EXPLOSION PROTECTION
CERTIFICATE OF CONFORMITY

Cert NO.GYJ19.1364X

This is to certify that the product

	Radar Level Transmitter
manufactured by	Schneider Electric Systems USA, Inc.
	(Address:38 Neponset Avenue, Foxboro, MA 02035, United States of America)
which model is	LRx4, LRx5 Series
Ex marking	Ex d ia IIC T3~T6 Ga/Gb Ex iaD 20/21 tD A21 IP6X T85°C~T200°C Ex ia IIC T3~T6 Ga/Gb Ex iaD 20/21 T85~T200
product standard	/
drawing number	/

has been inspected and certified by NEPSI, and that it conforms to GB 3836.1-2010,GB 3836.2-2010,GB 3836.4-2010,GB 3836.20-2010, GB 12476.1-2013,GB 12476.4-2010,GB 12476.5-2013

This Approval shall remain in force until 2024.09.24

Remarks
1.Conditions for safe use are specified in the attachment to this certificate.
2.Symbol "X" placed after the certification number denotes specific conditions of use, which are specified in the attachment to this certificate.
3.Model designation is specified in the attachment to this certificate.
4.Safety parameters specified in the attachment to this certificate.

Director

National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation

Issued Date 2019.09.25

This Certificate is valid for products compatible with the documents and samples approved by NEPSI.

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国家级仪器仪表防爆安全监督检验站

National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation

(GYJ19.1364X) **(Attachment Ⅰ)**

Attachment

(Translation)

Radar Level Transmitter, type LRx4 and LRx5 series, manufactured by Schneider Electric Systems USA, Inc., have been approved in accordance with the following standards by National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation (NEPSI):

GB3836.1–2010 Explosive atmospheres – Part 1: Equipment – General requirements
GB3836.2–2010 Explosive atmospheres – Part 2: Equipment protection by flameproof enclosure "d"
GB3836.4–2010 Explosive atmospheres – Part 4: Equipment protection by intrinsic safety "i"
GB3836.20–2010 Explosive atmospheres – Part 20: Equipment with equipment protection level (EPL) Ga
GB12476.1–2013 Electrical apparatus for use in the presence of combustible dust – Part 1: Equipment – General requirements
GB12476.4–2010 Electrical apparatus for use in the presence of combustible dust – Part 4: Protection by intrinsic safety "iD"
GB12476.5–2013 Electrical apparatus for use in the presence of combustible dust – Part 5: Protection by enclosures"tD"

The certificate number is GYJ19.1364X。

Ex marking: Ex d ia IIC T3~T6 Ga/Gb
Ex iaD 20/21 tD A21 IP6X T85℃~T200℃
Ex ia IIC T3~T6 Ga/Gb
Ex iaD 20/21 T85~T200

The relations between the temperature class, the maximum surface temperature, the maximum process temperature and the maximum ambient temperature are as below:

LR54 - LR64

Temperature class (Gas)	Maximum surface temperature (Dust)	Maximum process Process connection temperature	Maximum ambient temperature	
			Aluminium housing	Stainless steel housing
T6	T85℃	60℃	60℃	60℃
		85℃	44℃	35℃
T5	T100℃	75℃	75℃	75℃
		100℃	59℃	50℃
T4*	T130℃*	115℃	57℃	46℃
		130℃	48℃	31℃

***Remark: Max. process connection temperature is 100℃, if the PP Drop antenna and PP accessories are used.**

Minimum process temperature Minimum process connection temperature	Minimum ambient temperature	
	Aluminium housing	Stainless steel housing
-40°C	-40°C	-40°C
-50°C	-33°C	-30°C

***Remark: 1. Min. process connection temperature is -20℃, if a Kalrez®6375 gasket is used.**
2. Min. process connection temperature is -40℃, if an FKM/FPM gasket is used.
3. Min. process connection temperature is -40℃, if the PP Drop antenna and PP accessories are used.

LR74

Temperature class (Gas)	Maximum surface temperature (Dust)	Maximum process Process connection temperature	Maximum ambient temperature	
			Aluminium housing	Stainless steel housing
T6	T85°C	60°C	60°C	60°C
		85°C	54°C	51°C
T5	T100°C	75°C	75°C	75°C
		100°C	69°C	66°C
T4	T135°C	115°C	72°C	67°C
		135°C	68°C	61°C
T3*	T200°C*	150°C	64°C	55°C
		180°C	58°C	45°C
		200°C	54°C	38°C

***Remark: Max. process connection temperature is +150℃, if the device has a Metallic Horn, Drop or hygienic antenna with an EPDM gasket or a PTFE Drop antenna.**

Minimum process temperature Minimum process connection temperature	Minimum ambient temperature	
	Aluminium housing	Stainless steel housing
-40°C	-40°C	-40°C
-50°C	-37°C	-36°C

***Remark: 1. Min. pocess connection temperature is -15℃, if the device has a hygienic antenna with an FKM/FPM gasket.**
2. Min. process connection temperature is -20℃, if a Kalrez®6375 gasket is used.
3. Min. process connection temperature is -30℃, if a Metaglas® feedthrough is used.
4. Min. process connection temperature is -30℃, if the device has a hygienic antenna with an EPDM gasket.
5. Min. process connection temperature is -40℃, if the device has a Horn or drop antenna with an FKM/FPM gasket.

LR65 - LR75
（Without distance piece）

Temperature class （Gas）	Maximum surface temperature （Dust）	Maximum process Process connection temperature	Maximum ambient temperature	
			Aluminium housing	Stainless steel housing
T6	T85°C	60°C	60°C	60°C
		85°C	48°C	43°C
T5	T100°C	75°C	75°C	75°C
		100°C	63°C	58°C
T4	T135°C	115°C	64°C	56°C
		135°C	55°C	43°C
T3	T150°C	150°C	49°C	33°C

Minimum process temperature Minimum process connection temperature	Minimum ambient temperature	
	Aluminium housing	Stainless steel housing
-40°C	-40°C	-40°C
-50°C	-35°C	-33°C

***Remark: 1. Min. process connection temperature is -20℃, if a Kalrez®6375 gasket is used;**
2. Min. process connection temperature is -40℃, if an FKM/FPM gasket is used;
3. If the device has the flange plate protection option, the permitted process connection temperature range is -50℃～+150℃.

LR65 - LR75
（With distance piece）

Temperature class （Gas）	Maximum surface temperature （Dust）	Maximum process Process connection temperature	Maximum ambient temperature	
			Aluminium housing	Stainless steel housing
T6	T85°C	60°C	60°C	60°C
		85°C	53°C	51°C
T5	T100°C	75°C	75°C	75°C
		100°C	68°C	66°C
T4	T135°C	115°C	70°C	68°C
		135°C	65°C	61°C
T3*	T200°C*	150°C	61°C	56°C
		180°C	53°C	46°C
		200°C	48°C	40°C

***Remark: Max. process connection temperature is +150℃, if an EPDM gasket is used.**

Minimum process temperature Minimum process connection temperature	Minimum ambient temperature	
	Aluminium housing	Stainless steel housing
-40℃	-40℃	-40℃
-50℃	-37℃	-36℃

***Remark: 1. Min. process connection temperature is -20℃, if a Kalrez®6375 gasket is used;**

2. Min. process connection temperature is -40℃, if an FKM/FPM gasket is used;

3. If the device has the flange plate protection option, the permitted process connection temperature range is -50℃～+200℃.

Approved Series to this certificate:

Series	LR54	LR64	LR74
Type	LR540 LR544 LR549	LR640 LR644 LR649	LR740 LR744 LR749

Series	LR65	LR75
Type	LR650 LR654 LR659	LR750 LR754 LR759

LR54

LR540 ***a b c d e f g h i j k l m n o p q r s t***

LR544 ***a b c d e f g h i j k l m n o p q r s t***

LR549 ***a b c d e f g h i j k l m n o p q r s t***

a Version code, F（Schneider Electric）;

b Regional Directives, one digit,not safety relevant;

c NEPSI Approved code, 5（Ex ia + Ex iaD）,6（Ex d ia + Ex iaD tD）;

d Industry / Safety, one digit, not safety relevant;

e Construction, one digit, not safety relevant;

f Converter version,Housing material / IP class code, 2(Aluminium housing), 3 (Stainless steel housing);

g Output code, 1;

h Cable entry / Cable gland code, 1, 2, 3, 4, 5, 6, 7, 8, A, C, D, E, F, G;

i Display code, 0, 4;

j Display documentation language, one digit, not safety relevant;

k Enhanced functions, one digit, not safety relevant;

l Process conditions / Process seal code, 1, 2, 3;

m Antennas code, 1, 2, 3, 4, 5, 6, 7, A, B, C;

n Antenna extensions / Flange plate protection code, 0, 1, 2, 3, 4, 5, 6, 7, 8, A, B, D, E, F, G, H, K;

o Process connection Size code, F, G, H, L, M, P, R;

p Process connection code, 1, 2, 7, A, C, E, G, P, U;

q Process connection Sealing Face / Hygienic code, 0, 1, 7, A, B, P;

r Calibration certificate, one digit, not safety relevant;

s Options code, 0, 2;

t Accessories / TAG plate, one digit, not safety relevant.

LR64

LR640 ***a b c d e f g h i j k l m n o p q r s t***

LR644 ***a b c d e f g h i j k l m n o p q r s t***

LR649 ***a b c d e f g h i j k l m n o p q r s t***

a Version code, F（Schneider Electric）;

b Regional Directives, one digit, not safety relevant;

c NEPSI Approved code, 5（Ex ia + Ex iaD）, 6（Ex d ia + Ex iaD tD）;

d Industry / Safety, one digit, not safety relevant;

e Construction, one digit, not safety relevant;

f Converter version,Housing material / IP class code, 2(Aluminium housing), 3 (Stainless steel housing);

g Output code, 1;

h Cable entry / Cable gland code, 1, 2, 3, 4, 5, 6, 7, 8, A, C, D, E, F, G;

i Display code, 0, 4;

j Display documentation language, one digit, not safety relevant;

k Enhanced functions, one digit, not safety relevant;

l Process conditions / Process seal code, 1, 2, 3;

m Antennas code, 0, 4, 5, 6, 7, A, B, C, E, F, G;

n Antenna extensions / Flange plate protection code, 0, 1, 2, 3, 4, 5, 6, 7, 8, A, B;

o Process connection size code, 0, F, G, L, M, P, R;

p Process connection Pressure class code, 0, 1, 2, 7, A, C, D, E, G, P, U;

q Process connection Sealing Face / Hygienic code, 0, 1, 7, A, B, P;

r Calibration certificate, one digit, not safety relevant;

s Options code, 0, 2;

t Accessories / TAG plate code, not safety relevant..

LR74

LR740 ***a b c d e f g h i j k l m n o p q r s t***

LR744 ***a b c d e f g h i j k l m n o p q r s t***

LR749 ***a b c d e f g h i j k l m n o p q r s t***

a Version code, F（Schneider Electric）;

b Regional Directives, one digit, not safety relevant;

c NEPSI Approved code，5（Ex ia + Ex iaD），6（Ex d ia + Ex iaD tD）;

d Industry / Safety, one digit, not safety relevant;

e Construction, one digit, not safety relevant;

f Converter version,Housing material / IP class code, 2(Aluminium housing), 3 (Stainless steel housing);

g Output code, 1;

h Cable entry / Cable gland code, 1，2，3，4，5，6，7，8，A，C，D，E，F，G;

i Display code, 0，4;

j Operating language, one digit, not safety relevant;

k Enhanced functions, one digit, not safety relevant;

l Process conditions / Process seal code, 1，2，3，5，6，7，A，B，C，E，F，G;

m Antennas code, 0，1，2，3，4，5，6，7，E，F，G，K，L，M，Y;

n Antenna extensions / Flange plate protection code, 0，1，2，3，4，5，6，7，8，A，B，D，M，N，P，S，T，U;

o Process connection size code, 0，G，H，L，M，P，R;

p Process connection Pressure class code, 0，1，2，3，4，5，7，A，C，E，G，H，K，P，U;

q Process connection Sealing Face / Hygienic code, 0，1，2，3，4，5，6，7，A，B，M，P，S，T，U，V，W，X;

r Calibration certificate, one digit, not safety relevant;

s Options code，0，1，2，3;

t Accessories / TAG plate, one digit code, not safety relevant.

LR65

LR650 ***a b c d e f g h i j k l m n o p q r s t***

LR654 ***a b c d e f g h i j k l m n o p q r s t***

LR659 ***a b c d e f g h i j k l m n o p q r s t***

a Version code, F（Schneider Electric）;

b Regional Directives, one digit, not safety relevant;

c NEPSI Approved code，5（Ex ia + Ex iaD），6（Ex d ia + Ex iaD tD）；

d Industry / Safety, one digit, not safety relevant;

e Construction, one digit, not safety relevant;

f Converter version,Housing material / IP class code, 2(Aluminium housing), 3 (Stainless steel housing);

g Output code, 1;

h Cable entry / Cable gland code,1，2，3，4，5，6，7，8，A，C，D，E，F，G;

i Display code, 0，4;

j Display- documentation language, one digit, not safety relevant;

k Enhanced functions, one digit, not safety relevant;

l Process conditions / Process seal code, 1，2，4;

m Antennas code, 3，4;

n Antenna extensions code, 0，1;

o Process connection size code, G，H，L，M，P，R;

p Process connection Pressure class code,1，2，7，A，C，D，E，G，P，U;

q Process connection Sealing Face / Hygienic code, 0，1，7，A，B，P;

r Calibration certificate, one digit, not safety relevant;

s Options, 0, 2;

t Accessories / TAG plate code, one digit, not safety relevant.

LR75

LR750 ***a b c d e f g h i j k l m n o p q r s t***

LR754 ***a b c d e f g h i j k l m n o p q r s t***

LR759 ***a b c d e f g h i j k l m n o p q r s t***

a Version code, F（Schneider Electric）；

b Regional Directives, one digit, not safety relevant;

c NEPSI Approved code，5（Ex ia + Ex iaD），6（Ex d ia + Ex iaD tD）；

d Industry / Safety, one digit, not safety relevant;

e Construction, one digit, not safety relevant;

f Converter version,Housing material / IP class code, 2(Aluminium housing), 3 (Stainless steel housing);

g Output code, 1;

h Cable entry / Cable gland code,1，2，3，4，5，6，7，8，A，C，D，E，F，G;

i Display code, 0，4;

j Display- documentation language, one digit, not safety relevant;

k Enhanced functions, one digit, not safety relevant;

l Process conditions / Process seal code, 1，2，3，4，5，6，7;

m Antennas code, 1, 2, 3, 4;

n Antenna extensions code, 0, 1, A;

o Process connection size code, E, F, G, H, L, M, P, R;

p Process connection Pressure class code, 1, 2, 7, A, C, D, E, G, P, U;

q Process connection Sealing Face / Hygienic code, 0, 1, 7, A, B, P;

r Calibration certificate, one digit, not safety relevant;

s Options, 0, 2;

t Accessories / TAG plate code, one digit, not safety relevant.

Ⅰ. SPECIAL CONDITIONS FOR SAFE USE

1.1 For the details on the dimensions of the flameproof joints contact the manufacturer.

1.2 Do not rub the surface of the enclosure that has a plastic unit and/or a layer of paint. Friction could cause an increase in electrostatic charge and ignition of a potentially explosive atmosphere

1.3 The stainless steel enclosure may only be used with level transmitters in type of protection intrinsic safety, Ex ia IIC T3~T6 Ga/Gb

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II. SPECIAL REQUIREMENTS

2.1. Electrical parameters:

c NEPSI approved code	Electrical parameters
6	Normal Voltage: U_n = 36 V d.c. Normal current: In = 22mA Maximum voltage: Um = 250V

c NEPSI approved code	Max.input voltage Ui (V)	Max.input current Ii (mA)	Max.input Power Pi (W)	Max. internal parameters	
				Ci (μF)	Li (mH)
5	30	130	1.0	0.01	0

2.2 Do not open the cover when the Radar Level Transmitter is located in Explosive atmospheres, except the Radar Level Transmitter with Ex ia IIC T3~T6 Ga/Gb marking.

2.3 Keep the enclosure clean to prevent dust accumulation, but dust shall not be blown by compressed air.

2.4 Users are forbidden to change the configuration to ensure the explosion protection performance of the equipment. Any faults shall be settled with experts from the manufacturer.

2.5 During installation, operation and maintenance, users shall comply with the relevant requirements of the product instruction manual, GB3836.13-2013 "Explosive atmospheres-Part 13: Equipment repair, overhaul and reclamation", GB/T 3836.15-2017 " Explosive atmospheres-Part 15: Electrical installations design, selection and erection", GB/T 3836.16-2017 " Explosive atmospheres-Part 16: Electrical installations Inspection and maintenance ", GB15577–2018 "Safety regulations for dust explosion prevention and protection" and GB50257-2014 "Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering".

III. MANUFACTURER'S RESPONSIBILITY

3.1 The instruction manual shall include all the clauses mentioned above.

3.2 The manufacturer shall exactly conform to the documents approved by NEPSI.

3.3 The nameplate shall add the following:

3.3.1 Identification of NEPSI.

3.3.2 Certificate No.

National Supervision and Inspection Centre
For Explosion Protection and Safety of Instrumentation
Sep. 25, 2019