

Manufacturer:
PMA AG
(PART OF ABB GROUP)

Issue : 1
Valid From : 10-07-2015

Insulated Flexible Conduits, Mating Glands and Accessories.

Product Description

- i) Flexible Insulating Conduits, Standard and Divisible, with a dielectric withstand of 3.5kV, in accordance with NR/L2/SIGELP/27421 Issue 1, Product Specification – Flexible Conduits for Class II Based Signalling Power Distribution Systems.
- ii) Conduit Glands in accordance with NR/L2/SIGELP/27422 Issue 1, Product Specification – Cable Glands for use in Class II Based Signalling Power Distribution Systems.

The product range comprises:

- Standard flexible insulating conduits;
- Divisible (split) flexible insulating conduits;
- Mating Glands (Straight, 90° and 45°);
- System supports (clips and clamps);
- Fibre washers

Product Image



Scope of Acceptance

Full Acceptance

Insulating conduit system with a minimum dielectric strength of 3.5kV. For use in new and upgraded Signalling Power Distribution Systems in accordance with NR/L2/SIGELP/27410 Issue 2.

Refer to Users Conditions for further information and constraints of use.

Network Rail Acceptance Panel (NRAP) hereby authorises the product above for use and trial use on railway infrastructure for which Network Rail is the Infrastructure Manager.

Authorised by:

Vanessa Cumine
Product Acceptance Specialist

Alex Buchinger
Head of Power Distribution HV/LV (Acting)

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Specific Conditions

The following Conditions are specific to the approved product/s contained within this Certificate. These conditions must be adhered to in addition to the Network Rail General Conditions contained within the "General Terms and Conditions" section. Failure to adhere to these conditions may result in the withdrawal or suspension of Acceptance of some, or all of the items contained within the accepted configuration.

User


- 1) Insulating flexible conduits, glands and accessories are suitable for providing mechanical protection and supplementary insulation to existing legacy cabling in accordance with NR/L2/SIGELP/27410 Issue 2
- 2) A Class II installation is satisfied if the Insulating flexible conduits, glands and accessories are installed with other system components in accordance with NR/L2/SIGELP/27410 Issue 2. The use of Insulating flexible conduits, glands and accessories alone in a Class I installation does **not** provide a protective measure.
- 3) **Not** to be used in subsurface environments in accordance with section 12 stations and locations.
- 4) Insulating flexible conduits, glands and accessories are suitable for installation in marine/aggressive areas.
- 5) Insulating flexible conduits, glands and accessories are non-repairable and **shall** be fully replaced in the event of damage.
- 6) On installation, standard and divisible Conduits **shall** be sealed at all entry points via product approved glands or appropriate product approved conduit sealing accessories.
- 7) Conduits and Glands have a dielectric strength of 3.5kV and are suitable as supplementary insulating protection for cabling in accordance with NR/L2/SIGELP/27410 Issue 2.

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Product Configuration

Divisible (Split) Conduits – Suitable for enclosing cabling within FSP Switchgear Assemblies in accordance with NR/L2/SIGELP/27409 Issue 2.



Part No.	Description	Image	Catalogue No.
PACOF-17B	50M of Black Polyamide Flexible Conduit Metric 20mm (NW17)		091/099153
PACOF-23B	50M of Black Polyamide Flexible Conduit Metric 25mm (NW23)		091/099154
PACOF-29B	50M of Black Polyamide Flexible Conduit Metric 32mm (NW29)		091/099155
PACOF-36B	30M of Black Polyamide Flexible Conduit Metric 40mm (NW36)		091/099156
PACOF-48B	30M of Black Polyamide Flexible Conduit Metric 50mm (NW48)		091/099157
PACOF-70B	10M of Black Polyamide Flexible Conduit Metric 80mm (NW70)		091/041214

Heavy Duty Standard Conduits – Suitable for enclosing cabling in FSP Switchgear Assemblies in accordance with NR/L2/SIGELP/27409 Issue 2.

Part No.	Description	Image	Catalogue No.
XVCS1H-17BG	50M of Black Multi-Layer, Polyamide Flexible Conduit Course Profile, Metric 20mm (NW17)		091/099158
XVCS1H-23BG	50M of Black Multi-Layer, Polyamide Flexible Conduit Course Profile, Metric 25mm (NW23)		091/099159
XVCS1H-29BG	50M of Black Multi-Layer, Polyamide Flexible Conduit Course Profile, Metric 32mm (NW29)		091/099160
XVCS1H-36BG	30M of Black Multi-Layer, Polyamide Flexible Conduit Course Profile, Metric 40mm (NW36)		091/099161
XVCS1H-48BG	30M of Black Multi-Layer Polyamide Flexible Conduit Course profile, Metric 50mm (NW48)		091/099162
PCSG-17XO	50M of Orange, Polyamide Very Flexible Conduit, Metric 20mm (NW17)		
PCSG-23XO	50M of Orange, Polyamide Very Flexible Conduit, Metric 25mm (NW23)	091/041216	
PCSG-29XO	50M of Orange, Polyamide Very Flexible Conduit, Metric 32mm (NW29)	091/041217	
PCSG-36XO	30M of Orange, Polyamide Very Flexible Conduit, Metric 40mm (NW36)	091/041218	
PCSG-48XO	50M of Orange, Polyamide Very Flexible Conduit, Metric 50mm (NW48)	091/041219	

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Part No.	Description	Image	Catalogue No.
VCSG-17B	Heavy Duty Black Flexible Conduit, Course Profile, NW 17, 20mm		091/041220
VCSG-23B	Heavy Duty Black Flexible Conduit, Course Profile, NW 23, 25mm		091/041221
VCSG-29B	Heavy Duty Black Flexible Conduit, Course Profile, NW 29, 32mm		091/041222
VCSG-36B	Heavy Duty Black Flexible Conduit, Course Profile, NW 36, 40mm		091/041223
VCSG-48B	Heavy Duty Black Flexible Conduit, Course Profile, NW 48, 50mm		091/041224
VCSG-56B	Heavy Duty Black Flexible Conduit, Course Profile, NW 56, 68mm		091/041225
VCSG-70B	Heavy Duty Black Flexible Conduit, Course Profile, NW 70, 80mm		091/041226
VCSG-95B	Heavy Duty Black Flexible Conduit, Course Profile, NW 95, 106mm		091/041227
VCSG-17S	Heavy Duty Grey Flexible Conduit, Course Profile, NW 17, 20mm		
VCSG-23S	Heavy Duty Grey Flexible Conduit, Course Profile, NW 23, 25mm	091/041229	
VCSG-29S	Heavy Duty Grey Flexible Conduit, Course Profile, NW 29, 32mm	091/041230	
VCSG-36S	Heavy Duty Grey Flexible Conduit, Course Profile, NW 36, 40mm	091/041231	
VCSG-48S	Heavy Duty Grey Flexible Conduit, Course Profile, NW 48, 50mm	091/041232	
VCSG-56S	Heavy Duty Grey Flexible Conduit, Course Profile, NW 56, 68mm	091/041233	
VCSG-70S	Heavy Duty Grey Flexible Conduit, Course Profile, NW 70, 80mm	091/041234	
VCSG-95S	Heavy Duty Grey Flexible Conduit, Course Profile, NW 95, 106mm	091/041235	

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Straight Conduit Connectors – Suitable for use with standard and divisible conduits where cable strain relief is not required.

Connector pack includes: Gland, Conduit retaining clip and Locknut.

Part No.	Description	Image	Catalogue No.
BVNV-M207	50 off Straight IP68 Black Polyamide Conduit Gland M20x1.5mm (NW17)		091/099163
BVNV-M203	50 off Straight IP68 Black Polyamide Conduit Gland M20x1.5mm (NW23)		091/041236
BVNV-M257	50 off Straight IP68 Black Polyamide Conduit Gland M25x1.5mm (NW17)		091/041237
BVNV-M253	30 off Straight IP68 Black Polyamide Conduit Gland M25x1.5mm (NW23)		091/099164
BVNV-M323	30 off Straight IP68 Black Polyamide Conduit Gland M32x1.5mm (NW23)		091/041238
BVNV-M329	20 off Straight IP68 Black Polyamide Conduit Gland M32x1.5mm (NW29)		091/099165
BVNV-M409	20 off Straight IP68 Black Polyamide Conduit Gland M40x1.5mm (NW29)		091/041239
BVNV-M406	20 off Straight IP68 Black Polyamide Conduit Gland M40x1.5mm (NW36)		091/099166
BVNV-M506	20 off Straight IP68 Black Polyamide Conduit Gland M50x1.5mm (NW36)		091/041240
BVNV-M508	10 off Straight IP68 Black Polyamide Conduit Gland M50x1.5mm (NW48)		091/099167
BVNV-M638	10 off Straight IP68 Black Polyamide Conduit Gland M63x1.5mm (NW48)		091/041241
SVNV-M207	50 off Straight IP68 Grey Polyamide Conduit Gland M20x1.5mm (NW17)		
SVNV-M203	50 off Straight IP68 Grey Polyamide Conduit Gland M20x1.5mm (NW23)	091/041243	
SVNV-M257	50 off Straight IP68 Grey Polyamide Conduit Gland M25x1.5mm (NW17)	091/041244	
SVNV-M253	30 off Straight IP68 Grey Polyamide Conduit Gland M25x1.5mm (NW23)	091/041245	
SVNV-M323	30 off Straight IP68 Grey Polyamide Conduit Gland M32x1.5mm (NW23)	091/041246	
SVNV-M329	20 off Straight IP68 Grey Polyamide Conduit Gland M32x1.5mm (NW29)	091/041247	
SVNV-M409	20 off Straight IP68 Grey Polyamide Conduit Gland M40x1.5mm (NW29)	091/041248	
SVNV-M406	20 off Straight IP68 Grey Polyamide Conduit Gland M40x1.5mm (NW36)	091/041249	
SVNV-M506	20 off Straight IP68 Grey Polyamide Conduit Gland M50x1.5mm (NW36)	091/041250	
SVNV-M508	10 off Straight IP68 Grey Polyamide Conduit Gland M50x1.5mm (NW48)	091/041251	
SVNV-M638	10 off Straight IP68 Grey Polyamide Conduit Gland M63x1.5mm (NW48)	091/041252	



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90° Elbow Conduit Connectors – Suitable for use with standard and divisible conduits where cable strain relief is not required.



Connector pack includes: Gland, Conduit retaining clip and Locknut.

Part No.	Description	Image	Catalogue No.
BVWV-M207	50 off 90° IP68 Black Polyamide Conduit Elbow Gland M20x1.5mm (NW17)		091/041253
BVWV-M253	30 off 90° IP68 Black Polyamide Conduit Elbow Gland M25x1.5mm (NW23)		091/041254
BVWV-M329	20 off 90° IP68 Black Polyamide Conduit Elbow Gland M32x1.5mm (NW29)		091/041255
BVWV-M406	20 off 90° IP68 Black Polyamide Conduit Elbow Gland M40x1.5mm (NW36)		091/041256
BVWV-M508	10 off 90° IP68 Black Polyamide Conduit Elbow Gland M50x1.5mm (NW48)		091/041257
SVWV-M207	50 off 90° IP68 Grey Polyamide Conduit Elbow Gland M20x1.5mm (NW17)		091/041258
SVWV-M253	30 off 90° IP68 Grey Polyamide Conduit Elbow Gland M25x1.5mm (NW23)		091/041259
SVWV-M329	20 off 90° IP68 Grey Polyamide Conduit Elbow Gland M32x1.5mm (NW29)		091/041260
SVWV-M406	20 off 90° IP68 Grey Polyamide Conduit Elbow Gland M40x1.5mm (NW36)		091/041261
SVWV-M508	10 off 90° IP68 Grey Polyamide Conduit Elbow Gland M50x1.5mm (NW48)		091/041262

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BVBV-M207	50 off 90° IP68 Black Polyamide Conduit Curved Elbow Gland M20x1.5mm (NW17)		091/041263
BVBV-M257	50 off 90° IP68 Black Polyamide Conduit Curved Elbow Gland M25x1.5mm (NW17)		091/041264
BVBV-M253	30 off 90° IP68 Black Polyamide Conduit Curved Elbow Gland M25x1.5mm (NW23)		091/041265
BVBV-M323	30 off 90° IP68 Black Polyamide Conduit Curved Elbow Gland M32x1.5mm (NW23)		091/041266
BVBV-M329	20 off 90° IP68 Black Polyamide Conduit Curved Elbow Gland M32x1.5mm (NW29)		091/041267
BVBV-M409	20 off 90° IP68 Black Polyamide Conduit Curved Elbow Gland M40x1.5mm (NW29)		091/041268
BVBV-M406	20 off 90° IP68 Black Polyamide Conduit Curved Elbow Gland M40x1.5mm (NW36)		091/041269
BVBV-M506	20 off 90° IP68 Black Polyamide Conduit Curved Elbow Gland M50x1.5mm (NW36)		091/041270
BVBV-M508	10 off 90° IP68 Black Polyamide Conduit Curved Elbow Gland M50x1.5mm (NW48)		091/041271
BVBV-M638	10 off 90° IP68 Black Polyamide Conduit Curved Elbow Gland M63x1.5mm (NW48)		091/041272
SVBV-M207	50 off 90° IP68 Grey Polyamide Conduit Curved Elbow Gland M20x1.5mm (NW17)		091/041273
SVBV-M257	50 off 90° IP68 Grey Polyamide Conduit Curved Elbow Gland M25x1.5mm (NW17)		091/041274
SVBV-M253	30 off 90° IP68 Grey Polyamide Conduit Curved Elbow Gland M25x1.5mm (NW23)		091/041275
SVBV-M323	30 off 90° IP68 Grey Polyamide Conduit Curved Elbow Gland M32x1.5mm (NW23)		091/041276
SVBV-M329	20 off 90° IP68 Grey Polyamide Conduit Curved Elbow Gland M32x1.5mm (NW29)		091/041278
SVBV-M409	20 off 90° IP68 Grey Polyamide Conduit Curved Elbow Gland M40x1.5mm (NW29)		091/041279
SVBV-M406	20 off 90° IP68 Grey Polyamide Conduit Curved Elbow Gland M40x1.5mm (NW36)		091/041280
SVBV-M506	20 off 90° IP68 Grey Polyamide Conduit Curved Elbow Gland M50x1.5mm (NW36)		091/041281
SVBV-M508	10 off 90° IP68 Grey Polyamide Conduit Curved Elbow Gland M50x1.5mm (NW48)		091/041282
SVBV-M638	10 off 90° IP68 Grey Polyamide Conduit Curved Elbow Gland M63x1.5mm (NW48)		091/041283

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45° Elbow Conduit Connectors – Suitable for use with standard and divisible conduits where cable strain relief is not required.

Connector pack includes: Gland, Conduit retaining clip and Locknut.

Part No.	Description	Image	Catalogue No.	
BVAV-M207	50 off 45° IP68 Black Polyamide Conduit Curved Elbow Gland M20x1.5mm (NW17)		091/041284	
BVAV-M253	30 off 45° IP68 Black Polyamide Conduit Curved Elbow Gland M25x1.5mm (NW23)		091/041285	
BVAV-M329	20 off 45° IP68 Black Polyamide Conduit Curved Elbow Gland M32x1.5mm (NW29)		091/041286	
BVAV-M406	20 off 45° IP68 Black Polyamide Conduit Curved Elbow Gland M40x1.5mm (NW36)		091/041287	
BVAV-M506	20 off 45° IP68 Black Polyamide Conduit Curved Elbow Gland M50x1.5mm (NW36)		091/041288	
BVAV-M508	10 off 45° IP68 Black Polyamide Conduit Curved Elbow Gland M50x1.5mm (NW48)		091/041289	
BVAV-M638	10 off 45° IP68 Black Polyamide Conduit Curved Elbow Gland M63x1.5mm (NW48)		091/041290	
SVAV-M207	50 off 45° IP68 Grey Polyamide Conduit Curved Elbow Gland M20x1.5mm (NW17)			091/041291
SVAV-M253	30 off 45° IP68 Grey Polyamide Conduit Curved Elbow Gland M25x1.5mm (NW23)			091/041292
SVAV-M329	20 off 45° IP68 Grey Polyamide Conduit Curved Elbow Gland M32x1.5mm (NW29)			091/041293
SVAV-M406	20 off 45° IP68 Grey Polyamide Conduit Curved Elbow Gland M40x1.5mm (NW36)	091/041294		
SVAV-M506	20 off 45° IP68 Grey Polyamide Conduit Curved Elbow Gland M50x1.5mm (NW36)	091/041295		
SVAV-M508	10 off 45° IP68 Grey Polyamide Conduit Curved Elbow Gland M50x1.5mm (NW48)	091/041296		
SVAV-M638	10 off 45° IP68 Grey Polyamide Conduit Curved Elbow Gland M63x1.5mm (NW48)	091/041297		



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Straight Conduit Connectors with Integral Strain Relief Suitable for use with standard and divisible conduits where cable strain relief required.

Connector pack includes: Gland, Conduit retaining clip and Locknut

Part No.	Description	Image	Catalogue No.
BVNZ-M207S	50 off Straight IP68 Black Polyamide Conduit Gland M20x1.5mm (NW17) 10-14mm cable		091/099168
BVNZ-M253S	30 off Straight IP68 Black Polyamide Conduit Gland M25x1.5mm (NW23) 13-18mm cable		091/099169
BVNZ-M329S	20 off Straight IP68 Black Polyamide Conduit Gland M32x1.5mm (NW29) 18-25mm cable		091/099170
BVNZ-M406S	20 off Straight IP68 Black Polyamide Conduit Gland M40x1.5mm (NW36) 22-32mm cable		091/099171
BVNZ-M508S	10 off Straight IP68 Black Polyamide Conduit Gland M50x1.5mm (NW48) 30-38mm cable		091/099172
BVNZ-M638S	10 off Straight IP68 Black Polyamide Conduit Gland M63x1.5mm (NW48) 34-44mm cable		091/041299
SVNZ-M207S	50 off Straight IP68 Grey Polyamide Conduit Gland M20x1.5mm (NW17) 10-14mm cable		091/041300
SVNZ-M253S	30 off Straight IP68 Grey Polyamide Conduit Gland M25x1.5mm (NW23) 13-18mm cable		091/041301
SVNZ-M329S	20 off Straight IP68 Grey Polyamide Conduit Gland M32x1.5mm (NW29) 18-25mm cable		091/041302
SVNZ-M406S	20 off Straight IP68 Grey Polyamide Conduit Gland M40x1.5mm (NW36) 22-32mm cable		091/041303
SVNZ-M508S	10 off Straight IP68 Grey Polyamide Conduit Gland M50x1.5mm (NW48) 30-38mm cable		091/041304
SVNZ-M638S	10 off Straight IP68 Grey Polyamide Conduit Gland M63x1.5mm (NW48) 34-44mm cable		091/041305

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Installation Accessories – Suitable for conduit system mechanical support


Part No.	Description	Image	Catalogue No.
BGPS-17	30 off System support, Black one piece stackable Metric 20mm (NW17)		091/099173
BGPS-23	30 off System support, Black one piece stackable Metric 25mm (NW23)		091/099174
BGPS-29	30 off System support, Black one piece stackable Metric 32mm (NW29)		091/099175
BGPS-36	20 off System support, Black one piece stackable Metric 40mm (NW36)		091/099176
BGPS-48	10 off System support, Black one piece stackable Metric 50mm (NW48)		091/099177
BGPS-56	10 off System support, Black one piece stackable Metric 68mm (NW56)		
BFH-17-0	100 off System support, Black one piece with safety lid. Metric 20mm (NW17)		091/099178
BFH-23-0	100 off System support, Black one piece with safety lid. Metric 25mm (NW23)		091/099179
BFH-29-0	100 off System support, Black one piece with safety lid. Metric 32mm (NW29)		091/099180
BFH-36-0	50 off System support, Black one piece with safety lid. Metric 40mm (NW36)		091/099181
BFH-48-0	50 off System support, Black one piece with safety lid. Metric 50mm (NW48)		091/099182
SFH-17-0	100 off System support, Grey one piece with safety lid. Metric 20mm (NW17)		
SFH-23-0	100 off System support, Grey one piece with safety lid. Metric 25mm (NW23)	091/041308	
SFH-29-0	100 off System support, Grey one piece with safety lid. Metric 32mm (NW29)	091/041309	
SFH-36-0	50 off System support, Grey one piece with safety lid. Metric 40mm (NW36)	091/041310	
SFH-48-0	50 off System support, Grey one piece with safety lid. Metric 50mm (NW48)	091/041311	
BGH-23	50 off Tube clamp, Black one piece Metric 25mm (NW23)		
BGH-29	50 off Tube clamp, Black one piece Metric 32mm (NW29)		091/099184
BGH-36	50 off Tube clamp, Black one piece Metric 40mm (NW36)		091/0991885
BGH-48	50 off Tube clamp, Black one piece Metric 50mm (NW48)		091/099186
BGH-56	10 off Tube clamp, Black one piece Metric 68mm (NW56)		091/041312
BGH-70	10 off Tube clamp, Black one piece Metric 80mm (NW70)		091/041313
BGH-95	10 off Tube clamp, Black one piece Metric 106mm (NW95)		091/041314

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SGH-23	50 off Tube clamp, Grey one piece Metric 25mm (NW23)		091/041315
SGH-29	50 off Tube clamp, Grey one piece Metric 32mm (NW29)		091/041316
SGH-36	50 off Tube clamp, Grey one piece Metric 40mm (NW36)		091/041317
SGH-48	50 off Tube clamp, Grey one piece Metric 50mm (NW48)		091/041318
SGH-56	10 off Tube clamp, Grey one piece Metric 63mm (NW56)		091/041319
SGH-70	10 off Tube clamp, Grey one piece Metric 80mm (NW70)		091/041320
SGH-95	10 off Tube clamp, Grey one piece Metric 95mm (NW48)		091/041321

Metric Flat Sealing Washer – Suitable for IP68 sealing of conduit fittings with polyamide threads.

Part No.	Description	Image	Catalogue No.
SVN4-M20	50 off Sealing Washer, Gland to Equipment . M20 thread, AD 27mm		091/041322
SVN4-M20/02	50 off Sealing Washer, Gland to Equipment . M20 thread, AD 33mm		091/041323
SVN4-M25	30 off Sealing Washer, Gland to Equipment . M25 thread, AD 35mm		091/041324
SVN4-M25/01	30 off Sealing Washer, Gland to Equipment . M25 thread, AD 31mm		091/041325
SVN4-M25/02	30 off Sealing Washer, Gland to Equipment . M25 thread, AD 39mm		091/041326
SVN4-M32	20 off Sealing Washer, Gland to Equipment . M32 thread, AD 43mm		091/041327
SVN4-M32/02	20 off Sealing Washer, Gland to Equipment . M32 thread, AD 49mm		091/041328
SVN4-M40	20 off Sealing Washer, Gland to Equipment . M40 thread, AD 55mm		091/041329
SVN4-M40/01	20 off Sealing Washer, Gland to Equipment . M40 thread, AD 51mm		091/041330
SVN4-M40/02	20 off Sealing Washer, Gland to Equipment . M40 thread, AD 64mm		091/041331
SVN4-M50	10 off Sealing Washer, Gland to Equipment . M50 thread, AD 69mm		091/041332
SVN4-M50/01	10 off Sealing Washer, Gland to Equipment . M50 thread, AD 59mm		091/041333
SVN4-M50/02	10 off Sealing Washer, Gland to Equipment . M50 thread, AD 74mm		091/041334
SVN4-M63	10 off Sealing Washer, Gland to Equipment . M63 thread, AD 75mm		091/041335

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Assessed Documentation

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
Doc 1 Weathering Resistance ASTM 2569	Resistance of PMA Products to Weathering (including UV and Rain).	27/04/2011	22/06/2015	1
Doc 2 Polyamide Resistance to Ozone Exposure	Polyamide Resistance Against Ozone	11/06/2006 AG	22/06/2015	1
Doc 3-22002	Technical Datasheet VNV PMAFIX	01.09.2012/YS	22/06/2015	1
Doc 4-25002	Technical Datasheet VNZ PMAFIX	23.01.2015/BF	22/06/2015	1
Doc 5-109200	Technical Datasheet PACOF PMA Divisible System	30.10.2013/YS	22/06/2015	1
Doc 6-160100	Technical Datasheet XVCS1H PMA FLEX	01.09.2012/YS	22/06/2015	1
Doc 8-Cable Protection_Test_Criteria	Cable Protection Test Criteria	28.08.2006/AL	22/06/2015	1
Doc 9-CE Marking Explanation	CE Marking of PMA Cable Protection Products	16.03.2015	22/06/2015	1
Doc 10-Compliance with Reg EC 2037 2000 Directive 76 769 EEC	Compliance with EU regulations and directives	March 2005	22/06/2015	1
Doc 11-Conflict Mineral Compliance_Declaration	Conflict Minerals Compliance (Dodd-Frank Act).	16.03.2015	22/06/2015	1
Doc 12- Damage caused by Rodents	Resistance of PMA Products to Damage caused by Rodents.	Sept 2007	22/06/2015	1
Doc 13- Dielectric_strength	Technical Information	DuPont 2002	22/06/2015	1
Doc 14 Electrical characteristics of Polyamide	What are the Electrical Characteristics of PMA polyamide products?	20.01.2011/AL	22/06/2015	1
Doc 15-EU Declaration Conformity	Declaration of Conformity	06.01.2014	22/06/2015	1
Doc 16-Flammability testing UL_94	Testing of plastic material according to UL 94	-	22/06/2015	1
Doc 17-Glow wire test	Glow Wire Test/IEC 60695-2-1/0,1,2,3	DuPont 2002	22/06/2015	1
Doc 18-Info_06	PMA Conduits and connectors in rail infrastructure applications, including tunnels	2.7.2014/AF	22/06/2015	1
Doc 19-Info_09	PMA Conduits, braids and connectors in applications to generate renewable energy	2.7.2014/AF	22/06/2015	1
Doc 20-Info_34	Chemical Resistance	04.03.2014/BF	22/06/2015	1
Doc 21-Ingress Protection – Conduits and Fittings	Ingress protection PMA conduits and fittings	27.07.2009/AL	22/06/2015	1

Manufacturer:
PMA AG
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Issue : 1

Valid From : 10-07-2015

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
Doc 22-ISO 9001 2008-466679 PMA certificate English 2013-09-02	Certificate ISO 9001:2008	22/06/2015	22/06/2015	1
Doc 23-ISO 9001 2008 466679 PMA certificate English Qnet 2013-09-02	IQ Net Certificate ISO 9001:2008	01.09.2016	22/06/2015	1
Doc 27-Oxygen_Index	Technical information – Oxygen index	DuPont 2002	22/06/2015	1
Doc 28-REACH Compliance	Responsibility for the registration of PMA products under the REACH system	09.01.2015	22/06/2015	1
Doc 29-RoHS Compliance	Use of critical substances according to the EU directive	20.03.2015	22/06/2015	1
Doc 30-Surface resistivity	Surface Resistivity	DuPont 2002	22/06/2015	1
Doc 31-Volume resistivity	Volume Resistivity	DuPont 2002	22/06/2015	1
Doc 32-Low Temperature Application	Low temperature application of plastic products	10.07.2006/AG	22/06/2015	1
Doc 33-Weathering Long Term Exposure of PMA Conduits	Long Term Exposure of PMA Conduits to Weathering	16.06.2008/AL	22/06/2015	1
Doc 34-Weathering on PA Conduits	Influence of weathering and sunlight (UV radiation) on Polyamide Conduits.	28.03.2007/AF	22/06/2015	1
Doc 35-40025	Technical Datasheet GPS PMA Accessories	30.04.2013/YS	22/06/2015	1
Doc 36-40001	Technical Datasheet FH-0 PMA CLIP	30.03.2006/YS	22/06/2015	1
Doc 37-60025	Technical Datasheet GH PMA Accessories	11.04.2011/YS	22/06/2015	1
Doc 39-Info_08	PMA Conduits and connectors in applications exposed to extreme temperatures and conditions	02.07.2014/AF	22/06/2015	1
Doc 40-Info_21	PMA Conduits, braids and connectors in telecommunications	02.07.2014/AF	22/06/2015	1
Doc 41-IEC 61386 PCS_VAM_VAML_VCS_PCSL_VCSSL_Conduits + Fittings	ElectroSuisse Certificate of Testing	23.04.2010	22/06/2015	1
Network Rail Requirements	Compliance Matrix	16.06.2015	22/06/2015	1
50013	Technical Datasheet SNV4 - Flat Gasket Metric	27.13	01/07/2015	1
22012	Technical Datasheet VBV – 90 degree Elbow	01.09.2012	01/07/2015	1
22035	Technical Datasheet VBV – 90 degree Curved Elbow	01.09.2012	01/07/2015	1
11021	Technical Datasheet PCS – Conduit Orange, Heavy Duty	01.04.2014	01/07/2015	1
100600	Technical Datasheet VCS – Conduit, Heavy Duty	07.10.2014	01/07/2015	1

Certificate of Acceptance

PA05/06425

Manufacturer:
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Issue : 1
Valid From : 10-07-2015

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
22022	Technical Datasheet VAV – 45 degree Curved Elbow	25.11.2 014	01/07/2015	1
Report (iLECYS Rail)	Dielectric Strength Tests on ABB – PMA Conduit	-	02/07/2015	1

Manuals and Training Materials

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
Doc 24-MONTANL 1 IP68	PMA IP68 Installation Instruction	12.13	22/06/2015	1
Doc 25-MONTANL 14 VNZ	PMA Nautic Fitting Installation Instruction	12.13	22/06/2015	1

Certificate History

Issue	Date	Issue History
1	30/06/2015	First accepted for use

Contact Details

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Manufacturer:
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General Terms & Conditions

1) General

- 1) This certificate can only be amended by Network Rail Technology Introduction Group. Any alterations made by a different person will invalidate the entire certificate.
- 2) Failure to abide by the requirements in this Certificate of Acceptance may invalidate the certificate, thereby restricting the right to operate the product and / or limiting the future supply and deployment of the product on the infrastructure.
- 3) Upon the review date this certificate and the product it relates to is invalid and not accepted for use. Manufacturers are to make an application for a review prior to the review date.

2) Manufacturer

The Manufacturer shall:

- 1) Ensure that all products supplied comply with the standards defined in the Acceptance Requirements or otherwise documented as part of the assessment, including meeting the reliability requirements included in the Acceptance Requirements and in any deed of warranty for the relevant certificate number.
- 2) Notify Network Rail Technology Introduction Group:
 - a. Within 48 hours, of any deficiencies affecting the quality, functionality or safety integrity of the product (including corrective action undertaken or proposed).
 - b. Of any intended change to the accepted product; changes include:
 - i. a change to the product configuration (to the actual product or its application);
 - ii. a variation to or addition of manufacturing locations or processes;
 - iii. a change in the name or ownership of the manufacturing company;
 - iv. any changes to the ability or intention to support with technical services, spares or repairs.
- 3) The Manufacturer shall provide Network Rail Technology Introduction Group at least 12 (twelve) months notice of its intention to discontinue supply or to provide such notice as is reasonable if such discontinuance is outside its control and will offer the opportunity of a Last Time Buy to Network Rail together with date for last order placement and supply of the parts affected. The introduction of proposed alternative products shall be communicated to the Network Rail Technology Introduction Group.
- 4) Provide further copies of operating and maintenance manuals to purchasers / users of the product as necessary (including certificates of conformance, calibration etc).
- 5) Provide further copies of training manuals and an appropriate level of training to purchasers or users of the product as necessary.
- 6) Where applicable, specialist technical support, repairs and servicing of the product shall be carried out by the Original Equipment Manufacturer (OEM) or authorised agent only.
- 7) Network Rail may request information from the manufacturer to prove product compliance with clauses 1 and 2 above and reserve the right to suspend and/or withdraw any application where information is not forthcoming within a reasonable timeframe.
- 8) In accordance with Network Rail's Quality Assurance Policy Statement 2011, where the specification and/or Product Acceptance Certificates specify quality assurance classifications (QA1 to QA5) for the products, the manufacturer shall comply with the specified level of quality assurance for each product and allow Network Rail access to carry out its quality assurance checks.
- 9) The manufacturer shall give Network Rail's representatives access at all reasonable times to its premises and allow them to inspect its quality systems and production methods and, if requested, to inspect, examine and test the products both during and after their manufacture and the materials being used in their manufacture.

3) Conditions of Use

Specifiers, installers, operators, maintainers, etc. using the product shall:

- 1) Comply with the certificate conditions. If a condition is not understood guidance must be sought from Network Rail Technology Introduction Group.
- 2) Check that the application of use complies with the relevant certificate's scope of acceptance.
- 3) Report any defect if it is a design or manufacturing fault likely to affect performance and/or the safe operation of the railway in writing to Network Rail Technology Introduction Group.
- 4) Inform Network Rail Technology Introduction Group in writing of a change to the product configuration (or to the actual product or its application).
- 5) Operate, maintain and service the product in accordance with Network Rail standards and Operation and Maintenance manuals as appropriate.
- 6) Be appropriately trained and authorised for the installation, maintenance and use of the product.
- 7) Only send products for repair or reconditioning to the Original Equipment Manufacturer (OEM) or authorised agent.
- 8) Users are to be aware that Product Acceptance is not a substitute for design approval.

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4) Compliance

Railways and Other Guided Systems (ROGS) Regulations

1) Where the product is to be used in areas where Network Rail is not the Infrastructure Manager (e.g. leased stations), the sponsor shall additionally obtain formal consent from the Infrastructure Manager for the locality where the equipment is to be installed. This may include a requirement for additional safety verification. The decision of that Infrastructure Manager is binding, and cannot be overridden by Network Rail except by the escalation processes established in the ROGS regulations

2) As required in Railway Group Standard GE/RT8270, at each use of this product the project or group responsible for installation and commissioning shall be required to demonstrate compatibility with:

- a. All rail vehicle types that have access rights over the area affected by the change
- b. Infrastructure managed by others
- c. Neighbours.

Railway Interoperability Regulations

3) For interoperable constituents of systems the project or group responsible for installation and commissioning shall be required to demonstrate compliance with the relevant Technical Specifications for Interoperability (TSI) where appropriate.

4) An authorisation from the national safety authority (i.e. the Railway Safety Directorate of the Office of Rail Regulation) is required before the equipment is to be used in revenue earning service.

5) Supply Chain Arrangements

1) Certificates of acceptance do not imply any particular quantity of supply nor any exclusivity of supply.

2) Products may be purchased by Network Rail or its agents, suppliers or contractors.

3) Manufacturers should note that it is not necessary to enter into any exclusive supply arrangements with resellers or other suppliers