELV, communication (HART, PROFIBUS DP, Modbus, EtherNet/IP, PROFINET), 1 or 2 sets of 2 digital inputs and 2 digital outputs (passive), with auxiliary voltage 24V DC (max. 50mA); Temperature Code T4A, $-20^{\circ}\text{C} \leq T_a \leq 50^{\circ}\text{C}$; Provides associated Intrinsically Safe connection to field sensors from installed 2DS Ex I modules (terminals 87i, 88i, 97i, 98i) when installed per control drawing 961006059. Enclosure Type 4X, IP66/67.

xM44P (FIH) Approved Order Code options:

Note: Prefix x = C or O or OC

a = Approval = CL
b = Housing = FIH
c = Optical Sensor Input = P1, P2, S1
d = Sensor Input = M2
e = Digital Communication = A, B, C, D, J, 0, 1, 2, 3
f = Analog Output = A0, A1, A3, A5, A7
g = Additional Features = FA, FE, FF, FG, FH, FI, FK, FM, F0, F2, F4
h = Power Supply = 1, 6
i = Cable Entry Housing = 0, 1, 2, 5
j = Female Jack Fieldbus Communication = BA, BB, BC
k = Cable Entry Set = A, B, E
l = Calibration = A, B
m = Edge Connectivity = UC, UE
n = Edge Functionality = UP
o = *** Non-Critical for Hazloc

Rail mount transmitters:



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1. Liquiline, type xM442R-abcdehij, Rail-mount transmitter for liquid analysis. Input rated 100-230Vac, 50/60Hz, 55VA (AC Version) or 24Vac, 50/60Hz, 55VA, 24Vdc, 22Watts (24Vac/dc Version). One set of relay contacts rated 250Vac, 0.5 Amps (alarm contacts) two 4-20mA signal circuits, probe and sensor connections all SELV, communication (HART, PROFIBUS DP, Modbus, EtherNet/IP, PROFINET), Temperature Code T4A, $0^{\circ}\text{C} \leq \text{Tamb} \leq +50^{\circ}\text{C}$. Provides associated Intrinsically Safe connection to field sensors from installed 2DS Ex I modules (terminals 87i, 88i, 97i, 98i) when installed per control drawing 961006059. Enclosure is installed in a cabinet connected to an external graph display, cabinet 71185295 or 71749101 in hazardous location. External power supply is in hazardous location.

xM442R Approved Order Code options:

Note: Prefix x = C or O or OC

a = Approval = CL

b = Sensor Input = M2

c = Communication = CA, CC, CE, CG, CJ

d = Additional Features = F0

e = Power Supply = 1, 6, 7

h = Edge Connectivity = UC, UE

i = Edge Functionality = UP

j = *** Non-Critical for Hazloc

2. Liquiline, type xM444R-abcdeijkl, xM448R-abcdehij, Rail-mount transmitter for liquid analysis. Input rated 24Vdc, max. 50Watts. One set of relay contacts rated 250Vac, 0.5 Amps (alarm contacts) another 2 or 4 sets rated 250Vac, 2 Amps, 2 or 4 4-20mA signal circuits, probe and sensor connections all SELV, communication (HART, PROFIBUS DP, Modbus, EtherNet/IP, PROFINET) or 2 sets of 2 digital inputs and 2 digital outputs (passive), with auxiliary voltage 24Vdc (max. 50mA). Temperature Code T4A, $0^{\circ}\text{C} \leq \text{Tamb} \leq +50^{\circ}\text{C}$. Provides associated Intrinsically Safe connection to field sensors from installed 2DS Ex I modules (terminals 87i, 88i, 97i, 98i) when installed per control drawing 961006059. Enclosure is installed in a cabinet connected to an external graph display, cabinet 71185295 or 71749101 in hazardous location. External power supply is in hazardous location.

xM444R Approved Order Code options:

Note: Prefix x = C or O or OC

a = Approval = CL

b = Sensor Input = M2, M4

c = Digital Communication = A, B, C, D, J, 0, 1, 2, 3

d = Analog Output = A0, A1, A3, A5, A7

e = Additional Features = FA, FE, FF, FG, FH, FI, FK, FM, F0, F2, F4

f = Power Supply = 1, 6

j = Edge Connectivity = UC, UE

k = Edge Functionality = UP

l = *** Non-Critical for Hazloc

xM448R Approved Order Code options:

a = Approval = CL

b = Digital Communication = A, B, C, D, J, 0, 1, 2, 3

c = Digital Sensor; Output; Input = 2A6, 6AA, 6A1, 6A3, 6A5, 6A6, 6A7, 6A8

d = Power Supply = 1, 6

h = Edge Connectivity = UC, UE

i = Edge Functionality = UP

j = *** Non-Critical for Hazloc



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3. Liquiline, type xM44P-abcdefghijklmno (DIN option). Input rated 24Vdc, max. 50 Watts. One set of relay contacts rated 250V ac, 0.5 Amps (alarm contacts) another 2 or 4 sets rated 250Vac, 2 Amps, two or 4 4-20mA signal circuits, probe and sensor connections all, communication (HART, PROFIBUS DP, Modbus, EtherNet/IP, PROFINET) or 2 sets of 2 digital inputs and 2 digital outputs (passive), with auxiliary voltage 24Vdc (max. 50mA); Temperature Code T4A, $0^{\circ}\text{C} \leq T_a \leq 50^{\circ}\text{C}$; Provides associated I.S. connection to field sensors from installed 2DS Ex I modules (terminals 87i, 88i, 97i, 98i) when installed per control drawing 961006059 Enclosure is installed in a cabinet connected to an external graph display, cabinet 71185295 or 71749101 in hazardous location. External power supply is in hazardous location.

xM44P (DIN) Approved Order Code options:

Note: Prefix x = C or O or OC

a = Approval = CL

b = Housing = DIN

c = Optical Sensor Input = P1, P2, S1

d = Sensor Input = M2

e = Digital Communication = A, B, C, D, J, 0, 1, 2, 3

f = Analog Output = A0, A1, A3, A5, A7

g = Additional Features = FA, FE, FF, FG, FH, FI, FK, FM, F0, F2, F4

h = Power Supply = 1, 6

l = Calibration = A, B

m = Edge Connectivity = UC, UE

n = Edge Functionality = UP

o = *** Non-Critical for Hazloc

Approved cabinets, sensors, and associated apparatus modules for use with the transmitters above

1. External graph display, cabinet 71185295 or 71749101 for xM442R, xM444R, xM448R ambient temperature -20 to 60°C; IP66/Type 4X enclosure. Installed as per control drawing 961006059.
2. 2DS Ex I modules
Intrinsically safe connections (sensor 1 and sensor 2) - light blue connection terminals: 87i, 88i, 97i, 98i per terminal connection when installed per drawing 961006059.

Allowed sensors/connections in Zone 0/Div 1:

- a. xLS50D sensors
- b. Cables xYK10 or xYK20 with the following sensors with a max cable length of 100m.
 1. Digital Memosens Sensors per listed CSA report 80021719
 2. Digital Memosens 2.0 sensors listed per CSA 80021490
 3. xYP03D

Conditions of Acceptability:

- Power to rail mount controllers xM444R, xM448R, and xM44P to be supplied by power supplies certified for Class I, Division 2, Groups A, B, C and D.
- The xM442R, xM444R, xM448R, and xM44P (DIN) version shall be completely installed inside a suitable Type rated enclosure, appropriate for the end application, and acceptable to the Authority Having Jurisdiction (AHJ).



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APPLICABLE REQUIREMENTS

Standards Used	Description
CAN/CSA C22.2 No. 61010-1-12	Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 1: General requirements
ANSI/UL 61010-1:2012 - Third Edition	Electrical Equipment For Measurement, Control, and Laboratory Use; Part 1: General Requirements
CSA C22.2 No. 94.2:15 - Second Edition	Enclosures for electrical equipment, environmental considerations
UL 50E:2015 - Second Edition	UL Standard for Safety Enclosures for Electrical Equipment, Environmental Considerations
CAN/CSA C22.2 No. 60079-0:19	Explosive atmospheres - Part 0: Equipment - General requirements
ANSI/UL 60079-0-2019 Seventh Edition	UL Standard for Safety Explosive atmospheres – Part 0: Equipment – General requirements
CAN/CSA-C22.2 No 60079-11:14	Explosive Atmospheres - Part 11: Equipment protection by intrinsic safety 'I'
ANSI/UL 60079-11:2013 - Sixth Edition	Explosive Atmospheres - Part 11: Equipment Protection By Intrinsic Safety 'I'
CSA C22.2 NO. 213-17 - Third Edition - Up to and Including Update No. 3: April 2021	Nonincendive electrical equipment for use in Class I and II, Division 2 and Class III, Divisions 1 and 2 hazardous (classified) locations
ANSI/UL 121201:2017 - Ninth Edition	Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations

Standards Notes

The 60079 series Zone standards are applicable to 2DS-Ex i modules only

Markings

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

- CSA Mark, with or without the “C” and “US” indicators, as shown on the Certificate of Conformity
- Manufacturer’s name: “Endress+Hauser Conducta GmbH & Co. KG”, or CSA Master Contract Number “205557”, adjacent to the CSA Mark in lieu of manufacturer’s name.



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- Model designation: As specified in the PRODUCTS section, above.
 - Manufacturing date, or serial number, traceable to year and month of manufacture.
 - Electrical ratings: As specified in the PRODUCTS section, above.
 - Hazardous Location designation: As specified in the PRODUCTS section, above. The word “Class” may be abbreviated “CL”, the word “Division” may be abbreviated “DIV”, and the word “Groups” may be abbreviated “GRP” or “GP”.
 - Temperature code rating: As specified in the PRODUCTS section, above.
 - Ambient temperature rating: As specified in the PRODUCTS section, above.
 - For xM442/xM444/xM448/xM44P and External Graphic display, cabinet 71185295 or 71749101: Enclosure ratings: As specified in the PRODUCTS section, above.
 - For xM442/xM444/xM448, the warning statement "DO NOT OPEN ENCLOSURE UNLESS POWER HAS BEEN REMOVED FROM THE EQUIPMENT", and "NE PAS OUVRIR LE BOÎTIER À MOINS QUE L'ALIMENTATION N'AIT ÉTÉ COUPÉE DE L'ÉQUIPEMENT"
 - The warning statement, “WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT WHILE CIRCUIT IS LIVE UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS”, and “AVERTISSEMENT - RISQUE D'EXPLOSION. NE PAS DEBRANCHER TANT QUE LE CIRCUIT EST SOUS TENSION, À MOINS QU'IL NE S'AGISSE D'UN EMPLACEMENT NON DANGEREUX”
 - The following words, or equivalent: “Install per drawing XXXXX”, where XXXXX is replaced with the control drawing number specified in the PRODUCTS section, above.
 - For models provided with 2DS Ex I modules:
 - The following words: “ASSOCIATED EQUIPMENT”, or the symbol “[Ex ia]”
 - The designation “CSA 10CA80094716”
 - The manufacturing location shall be identified if the equipment can be produced in more than one facility.



Certificate: 2352860

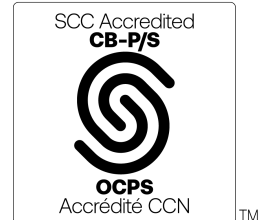
Project: 80292135

Master Contract: 205557

Date Issued: 2026-06-02

Notes:

Products certified under Class(es) C225803, C225883 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca





Supplement to Certificate of Compliance

Certificate: 2352860

Master Contract: 205557

*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
80292135	2026-06-02	Update CSA report 2352860 for Liquiline, type xM44x transmitter, to introduce the following modifications: •Minor update to the enclosure construction •Addition of stainless steel (SS) housing to the existing remote display •Update of documentation, control drawings
80220619	2025-02-18	Update to report 2352860 to introduce the new Edge Module for Transmitter type CM442/CM444/CM448/CM442R/CM444R/CM448R/CM44P, to remove xCS142D Chloromax Sensor and for some corrections from previous assessments.
80158246	2023-12-28	Update to Report 2352860 to assess the following: 1. Add alternate enclosure materials; 2. Add Bluetooth module FWBT1; 3. Add alternate connectors; 4. Update to CSA C22.2 No. 213-17/ UL 121201 9th Edition per certification notice Hazardous Locations Products No. 28.
80094716	2022-04-26	Update to Report 2352860 to assess the following changes: 1. Add alternate transformer: PREMO, X-18792-003R1; 2. Add new sensor card: 2DS Ex-i module; 3. Use the Phoenix connector FKC 2,5 / 4-ST-5,08 for modules BASE2-X, AOR, FA2R1 and FA4R1M; 4. Addition of KSAM2 electronics to sensors.
80069885	2021-03-12	Update to Report 2352860 for intrinsically safe and non-incendive Memosens Sensors to add a new ozone sensor model xCS58D using existing electronics, a new membrane, electrolyte and housing material POM.



Certificate: 2352860

Master Contract: 205557

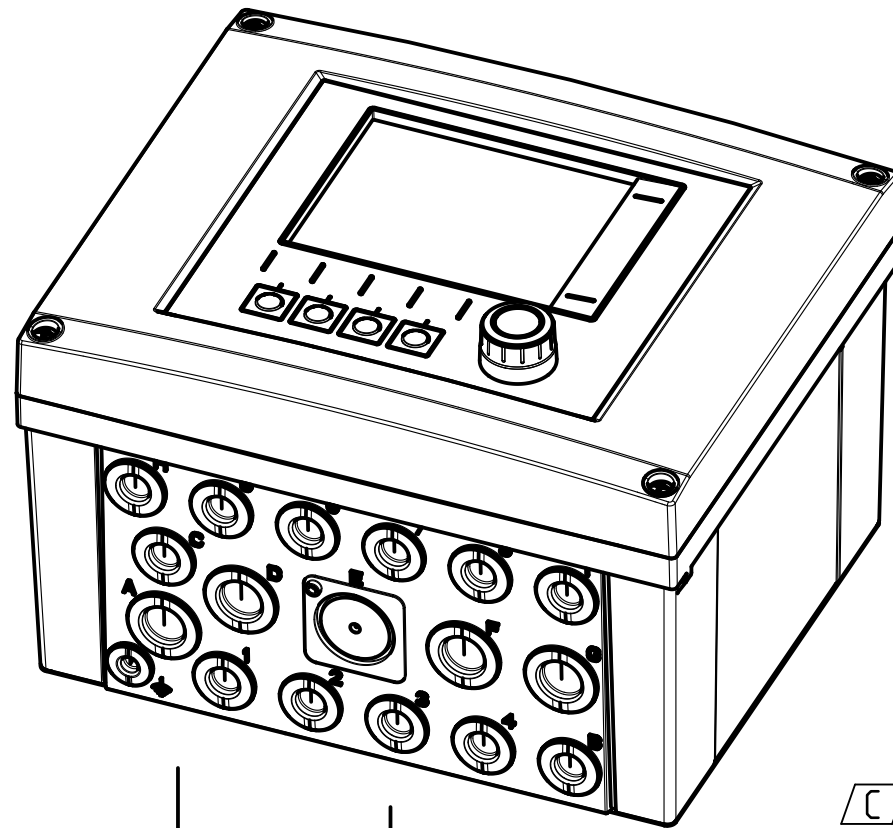
Project: 80292135

Date Issued: 2026-06-02

80008137	2019-11-04	Update to Report 2352860 for the following modifications: 1. Introduction of new model xM44P with PCB module FSIP1 photometer (PEM-module) and FSDG3 SPECTRO (SEM-module); 2. Minor changes that affect xM44x.xM44xR, xM44P; 3. Addition of alternate relays.
70208479	2019-02-25	Update to Report 2352860 to include two new type of Disinfection sensor models xCS5xD and xCS120D for NI Class I Div. 2, Grps ABCD, T6. $0^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$. Additionally some minor modifications to the CMR44x (R) transmitter components.
70155895	2018-02-23	Update Report 2352860 to include additional Liquiline models; xM442R, xM444/8 & xM444/8R, additional sensor models; xPS171D, xLS82D, xOS81D, xCS142D & CLS50D and an external display for railmount model to use in Class I, Division 2. In addition, assessment of minor modifications to the existing electronics and update of applicable standards.
70100152	2016-10-19	Update to Report 2352860 to include an alternate SD card holder and subsequent changes to certification drawings.
70046559	2016-03-03	Update to Report 2352860 to include several minor drawing changes.
2556622	2012-12-24	Update to Report 2352860 to include Hart and Fieldbus modules and other minor circuitry changes.
2391256	2011-02-04	Update to Report 2352860 to include addition of I/O modules.
2352860	2010-11-10	Original cCSAus Certification of Liquidline Transmitter, Type CM442 Series to Non-Incendive Class I, Div. 2, Groups A, B, C & D.

Hazardous location

 Class I, Division 2, Groups A-D T4A



xM44P-CDFIH
xM442-CD
xM444-CD
xM448-CD

x ... C or O or OC

 Installation in a conduit or other suitable wiring method for the respective environment, in accordance with the National Electrical Code (NEC) or the Canadian Electrical Code (CEC).

Non-hazardous location

- Power supply 100... 230 V AC or 24 V AC/DC
- Relay 230 V AC or 24 V DC
- Digital/ analog input/ output 0/4 mA... 20 mA
- Communication (Ethernet/ Fieldbus/ RS485)

Hazardous or Non-hazardous location

Sensor interface normally nonarcing:
Fixed cable sensors with memosens protocol and photometer sensors may be installed in hazardous location or non hazardous location. The connection interface is normally nonarcing.
Installation in a conduit or other suitable wiring method for the respective environment, in accordance with NEC or CEC

Fixed cable sensors with Memosens protocol:
Terminals: 85, 86, 97, 98
Umax: 28.8V DC

Photometer sensors
Terminals: P+, P-, S+, A, C, SH
Umax: 13V DC



All below listed digital sensors, digital cables (max. 100m/330ft) and digital sensor simulators certified for hazardous location IS/ NI Class I, Division 1 or 2 may be connected to the non-incendive Field Wiring Terminals 87, 88, 97, 98 and used in hazardous location NI Class I, Division 2, Groups A-D T4A only.

Note:
Installation shall be in accordance with the NEC/ CEC.

THIS APPARATUS IS SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A-D OR UNCLASSIFIED LOCATIONS

WARNING: EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR USE IN CLASS I, DIVISION 2.

AVERTISSEMENT: RISQUE D'EXPLOSION - LA SUBSTITUTION DES COMPOSANTS PEUT RENDRE CE MATERIEL INACCEPTABLE POUR LES EMPLACEMENTS DE CLASSE I, DIVISION 2.

WARNING: EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NON-HAZARDOUS.
AVERTISSEMENT: RISQUE D'EXPLOSION - AVANT DE DECONNECTER L'EQUIPEMENT, COUPER LE COURANT OU S'ASSURER QUE L'EMPLACEMENT EST DESIGNÉ NON DANGEREUX.

WARNING: EXPOSURE TO SOME CHEMICALS MAY DEGRADE THE SEALING PROPERTIES OF MATERIALS USED IN THE FOLLOWING DEVICES: Power Relay Takamisawa JS12N-K, TE Connectivity RY612012, Zettler AZ69601CB12DEA or Zettler AZ69601CE12DEA.

WARNING: EXPLOSION HAZARD - DO NOT SERVICE ELECTRICAL CONNECTIONS (CONNECT OR DISCONNECT RELAYS, REMOVE OR REPLACE PLUG-IN MODULES) UNLESS POWER HAS BEEN DISCONNECTED OR THE AREA IS KNOWN TO BE FREE OF IGNITIBLE CONCENTRATIONS OF FLAMMABLE GASES OR VAPORS.

Digital Memosens Sensors
Certificate/Report 80021719

Digital Memosens 2.0 Sensors
Certificate/ Report 80021490.

xYP03D according to
Certificate/Report 80021719

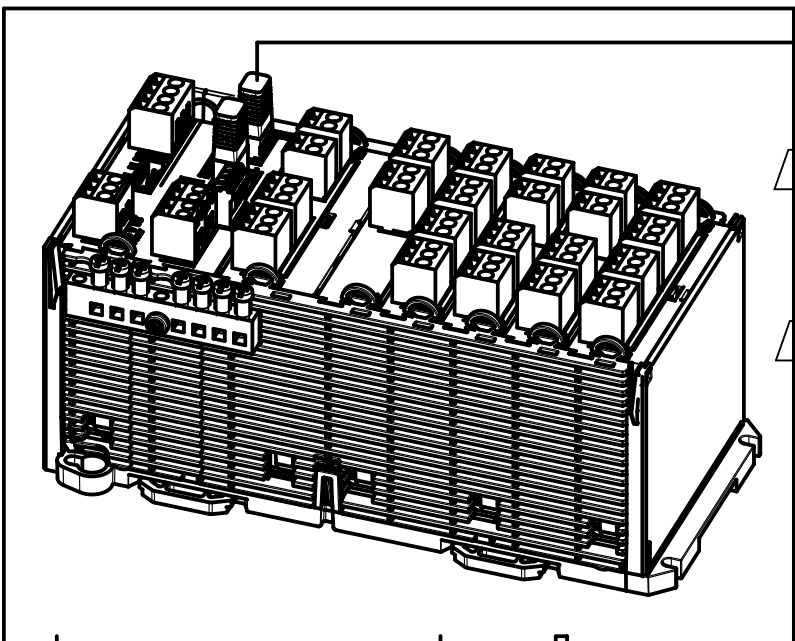
Digital oxygen sensor COS61D
Certificate/ Report 70220753
(only CSA US)

EH Endress+Hauser Endress+Hauser Conducta GmbH+Co. KG 70839 Gerlingen, Germany	The information contained in this document has to be kept strictly confidential. Any unauthorized use, reproduction, distribution, or disclosure to third parties is strictly forbidden. Copyright reserved by Endress+Hauser Conducta GmbH+Co. KG All rights reserved.		Scale 1:1		Tolerance -		
	Endress+Hauser Classification internal		Notif. no. 0		Designed 03.03.2022 TameggerR		
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	Control Drawing xM44x (R)		Status		Welding contr.		
			Appr. ckd.		Approval contr. 20.05.2026 HofmannH		
					Pressure contr.		
					Released		
	Zulassungszeichnung xM44x (R)		No. of document 961006059			Version C	Doc. part 000
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	Material		SAP material no.				Format DIN A3

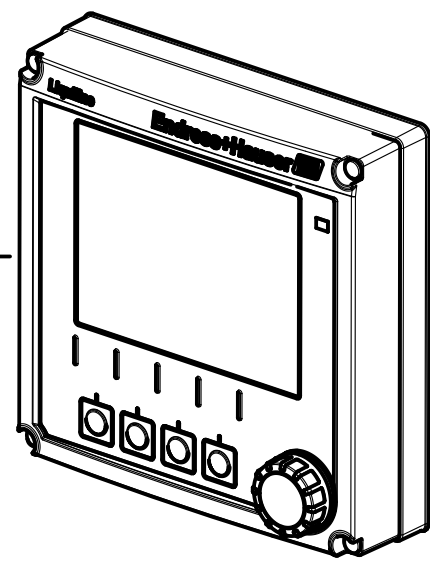
Hazardous location
Class 1, Division 2, Groups A-D T4A

Non-hazardous location

xM44P-CDDIN
(with external Class 1, DIV 2
certified power supply)
xM442R-CD
xM444R-CD
(with external Class 1, DIV 2
certified power supply)
xM448R-CD
(with external Class 1, DIV 2
certified power supply)
x ... C or O or OC



Prior use the external
graph. display, cabinet
(71185295 or 71749101)
must be
installed at the cabinet
door.



The CL 1, DIV 2
external graph.
display, cabinet
(71185295 or 71749101)
may be connected to
all CL 1, DIV 2
approved
xM44x(R) transmitter.

When using display
71749101 the Metal enclosures
must be connected to the
local equipotential bonding system
at the point of installation.

Installation in a conduit or other suitable
wiring method for the respective
environment, in accordance with the
National Electrical Code (NEC) or the
Canadian Electrical Code (CEC).

- Power supply 100... 230 V AC or 24 V AC/DC
- Relay 230 V AC or 24 V DC
- Digital/ analog input/ output 0/4 mA... 20 mA
Communication (Ethernet/ Fieldbus/ RS485)

Suitable enclosure
See conditions of use

All below listed digital sensors,
digital cables (max. 100m/330ft)
and digital sensor simulators
certified for hazardous location IS/
NI Class 1, Division 1 or 2 may be
connected to the non-incendive
Field Wiring Terminals 87, 88, 97,
98 and used in hazardous location
NI Class 1, Division 2, Groups A-D
T4A only.



Note:
Installation shall be in accordance with the NEC/ CEC.

THIS APPARATUS IS SUITABLE FOR USE IN CLASS 1, DIVISION 2, GROUPS A-D OR UNCLASSIFIED
LOCATIONS

WARNING: EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR USE IN
CLASS 1, DIVISION 2.
AVERTISSEMENT: RISQUE D'EXPLOSION - LA SUBSTITUTION DES COMPOSANTS PEUT RENDRE CE MATERIEL
INACCEPTABLE POUR LES EMPLACEMENTS DE CLASSE 1, DIVISION 2.

WARNING: EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED
OFF OR THE AREA IS KNOWN TO BE NON-HAZARDOUS.
AVERTISSEMENT: RISQUE D'EXPLOSION - AVANT DE DECONNECTER L'EQUIPEMENT, COUPER LE COURANT OU
S'ASSURER QUE L'EMPLACEMENT EST DESIGNÉ NON DANGEREUX.

WARNING: EXPOSURE TO SOME CHEMICALS MAY DEGRADE THE SEALING
PROPERTIES OF MATERIALS USED IN THE FOLLOWING DEVICES: Power
Relay Takamisawa JS12N-K, TE Connectivity RY612012,
Zettler AZ69601CB12DEA or Zettler AZ69601CE12DEA.

WARNING: EXPLOSION HAZARD - DO NOT SERVICE ELECTRICAL
CONNECTIONS (CONNECT OR DISCONNECT RELAYS, REMOVE OR
REPLACE PLUG-IN MODULES) UNLESS POWER HAS BEEN DISCONNECTED
OR THE AREA IS KNOWN TO BE FREE OF IGNITIBLE CONCENTRATIONS
OF FLAMMABLE GASES OR VAPORS.

THE DEVICE MUST BE INSTALLED IN A SUITABLE CABINET OR ENCLOSURE
WHICH PERMITS ACCESS BY TOOL OR KEY ONLY.
L'INSTRUMENT DOIT ETRE INSTALLE DANS UN BOITIER OU UNE ARMOIRE
ELECTRIQUE OU L'ACCES EST POSSIBLE SEULEMENT AVEC UN OUTIL OU
AVEC UNE CLE.

Hazardous or
Non-hazardous location

Sensor interface normally nonarcing:
Fixed cable sensors with memosens protocol and
photometer sensors may be installed in hazardous
location or non hazardous location. The connection
interface is normally nonarcing.
Installation in a conduit or other suitable wiring
method for the respective environment, in accordance
with NEC or CEC

Fixed cable sensors with Memosens protocol:
Terminals: 85, 86, 97, 98
Umax: 28.8V DC

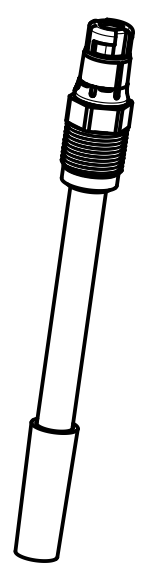
Photometer sensors
Terminals: P+, P-, S+, S-, A, C, SH
Umax: 13V DC

Digital Memosens Sensors
Certificate/Report 80021719

Digital Memosens 2.0 Sensors
Certificate/ Report 80021490.

xYP03D according to
Certificate/Report 80021719

Digital oxygen sensor COS61D
Certificate/ Report 70220753
(only CSA US)



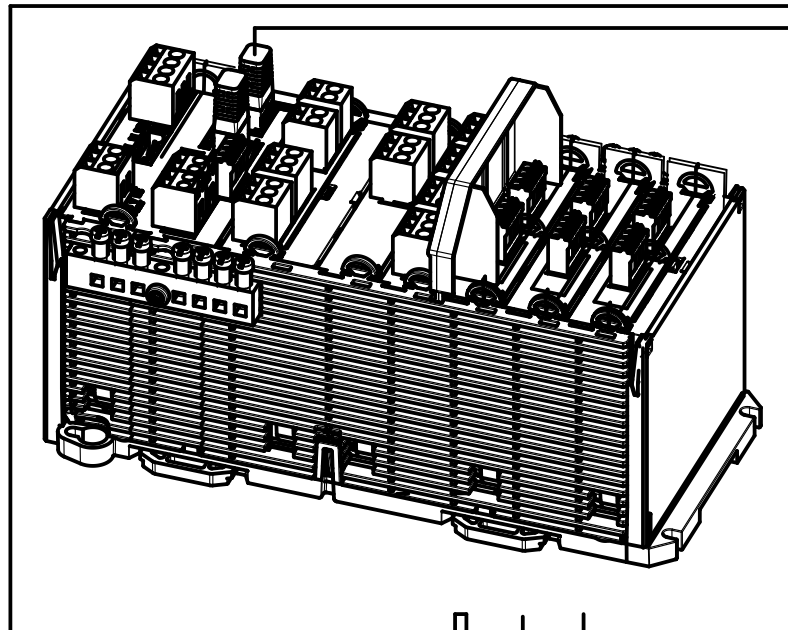
Endress+Hauser Endress+Hauser Conducta GmbH+Co. KG 70839 Gerlingen, Germany	The information contained in this document has to be kept strictly confidential. Any unauthorized use, reproduction, distribution, or disclosure to third parties is strictly forbidden. Copyright reserved by Endress+Hauser Conducta GmbH+Co. KG. All rights reserved.		Scale	Tolerance	
	Endress+Hauser Classification internal		1:2	-	
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	Control Drawing xM44x (R)		0	Drawing chng.	20.05.2026 PetersF
			Number of changes	Welding contr.	
			18	Approval contr.	20.05.2026 HofmannH
			Status	Pressure contr.	
			Appr. ckd.	Released	
	Zulassungszeichnung xM44x (R)		No. of document	Version	Doc. part
			961006059	C	000
Material		SAP material no.		Format	Sheet
				DIN A3	2/4

Hazardous location

Class I, Division 2, Groups A-D T4A

Transmitter with associated IS connection to digital Sensor: Class I, Division 1, Zone 0, 1, 2

xM44P-CLDIN (with external Class I, DIV 2 certified power supply)
xM442R-CL (with external Class I, DIV 2 certified power supply)
xM444R-CL (with external Class I, DIV 2 certified power supply)
xM448R-CL (with external Class I, DIV 2 certified power supply)
x ... C or O or OC



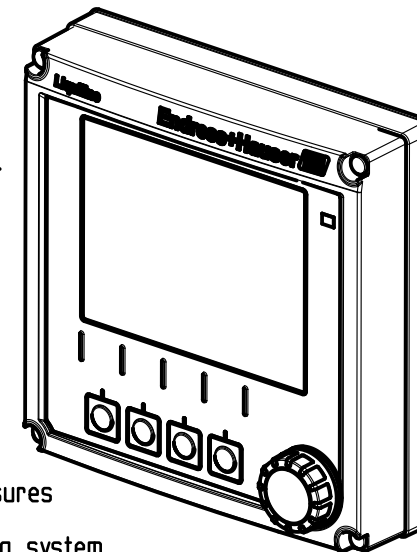
Suitable enclosure
See conditions of use

Installation in a conduit or other suitable wiring method for the respective environment, in accordance with the National Electrical Code (NEC) or the Canadian Electrical Code (CEC).

Prior use the external graph. display, cabinet (71185295 or 71749101) must be installed at the cabinet door.

The CL I, DIV 2 external graph. display, cabinet (71185295 or 71749101) may be connected to all CL I, DIV 2 approved xM44x(R) transmitter.

When using display 71749101 the Metal enclosures must be connected to the local equipotential bonding system at the point of installation.



Hazardous location

Class I, Division 1

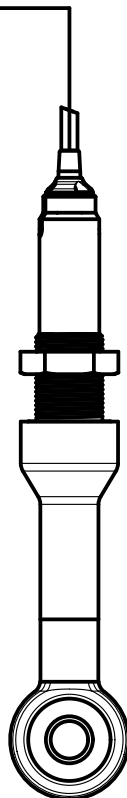
Cables xYK10 and xYK20 (max. 100m/330ft) acc. to Certificate: 80021719; Report 80021719 certified for hazardous Location IS Class I, Division 1 or 2 may be connected to intrinsic safe Field Wiring Terminals 87i, 88i, 97i, 98i $P_o \leq 180 \text{ mW}$

xLS50D according to Certificate: 80021719; Report 80021719

Digital Memosens Sensors Certificate/Report 80021719

Digital Memosens 2.0 Sensors Certificate/ Report 80021490.

xYP03D according to Certificate/Report 80021719



Hazardous or Non-hazardous location

Sensor interface normally nonarcing. Photometer sensors may be installed in hazardous location or non hazardous location. The connection interface is normally nonarcing. Installation in a conduit or other suitable wiring method for the respective environment, in accordance with NEC or CEC

Photometer sensors
Terminals: P+, P-, S+, S-, A, C, SH
Umax: 13V DC

Non-hazardous location

- Power supply 100... 230 V AC or 24 V AC/DC
- Relay 230 V AC or 24 V DC
- Digital/ analog input/ output 0/4 mA... 20 mA
- Communication (Ethernet/ Fieldbus/ RS485)

WARNINGS:
See page 2

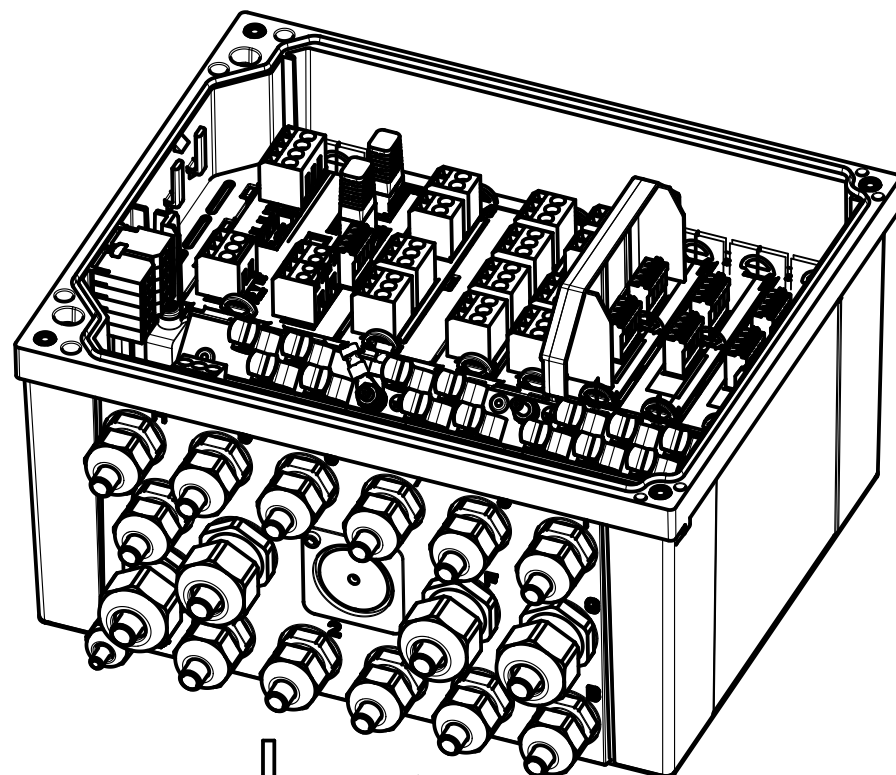
SPECIFIC CONDITIONS OF USE:

1. The xM44x(R) shall be completely installed inside a suitable Type rated enclosure that provides ingress protection appropriate for the end application, and acceptable to the authority having Jurisdiction (AHJ)
2. The environmental data must be taken into account - see the operating instructions of the manufacturer.

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	Endress+Hauser Classification internal		1:2	-	
	CM44		Notif. no.	Designed	03.03.2022 TameggerR
	Control Drawing xM44x (R)		0	Drawing chng.	20.05.2026 PetersF
	Zulassungszeichnung xM44x (R)		Number of changes	Welding contr.	
			18	Approval contr.	20.05.2026 HofmannH
			Status	Pressure contr.	
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			961006059	C	000
			Weight	Volume	
			SAP material no.		
				Format	Sheet
				DIN A3	3/4

Hazardous location
Class I, Division 2, Groups A-D T4A
Transmitter with associated IS connection to digital Sensor: Class I, Division 1, Zone 0, 1, 2

xM44P-CLFIH
xM442-CL
xM444-CL
xM448-CL
x stands for C, O or OC



Installation in a conduit or other suitable wiring method for the respective environment, in accordance with the National Electrical Code (NEC) or the Canadian Electrical Code (CEC).



Non-Hazardous Location

- Power supply 100... 230 V AC or 24 V AC/DC
- Relay 230 V AC or 24 V DC
- Digital/ analog input/ output 0/4 mA... 20 mA
- Communication (Ethernet/ Fieldbus/ RS485)

WARNINGS:
See page 1

SPECIFIC CONDITIONS OF USE:

The environmental data must be taken into account
- see the operating instructions of the manufacturer.

Hazardous location
Class I, Division 1

Cables xYK10 and xYK20
(max. 100m/330ft) acc.
to Certificate: 80021719;
Report 80021719
certified for hazardous
Location IS Class I
Division 1 or 2 may be
connected to intrinsic safe
Field Wiring Terminals
87i, 88i, 97i, 98i

Digital Memosens Sensors
Certificate/Report 80021719

Digital Memosens 2.0 Sensors
Certificate / Report 80021490.

xYP03D according to
Certificate/Report 80021719

xLS50D
according to
Certificate:
80021719;
Report 80021719

Hazardous or
Non hazardous location

Sensor interface normally nonarcing.
Photometer sensors may be installed in hazardous
location or non hazardous location. The connection
interface is normally nonarcing.
Installation in a conduit or other suitable wiring
method for the respective environment, in accordance
with NEC or CEC

Photometer sensors
Terminals: P+, P-, S+, S-, A, C, SH
Umax: 13V DC

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	Endress+Hauser Classification internal		1:2	-		
	CM44	Control Drawing xM44x (R)	Notif. no.	Designed	03.03.2022	TameggerR
			0	Drawing chng.	20.05.2026	PetersF
			Number of changes	Welding contr.		
			18	Approval contr.	20.05.2026	HofmannH
			Status	Pressure contr.		
	Zulassungszeichnung xM44x (R)		Appr. ckd.	Released		
			No. of document	Version		Doc. part
			961006059	C		000
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Material		SAP material no.		Format	Sheet	
				DIN A3	4/4	