

TECHNICAL DATA SHEET

PMAFIX IP68 - NVNZ-P/P - Strain relief fitting

Straight, PG thread

PMA



IP68, metal thread strain relief fitting for flexible non-metallic conduit



Applications:

- In railway vehicle and heavy machine construction
- For separation of damp and dry areas

Features & Benefits:

- Very high impact resistance
- With integrated strain relief for optimal ingress protection at the cable (up to IP68 / 10 bar)
- High thread and system connection strength
- Vibration-resistant connection to PMA conduits
- Easy assembly
- High conduit pull-out strength
- Very good chemical properties
- Fits both conduit profiles - fine (T) and coarse (G)

Ingress protection:

- IP66, IP68 & IP69 (EN/IEC 60529)
- IP68 (up to 10 bar at the cable)
- IP69, 100 bar with Water impact protection (WPS-ring)

Materials:

- Fitting body: high-grade, specially formulated polyamide 6
- Thread: nickel-plated brass
- Sealing insert: TPE-V

Compatible with:

- PMAFLEX Pro Conduits
- PMAFLEX Multilayer Conduits
- PMAFLEX Conduits
- PMA Smart Line Conduits

Conforms to:

- EN 45545-2 HL3 (R22 & R23)
- NFPA 130
- UL 94 (V0)

Weathering resistance:

- Very good UV resistance and weathering characteristics

Colour:

- Black

Chemical properties:

- Please refer to www.pma.ch (Technical Information / Chemical Resistance)

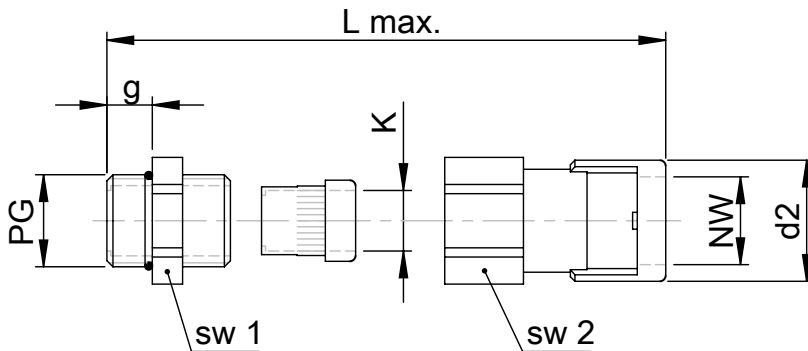
Environmental properties:

- Free from halogens and cadmium
- RoHS and REACH compliant

Product selection:

Part no.			Thread size	Conduit size	Cable clamping range in mm	Dimensions in mm (nom.)				Weight	Packing unit
System S (black)	System R (black)	Sealing insert	PG	NW	K	g	L	SW1	SW2	kg/100pcs	pcs/PU
NVNZ-P090S/P1	NVNZ-P090R/P	E150p7	9	10	4.0 - 6.5	6.0	49.5	17	21	2.5	50
NVNZ-P090S/P3		E150p9	9	10	6.5 - 9.5	6.0	49.5	17	21	2.5	50
NVNZ-P110S/P1	NVNZ-P110R/P	E151p7	11	10	4.0 - 6.5	6.0	52.0	20	24	3.3	50
NVNZ-P110S/P3		E151p9	11	10	6.5 - 9.5	6.0	52.0	20	24	3.3	50
NVNZ-P112S/P1	NVNZ-P112R/P	E151p7	11	12	4.0 - 6.5	6.0	53.5	20	24	3.5	50
NVNZ-P112S/P3		E151p9	11	12	6.5 - 9.5	6.0	53.5	20	24	3.5	50
NVNZ-P112S/P4		E151p11	11	12	7.0 - 10.5	6.0	53.5	20	24	3.5	50
NVNZ-P137S/P4	NVNZ-P137R/P	E152p11	13.5	17	7.0 - 10.5	6.5	60.0	22	28	4.3	50
NVNZ-P160S/P1	NVNZ-P160R/P	E151p7	16	10	4.0 - 6.5	6.5	52.5	24	24	4.7	50
NVNZ-P167S/P3	NVNZ-P167R/P	E153p9	16	17	6.5 - 9.5	6.5	61.0	24	28	5.1	50
NVNZ-P167S/P4		E153p11	16	17	7.0 - 10.5	6.5	61.0	24	28	5.1	50
NVNZ-P167S/P5		E153p13	16	17	9.0 - 13.0	6.5	61.0	24	28	5.1	50
NVNZ-P167S/P6		E153p16	16	17	11.5 - 15.5	6.5	61.0	24	28	5.1	50
NVNZ-P213S/P1	NVNZ-P213R/P	E154p11	21	23	7.0 - 10.5	7.0	72.0	30	36	8.4	30
NVNZ-P213S/P3		E154p16	21	23	11.5 - 15.5	7.0	72.0	30	36	8.4	30
NVNZ-P213S/P4		E154p18	21	23	14.0 - 18.0	7.0	72.0	30	36	8.4	30
NVNZ-P213S/P5	*NVNZ-P213R1/P	E154p20	21	23	17.0 - 20.5	7.0	72.0	30	36	8.4	30
NVNZ-P299S/P3	NVNZ-P299R/P	E155p20	29	29	17.0 - 20.5	8.0	73.5	40	43	13.9	20
NVNZ-P299S/P4		E155p25	29	29	20.0 - 25.0	8.0	73.5	40	43	13.9	20
NVNZ-P299S/P5		E155p28	29	29	24.0 - 28.0	8.0	73.5	40	43	13.9	20
NVNZ-P366S/P1	NVNZ-P366R/P	E156p32	36	36	27.0 - 32.0	9.0	88.0	50	55	19.1	20
NVNZ-P366S/P2		E156p34	36	36	29.0 - 34.0	9.0	88.0	50	55	19.1	20
NVNZ-P366S/P3		E156p36	36	36	32.0 - 36.0	9.0	88.0	50	55	19.1	20
NVNZ-P488S/P1	NVNZ-P488R/P	E158pm1x35	48	48	32.0 - 35.0	10.0	90.5	64	70	35.1	10
NVNZ-P488S/P2		E158p44	48	48	39.0 - 44.0	10.0	90.5	64	70	35.1	10

* R1 version has to be used in combination with multiple sealing inserts.
 IP68GT available. Please replace „S“ or „R“ with GT (e.g. NVNZ-P090GT/P1) (See PMA Info 25 for further details of IP68GT fittings)
 Our customer service dept. or local distribution partner will be pleased to help you concerning product availability and lead time

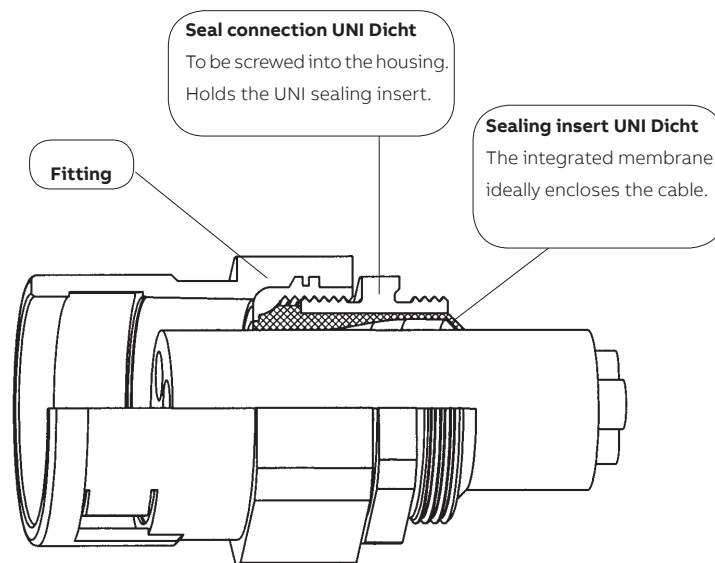


Sealing system

Graduation of the clamping area in the UNI sealing system achieves optimal transfer of the clamping force to the cables. Distribution of the pressure through the sealing insert avoids damage to the cables. At the same time optimal sealing and strain relief are provided. Even when not completely tightened the sealing insert membrane offers sealing to IP54.

Temperature range sealing insert Pflitsch: – 40 ... + 135 °C

If several conductors are used with the connector multiple sealing inserts should be considered.



Mechanical Properties:	Value:	Test parameters:	Test method:
Tensile modulus	1'200 ... 3'700 N/mm ²		ISO 527
Tensile strength	45 ... 65 N/mm ²		ISO 527
Notched bar impact test	4 ... 20 kJ/m ²		ISO 180/1C
Vibration and shock standard	Cat. 2		IEC 61373, IEC 60068-2-27 / -64

Thermal properties:	Value:	Test parameters:	Test method:
Continuous application temperature	-50 ... +105°C		PMA DO 9.21-4510
Upper application temperature	+120°C	(20'000 h)	PMA DO 9.21-4360
Short-term	+160°C	(168 h)	PMA DO 9.21-4360

Fire safety properties:	Value:	Test parameters:	Test method:
Fire performance	non flame-propagating		IEC EN 61386-1
Flame class	V0		UL 94
Fire hazard level	HL3		EN 45545-2 (R22)
Oxygen index	> 32 %		EN ISO 4589-2
Smoke density	< 150 Ds max.		EN ISO 5659-2 (25 kW/m ²)
Toxicity	< 0.75 CIT _{NLP}		NF X 70-100-1/-2: (600°C)
Fire hazard level	HL3		EN 45545-2 (R23)
Oxygen index	> 32 %		EN ISO 4589-2
Smoke density	< 300 Ds max.		EN ISO 5659-2 (25 kW/m ²)
Toxicity	< 1.5 CIT _{NLP}		NF X 70-100-1/-2: (600°C)
Fire performance NFPA 130:			NFPA 130
- Flammability	compliant		ASTM E 162
- Smoke density	compliant		ASTM E 662
Heat and visible smoke	26.00 MJ/kg		ASTM E 1354
Smoke emission toxicity	compliant		Bombardier SMP 800-C
Smoke emission toxicity	compliant		Boeing BSS 7239

Note: Fire safety properties only applicable for PMA raw material

Content of delivery:

- System S: Fitting with conduit locking clip (OVN2)
- Conduit gasket (NVN3)
- Pflitsch double thread element with pre-installed O-ring (OR)
- Pflitsch sealing insert

- System R: Fitting with conduit locking clip (OVN2)
- Conduit gasket (NVN3)
- Pflitsch double thread element with pre-installed O-ring (OR)

Assembly instructions:

- Please consider the appropriate assembly instructions on www.pma.ch

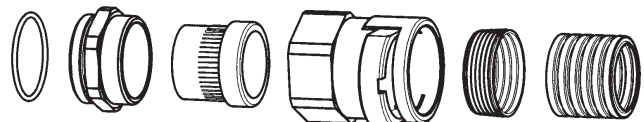


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