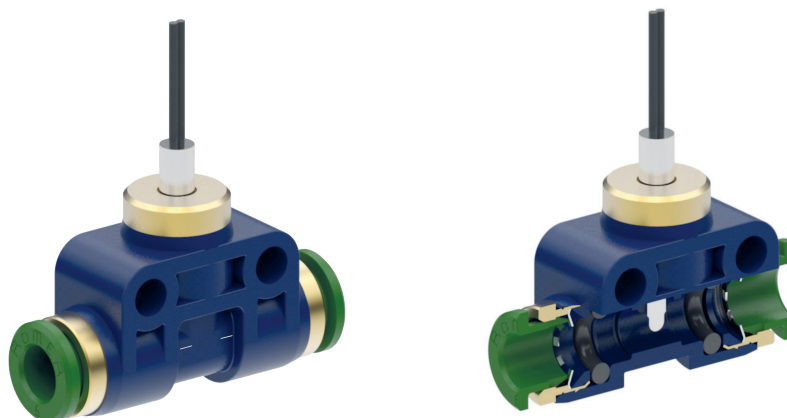


Temperature Sensors Type ITS POM

Inline Temperature Sensor

ITS the new inline temperature sensor from AVS-Römer



Inline temperature sensor for measuring temperature of fluids and gaseous medium.

The temperature sensor made of stainless steel combined with the proven ELSA push-in connections made of POM.

Other features:

- fast response time
- minimal dead space

Variations / options:

- other hose connections
- other materials for seal

CHARACTERISTICS

GENERAL

Constructional design	Stainless steel temperature measuring cell
Product name	Temperature sensor
Product type	ITS-958P-...
Nominal diameter	2.5 DN or DN 4
Connection	ELSA push-in connectors for pipe/tube OD 4 or OD 6
Ambient temperature	0 °C to +60 °C
Medium temperature	0 °C to +80 °C
Thermal time constant	<2 s (water)
Body material	POM
Sensor housing material	1.4301
O-ring material	FKM / EPDM

PNEUMATIC - HYDRAULIC

Nominal pressure	PN 16
Pressure range	Technical vacuum up to maximum allowable operating pressure OP in accordance with the specification table
Flow rate	Kv-value in accordance with the specification table
Medium	Gases or fluidss which do not corrode the materials specified

ELECTRIC

Electrical Connection	2-pin PVC ribbon cable AWG 30, 0.20 m, 300 V, 105 °C, strand ends pre-tinned
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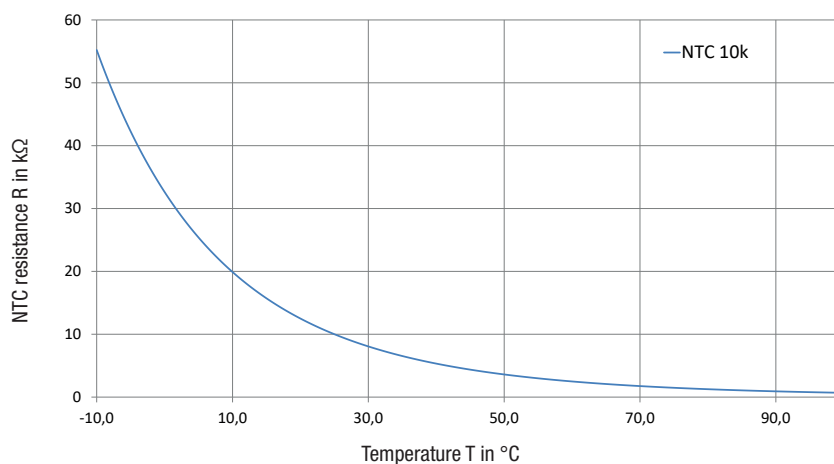
Temperature Sensor - Type ITS POM

Price group **721** PN 16 Max. Allow. OP at ambient temp.
T_{min} 0 °C, T_{max} +60 °C

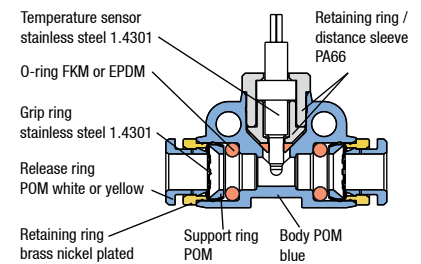
Plastic
POM

for tube OD	DN	Allow. OP [bar] at medium temp.			Kv-value water [l/min]	L1	L2	D1/D2	Sensor-type	Nominal resistance NTC at 25 °C	R Tolerance	B value R25/85	B Tolerance	Sealant material	Type	Order number
		20 °C	60 °C	80 °C												
4	2.5	16	16	12	2.4	37.2	22.4	12.4	NTC	10 kOhm	±3 %	3984 K	±0.5 %	FKM	ITS-958P-4F-X01-NTC10	390538
4	2.5	16	16	12	2.4	37.2	22.4	12.4	NTC	10 kOhm	±3 %	3984 K	±0.5 %	EPDM peroxid ernetzt	ITS-958P-4P-X01-NTC10	390540
6	4	16	12	10	8.1	38.2	22.4	12.4	NTC	10 kOhm	±3 %	3984 K	±0.5 %	FKM	ITS-958P-6F-X01-NTC10	390539
6	4	16	12	10	8.1	38.2	22.4	12.4	NTC	10 kOhm	±3 %	3984 K	±0.5 %	EPDM peroxid ernetzt	ITS-958P-6P-X01-NTC10	390541
8	6	16	12	10	19	44.2	22.7	14.4	NTC	10 kOhm	±3 %	3984 K	±0.5 %	FKM	ITS-958P-8F-X01-NTC10	390535
8	6	16	12	10	19	44.2	22.7	14.4	NTC	10 kOhm	±3 %	3984 K	±0.5 %	EPDM peroxid ernetzt	ITS-958P-8F-X01-NTC10	390537

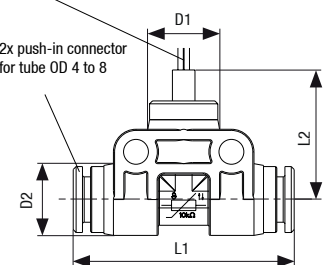
Characteristic Curve -10 °C to +100 °C 0-60 kΩ



Illustration



Cable length approx. 0.2m
strand ends stripped,
tinned



Temperature Sensors Type ITS PVDF

Inline Temperature Sensor

ITS the new inline temperature sensor from AVS-Römer

ELSA
Push-in Fittings

NSF
COMPONENT



Inline temperature sensor for measuring temperature of fluids and gaseous medium.

The temperature sensor made of stainless steel combined with the proven ELSA push-in connections made of PVDF.

Other features:

- fast response time
- minimal dead space

Variations / options:

- other hose connections
- other materials for seal

CHARACTERISTICS

GENERAL

Constructional design	Stainless steel temperature measuring cell
Product name	Temperature sensor
Product type	ITS-958V-...
Nominal diameter	2.5 DN to DN 6
Connection	ELSA push-in connectors for pipe/tube OD 4 to OD 8
Ambient temperature	0 °C to +60 °C
Medium temperature	0 °C to +105 °C
Thermal time constant	<2 s (water)
Body material	PVDF (FDA-complaint, KTW-approved)
Sensor housing material	1.4301
O-ring material	FKM or EPDM peroxide cured
Approval	NSF/ANSI 169

PNEUMATIC - HYDRAULIC

Nominal pressure	PN 16
Pressure range	Technical vacuum up to maximum allowable operating pressure OP in accordance with the specification table
Flow rate	Kv-value in accordance with the specification table
Medium	Gases or fluidss which do not corrode the materials specified

ELECTRIC

Electrical Connection	2-pin PVC ribbon cable AWG 30, 0.20 m, 300 V, 105 °C, strand ends pre-tinned
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Temperature Sensor - Type ITS PVDF

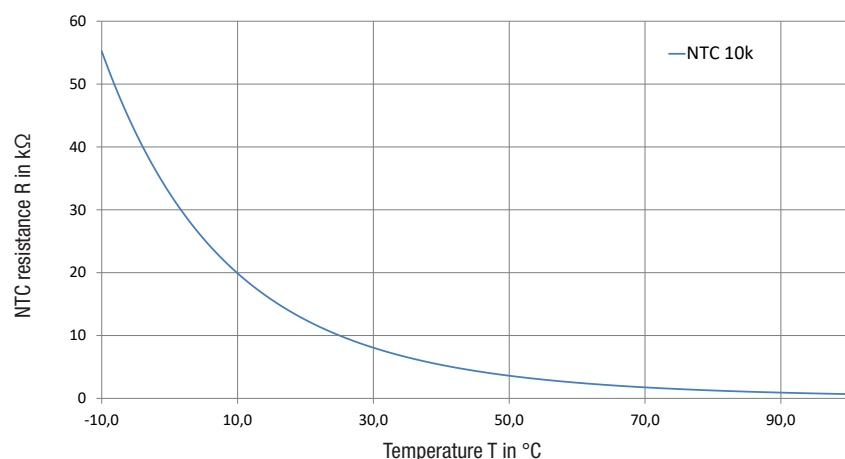
Price group **721** PN 16 Max. Allow. OP at ambient temp.
T_{min} 0 °C, T_{max} +60 °C



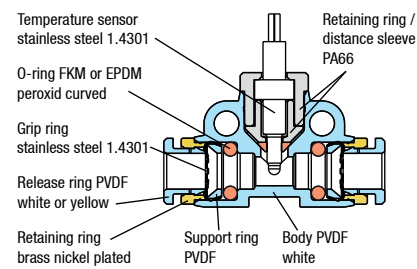
Plastic
PVDF

for tube OD	DN	Allow. OP [bar] at medium temp.			Kv-value water [l/min]	L1	L2	D1 D2	Sen- sor- type	Nominal resistance NTC at 25 °C	R Toler- ance	B value R25/85	B Toler- ance	Sealant material	Type	Order number
		20 °C	60 °C	100 °C												
4	2.5	16	12	10	2.4	37.2	22.3	12.4	NTC	10 kOhm	±3 %	3984 K	±0.5 %	FKM	ITS-958V-4FF- X01-NTC10	390542
4	2.5	16	12	10	2.4	37.2	22.3	12.4	NTC	10 kOhm	±3 %	3984 K	±0.5 %	EPDM peroxid curved	ITS-958V-4PF- X01-NTC10	390544
6	4	16	12	10	8.1	38.2	22.3	12.4	NTC	10 kOhm	±3 %	3984 K	±0.5 %	FKM	ITS-958V-6FF- X01-NTC10	390543
6	4	16	12	10	8.1	38.2	22.3	12.4	NTC	10 kOhm	±3 %	3984 K	±0.5 %	EPDM peroxid curved	ITS-958V-6PF- X01-NTC10	390545
8	6	16	12	8	18	44.2	22.7	14.4	NTC	10 kOhm	±3 %	3984 K	±0.5 %	FKM	ITS-958V-8FF- X01-NTC10	390482
8	6	16	12	8	18	44.2	22.7	14.4	NTC	10 kOhm	±3 %	3984 K	±0.5 %	EPDM peroxid curved	ITS-958V-8PF- X01-NTC10	390547

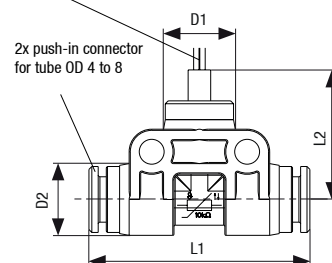
Characteristic Curve -10 °C to +100 °C 0-60 kΩ



Illustration



Cable length approx. 0.2m
strand ends stripped,
tinned



Temperature Sensors Type ITS PPSU

Inline Temperature Sensor

ITS the new inline temperature sensor from AVS-Römer



Inline temperature sensor for measuring temperature of fluids and gaseous medium.

The ceramic temperature sensor combined with the proven ELSA push-in connector made from PPSU is mainly used in the food industries.

Other features:

- fast response time
- minimal dead space
- materials and constructional design especially optimised for food applications

Variations / options:

- other hose connections
- other materials for seal

CHARACTERISTICS

GENERAL

Constructional design	Ceramic temperature measuring cell
Product name	Temperature sensor
Product type	ITS-958P3-...
Nominal diameter	2.5 DN to DN 6
Connection	ELSA push-in connectors for pipe/tube OD 4 to OD 8
Ambient temperature	0 °C to +60 °C
Medium temperature	0 °C to +135 °C
Medium viscosity	up to approx. 35 mm ² /s
Thermal time constant	<2 s (water)
Body material	PPSU (KTW-approved, NSF-certified)
Sensor housing material	1.4404
O-ring material	FKM or EPDM peroxid curved
Approval	NSF/ANSI 169
PNEUMATIC - HYDRAULIC	
Nominal pressure	PN 20
Pressure range	Technical vacuum up to maximum allowable operating pressure OP in accordance with the specification table
Flow rate	Kv-value in accordance with the specification table
Medium	Gases or fluidss which do not corrode the materials specified
ELECTRIC	
Electrical Connection	2-pin PVC ribbon cable AWG 24, 0.75 m, UL AWM style 2651, 300 V, 105 °C, strand ends pre-tinned NTC 47k silicone cable, Ø3.1 ± 0.1 mm, black, 2x AWG 24/7, red / white PT 100 PVC cable (HT), Ø3.1 ± 0.2mm, gray, 2x14mm ² , brown / white

Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!

Temperature Sensor, Type ITS

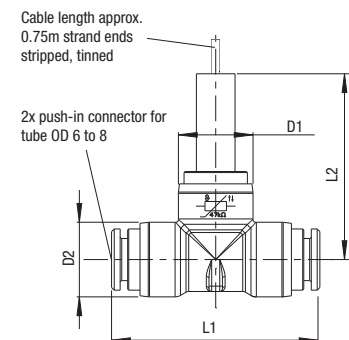
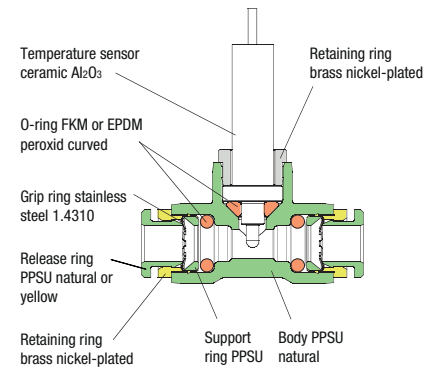
Price group **720** PN 20 Max. Allow. OP at ambient temp.
T_{min} 0 °C, T_{max} +60 °C



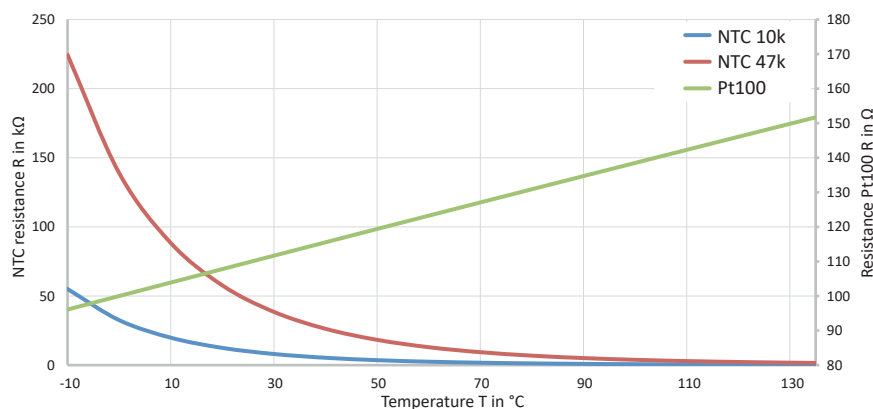
Plastic
PPSU

for tube OD	DN	Allow. OP [bar] at medium temp.			Kv-value water [l/min]	L1	L2	L6	Sensor-type	Nominal resistance NTC at 25 °C Pt100 at 0 °C	R Tolerance	B value R25/85	B Tolerance	Sealant material	Type	Order number
		20 °C	100 °C	135 °C												
4	2.5	20	16	10	2.4	37.8	34.6	13.9	NTC	10 kOhm	±1 %	3977 K	±1 %	FKM	ITS-958P3-4FF-NTC10	390517
4	2.5	20	16	10	2.4	37.8	34.6	13.9	NTC	10 kOhm	±1 %	3977 K	±1 %	EPDM peroxid curved	ITS-958P3-4PF-NTC10	390521
6	4	20	16	10	8.1	38.6	34.6	13.9	NTC	10 kOhm	±1 %	3977 K	±1 %	FKM	ITS-958P3-6FF-NTC10	390518
6	4	20	16	10	8.1	38.6	34.6	13.9	NTC	10 kOhm	±1 %	3977 K	±1 %	EPDM peroxid curved	ITS-958P3-6PF-NTC10	390522
8	6	20	16	10	25	44.8	35	17.2	NTC	10 kOhm	±1 %	3690 K	±1 %	FKM	ITS-958P3-8FF-NTC10	390435
8	6	20	16	10	25	44.8	35	17.2	NTC	10 kOhm	±1 %	3690 K	±1 %	EPDM peroxid curved	ITS-958P3-8PF-NTC10	390436
4	2.5	20	16	10	2.4	37.8	34.6	17.2	NTC	47 kOhm	±1 %	3690 K	±1 %	FKM	ITS-958P3-4FF-NTC47	390508
4	2.5	20	16	10	2.4	37.8	34.6	17.2	NTC	47 kOhm	±1 %	3690 K	±1 %	EPDM peroxid curved	ITS-958P3-4PF-NTC47	390509
6	4	20	16	10	8.1	38.6	34.6	13.9	NTC	47 kOhm	±1 %	3690 K	±1 %	FKM	ITS-958P3-6FF-NTC47	390510
6	4	20	16	10	8.1	38.6	34.6	13.9	NTC	47 kOhm	±1 %	3690 K	±1 %	EPDM peroxid curved	ITS-958P3-6PF-NTC47	390511
8	6	20	16	10	25	44.8	35	17.2	NTC	47 kOhm	±1 %	3690 K	±1 %	FKM	ITS-958P3-8FF-NTC47	390437
8	6	20	16	10	25	44.8	35	17.2	NTC	47 kOhm	±1 %	3690 K	±1 %	EPDM peroxid curved	ITS-958P3-8PF-NTC47	390438
4	2.5	20	16	10	2.4	37.8	34.6	13.9	Pt100	100 Ohm	±1 %	-	±1 %	FKM	ITS-958P3-4FF-PT100	390519
4	2.5	20	16	10	2.4	37.8	34.6	13.9	Pt100	100 Ohm	±1 %	-	±1 %	EPDM peroxid curved	ITS-958P3-4PF-PT100	390523
6	4	20	16	10	8.1	38.6	34.6	13.9	Pt100	100 Ohm	±1 %	-	±1 %	FKM	ITS-958P3-6FF-PT100	390520
6	4	20	16	10	8.1	38.6	34.6	13.9	Pt100	100 Ohm	±1 %	-	±1 %	EPDM peroxid curved	ITS-958P3-6PF-PT100	390524
8	6	20	16	10	25	44.8	35	17.2	Pt100	100 Ohm	±1 %	-	±1 %	FKM	ITS-958P3-8FF-PT100	390439
8	6	20	16	10	25	44.8	35	17.2	Pt100	100 Ohm	±1 %	-	±1 %	EPDM peroxid curved	ITS-958P3-8PF-PT100	390440

Illustration



Characteristic Curve -10 °C to +135 °C 0 kΩ to 250 kΩ



Temperature Sensors Type ITS PPSU Stainless Steel Measuring Cell

Inline Temperature Sensor

ITS the new inline temperature sensor from AVS-Römer



Inline temperature sensor for measuring temperature of fluids and gaseous medium.

The stainless steel temperature sensor combined with the proven ELSA push-in connector made from PPSU.

Other features:

- fast response time
- minimal dead space
- materials and constructional design especially optimised for food applications

Variations / options:

- other hose connections
- other materials for seal

CHARACTERISTICS

GENERAL

Constructional design	Stainless steel temperature sensor
Product name	Temperature sensor
Product type	ITS-958P3-...
Nominal diameter	2.5 DN to DN 6
Connection	ELSA push-in connectors for pipe/tube OD 4 to OD 8
Ambient temperature	0 °C to +60 °C
Medium temperature	0 °C to +120 °C
Thermal time constant	<2 s (water)
Body material	PPSU (KTW-approved, NSF-certified)
Sensor housing material	1.4404
O-ring material	FKM or EPDM peroxid curved
Approval	NSF/ANSI 169

PNEUMATIC - HYDRAULIC

Nominal pressure	PN 20
Pressure range	Technical vacuum up to maximum allowable operating pressure OP in accordance with the specification table
Flow rate	Kv-value in accordance with the specification table
Medium	Gases or fluidss which do not corrode the materials specified

ELECTRIC

Electrical Connection	Depending on the NTC or PT resistance, a different cable is used: NTC 47k: silicone cable, Ø3.1 ± 0.1 mm, black, 2x AWG 24/7, red / white PT 100: PVC cable (HT), Ø3.1 ± 0.2mm, gray, 2x14mm², brown / white
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Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!

Temperature Sensor, Type ITS Stainless Steel Measuring Cell

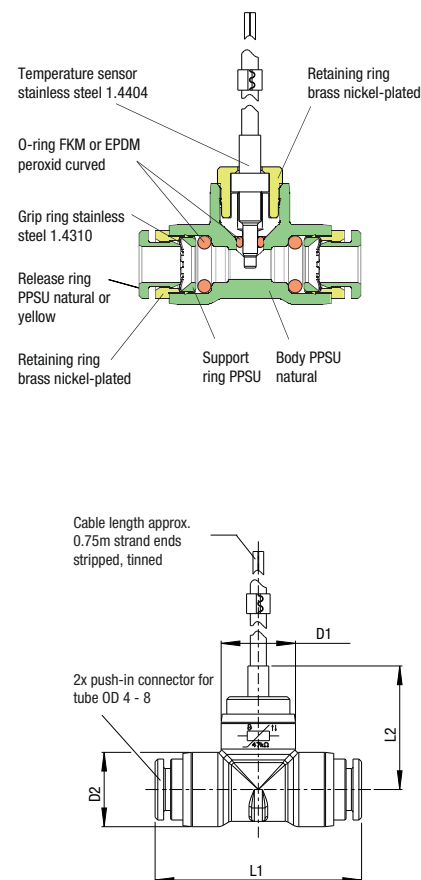
Price group **720** PN 20 Max. Allow. OP at ambient temp.
T_{min} 0 °C, T_{max} +60 °C



Plastic
PPSU

for tube OD	DN	Allow. OP [bar] at medium temp.			Kv-value water [l/min]	L1	L2	D1/D2	Sensor-type	Nominal resistance NTC at 25 °C Pt100 at 0 °C	R Tolerance	B value R25/85	B Tolerance	Sealant material	Type	Order number
		20 °C	100 °C	135 °C												
4	2.5	20	16	10	2.4	37.8	23.1	13.9	NTC	47 kOhm	± 1 %	3720 K	± 1 %	FKM	ITS-958P3-4FF-X04-NTC47	390443
4	2.5	20	16	10	2.4	37.8	23.1	13.9	NTC	47 kOhm	± 1 %	3720 K	± 1 %	EPDM peroxid curved	ITS-958P3-4PF-X04-NTC47	390445
6	4	20	16	10	8.1	38.6	23.1	13.9	NTC	47 kOhm	± 1 %	3720 K	± 1 %	FKM	ITS-958P3-6FF-X04-NTC47	390444
6	4	20	16	10	8.1	38.6	23.1	13.9	NTC	47 kOhm	± 1 %	3720 K	± 1 %	EPDM peroxid curved	ITS-958P3-6PF-X04-NTC47	390446
8	6	20	16	10	25	44.8	23.5	17.2	NTC	47 kOhm	± 1 %	3720 K	± 1 %	FKM	ITS-958P3-8FF-X04-NTC47	390441
8	6	20	16	10	25	44.8	23.5	17.2	NTC	47 kOhm	± 1 %	3720 K	± 1 %	EPDM peroxid curved	ITS-958P3-8PF-X04-NTC47	390442
4	2.5	20	16	10	2.4	37.8	23.1	13.9	PT	100 Ohm	Kl. B	-	-	FKM	ITS-958P3-4FF-X04-PT100	390457
4	2.5	20	16	10	2.4	37.8	23.1	13.9	PT	100 Ohm	Kl. B	-	-	EPDM peroxid curved	ITS-958P3-4PF-X04-PT100	390460
6	4	20	16	10	8.1	38.6	23.1	13.9	PT	100 Ohm	Kl. B	-	-	FKM	ITS-958P3-6FF-X04-PT100	390456
6	4	20	16	10	8.1	38.6	23.1	13.9	PT	100 Ohm	Kl. B	-	-	EPDM peroxid curved	ITS-958P3-6PF-X04-PT100	390458
8	6	20	16	10	25	44.8	23.5	17.2	PT	100 Ohm	Kl. B	-	-	FKM	ITS-958P3-8FF-X04-PT100	390461
8	6	20	16	10	25	44.8	23.5	17.2	PT	100 Ohm	Kl. B	-	-	EPDM peroxid curved	ITS-958P3-8PF-X04-PT100	390462

Illustration



Characteristic Curve -10 °C to +120 °C 0 kΩ to 250 kΩ

