

Installation Instructions for Redapt Stopping Plug Range

These installation instructions give guidance on selection of Redapt products and general instructions for safety and installation of chosen Redapt products. All Redapt products should only be used in applications and environments as detailed in these instructions and other Redapt literature.

Redapt will not take responsibility for any damage, injury or form of loss caused where products are not installed or used as detailed in these instructions. If in doubt, further advice can be obtained from our Technical Department.

Product Certification

| Series | CENELEC Certification | CSA / AEx Certification | Series | CENELEC Certification | CSA / AEx Certification |
|--------|--------------------------|-------------------------|--------|-----------------------|-------------------------|
| PD-U | I M2 II 2DG E Exde I/IIC | CL I, Div 1&2 ABCD | PD-E-4 | II 2DG E Exe II | CL I, Zone 1 EFG |
| PA-D | IM2 II 2DG E Exd I/IIC | CL I, Div 1&2 ABCD | PD-E | II 2DG E Exe II | CL I, Div 2 ABCD |
| PB-D | IM2 II 2DG E Exd I/IIC | CL I, Div 1&2 ABCD | PH-E | II 2DG E Exe II | CL I, Div 2 ABCD |

Product Information

| Series | Approval No. | Basic IP/CSA NEMA | Impact Resistance | Operating Temp |
|--------|-----------------|---------------------------|-------------------|-------------------|
| PD-U | Sira 00ATEX1094 | IP66-67-68 / 4, 4X, 6, 6P | 20 Nm | -50°C to +85°C |
| PA-D | Sira 99ATEX1113 | IP54 / 3 | 7 Nm | See Special Notes |
| PB-D | Sira 99ATEX1113 | IP54 / 3 | 7 Nm | See Special Notes |
| PD-E-4 | Sira 00ATEX3091 | IP66-67-68 / 4, 4X, 6, 6P | 7 Nm | -50°C to +85°C |
| PD-E | Sira 00ATEX3092 | IP66-67-68 / 4, 4X, 6, 6P | 7 Nm | -50°C to +85°C |
| PH-E | Sira 00ATEX3092 | IP54 / 3 | 7 Nm | See Special Notes |

Notes: Where an installation requires a higher level of Ingress Protection to be maintained than the basic IP rating for the product shown in the table above, this may be achieved by using IP washers or thread sealant.
For Aluminium EExd and EExde products refer to Special Notes before installation. Please contact Redapt for full details.

Certification and Material Variations for Standard Thread Sizes

| Product | | Certification | | Material | | Plating | | | |
|---------|------------------|---------------|--------|----------|------------------------|---------|-------------|---|--------------------|
| PD | Dome Headed Plug | U | E Exde | 1 | Brass | 0 | Unplated | 8 | Electroless Nickel |
| PA | Type A Plug | D | E Exd | 2 | Mild Steel | 1 | Nickel | | |
| PB | Type B Plug | E | E Exe | 3 | Stainless Steel | 2 | Zinc | | |
| PH | Hex Head Plug | | | 4 | 30% Glass Filled Nylon | 3 | Cadmium | | |
| | | | | 5 | Aluminium | 6 | Chromatised | | |

Standard Male and Female Thread Sizes

| | | | | | | | | | | | |
|----|---------|----|------------|----|------------|----|-------------|----|-------------|----|---|
| 03 | M16 | 18 | 3/4" ET | 34 | 2" NPT | 49 | 3" NPS | 64 | 4" BSPP | 80 | PG 9 |
| 04 | M20 | 19 | 1" ET | 35 | 2 1/2" NPT | 50 | 3 1/2" NPS | 67 | 3/8" BSPT | 81 | PG 11 |
| 05 | M25 | 20 | 1 1/4" ET | 36 | 3" NPT | 51 | 4" NPS | 68 | 1/2" BSPT | 82 | PG 13.5 |
| 06 | M32 | 21 | 1 1/2" ET | 37 | 3 1/2" NPT | 54 | 3/8" BSPP | 69 | 3/4" BSPT | 83 | PG 16 |
| 07 | M40 | 22 | 2" ET | 38 | 4" NPT | 55 | 1/2" BSPP | 70 | 1" BSPT | 84 | PG 21 |
| 08 | M50 | 23 | 2 1/2" ET | 41 | 3/8" NPS | 56 | 3/4" BSPP | 71 | 1 1/4" BSPT | 85 | PG 29 |
| 09 | M63 | 24 | 3" ET | 42 | 1/2" NPS | 57 | 1" BSPP | 72 | 1 1/2" BSPT | 86 | PG 36 |
| 10 | M75 | 25 | 3/8" NPT | 43 | 3/4" NPS | 58 | 1 1/4" BSPP | 73 | 2" BSPT | 87 | PG 42 |
| 11 | M80 | 29 | 1/2" NPT | 44 | 1" NPS | 59 | 1 1/2" BSPP | 74 | 2 1/2" BSPT | 88 | PG 48 |
| 12 | M85 | 30 | 3/4" NPT | 45 | 1 1/4" NPS | 60 | 2" BSPP | 75 | 3" BSPT | | For non-standard sizes see Special Notes. |
| 13 | M90 | 31 | 1" NPT | 46 | 1 1/2" NPS | 61 | 2 1/2" BSPP | 76 | 3 1/2" BSPT | | |
| 14 | M100 | 32 | 1 1/4" NPT | 47 | 2" NPS | 62 | 3" BSPP | 77 | 4" BSPT | | |
| 17 | 5/8" ET | 33 | 1 1/2" NPT | 48 | 2 1/2" NPS | 63 | 3 1/2" BSPP | 79 | PG 7 | | |

Example: PD-U-1-1-04-00 Dome Headed Plug, Certified EExde, Material Brass, Plating Nickel, Size M20

Selection

- All Redapt products should be selected in accordance with all relevant Standards and Codes of Practice.
- Ensure that the product is certified to the same method of protection as the equipment to which it is to be installed.
- Ensure that the correct threadform and size is selected for the entry hole of the enclosure.
- Ensure that the material the product is manufactured from is suitable to the enclosure material and also to the surrounding environmental conditions.
- Ensure that surrounding conditions do not exceed the Operating Temperatures stated in the Product Information table.
- Ensure that the product can maintain the same Ingress Protection levels as the equipment to which it is to be installed.
- Ensure that the impact resistance of the product is suitable to that of the equipment to which it is to be installed as stated in the Product Information Table.

Installation Guide

1. All Redapt products should be installed in accordance with all relevant Installation Standards and Codes of Practice.
BS EN 60079-14: 1997. Electrical Installations in hazardous areas (other than mines)
2. Installation of Redapt products should only be carried out by an engineer trained in cable gland installation.
3. Under no circumstances should installation be carried out under live conditions.
4. The installer should ensure that no damage occurs to any thread or form of seal during installation. Where component is plated care should be taken to prevent damage or chipping.
5. Threaded Entries – Components can be installed directly into threaded entries and the recommended torque applied.
6. Clearance Holes – Clearance holes should be 0.5 mm to 1mm larger than the major diameter of the male thread. Components installed in clearance holes should be secured with an appropriate sized locknut to recommended torque.
7. Maintaining IP 54 Rating – In order to maintain such an IP rating the installer should ensure that parallel threads engage to 6 full threads and tapered thread to 5 full threads.
8. Maintaining IP 66-67-68 Rating – In order to maintain the IP Rating of a product, the above thread engagement must be attained. The surface of the enclosure should also be clean and free from dust or moisture before assembly. In order to maintain IP 66-67-68 the installer must ensure that either the sealing washer is in the correct position or that the 'O' Ring seal is seated in the groove provided. A non-hardening thread sealant may be used to provide protection.
9. If a serrated washer is used it should not be installed in such a way that it may impair any IP Rating.
10. Recommended Installation Torque – In order to maintain the integrity of the enclosure it is important that an installation torque as detailed below be applied.

Installation Torque

Redapt stopping plugs should be installed to the recommended torque values detailed in the following table. Torque values apply to non-metric thread equivalents.

| Male Thread Size | Metallic Components (N.m.) | G.F. Nylon Components (N.m.) |
|---------------------------|---|------------------------------|
| M16 & M20 and Equivalents | 32.5 | 7 |
| M25 and Equivalents | 47.5 | 10 |
| M32 and Equivalents | 55.0 | 10 |
| M40 and Equivalents | 65.0 | 15 |
| M50 and Equivalents | 80.0 | 25 |
| M63 and Equivalents | 95.0 | 30 |
| M75 and Equivalents | 110.0 | 45 |
| M80 Threads and Above | Major Dia x 2 (i.e. for M80 – 160 N.m.) | - |

Routine Checking and Maintenance

1. All Redapt products should be checked during routine maintenance of equipment.

Special Notes

- Non standard threadforms conforming to Table 3 of BS EN 50018 are available as certified components.
- Non standard certified threads- An installation torque appropriate to the nearest metric size should be applied. E.g. Non standard male thread size M24. Use Installation torque of an M25 male thread.
- Aluminium variants are not permitted for Group 1 applications
- EExe equipment cannot be used with EExd equipment
- The PA-D, PB-D and PH-E series are capable of operating at temperatures between – 60° C to + 400° C. providing they are not used in conjunction with any sealing device.

For Further Assistance or Details on Redapt's Range Of Products Please Complete Faxback Details.

| | |
|-------------------|--|
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