Thread Data and Cable Carrying Capacity

metric

standard thread conforming to EN60423

Thread size	External thread outside diameter (mm)	Internal thread inside diameter (mm)	Pitch mm
M12	12.0	10.4	1.5
M16	16.0	14.4	1.5
M20	20.0	18.4	1.5
M25	25.0	23.4	1.5
M32	32.0	30.4	1.5
M40	40.0	38.4	1.5
M50	50.0	48.4	1.5
M63	63.0	61.4	1.5
M75	75.0	73.4	1.5

PG

German standard thread conforming to DIN40430

Thread size	External thread outside diameter (mm)	Internal thread inside diameter (mm)	Pitch mm
PG7	12.5	11.3	1.27
PG9	15.2	13.9	1.41
PG11	18.6	17.3	1.41
PG13.5	20.4	19.1	1.41
PG16	22.5	21.2	1.41
PG21	28.3	26.8	1.59
PG29	37.0	35.5	1.59
PG36	47.0	45.5	1.59
PG42	54.0	52.5	1.59
PG48	59.3	57.8	1.59

NPT

American taper pipe thread conforming to ANS/ASME B1.20.1 - 1983

Thread size (inches)	External thread outside diameter (mm)	Pitch mm
⅜"	16.7	1.14
½"	21.0	1.81
¾"	26.4	1.81
1"	33.3	2.21
1¼"	41.9	2.21
1½"	47.8	2.21
2"	59.6	2.21

PF/ gas

Japanese conduit thread conforming to JIS B 0202

Thread size (inches)	External thread outside diameter (mm)	Internal thread inside diameter (mm)	Pitch mm
½"	21.0	18.6	1.81
¾"	26.4	24.1	1.81
1"	33.3	30.3	2.31
1¼"	41.9	39.0	2.31
1½"	47.8	44.8	2.31
2"	59.6	56.7	2.31

UNEF/UNS/UN

American unified thread conforming to BS1580 used on circular connectors

UNEF imperial sizes	Thread size (inches)	External thread outside diameter (mm)	Internal thread inside diameter (mm)	Pitch mm
⅝" - 24 UNEF	⅝"	15.9	14.7	1.06
¾" - 20 UNEF	¾"	19.1	17.7	1.27
⅞" - 20 UNEF	⅞"	22.2	20.9	1.27
1" - 20 UNEF	1"	25.4	24.0	1.27
1 1/16" - 18 UNEF	1 1/16"	30.2	28.6	1.41
1⅛" - 18 UNEF	1⅛"	34.9	33.4	1.41
1¼" - 18 UNEF	1¼"	31.8	30.2	1.41
1 5/16" - 18 UNEF	1 5/16"	36.5	35.0	1.41
1¾" - 18 UNS	1¾"	44.5	42.9	1.41
2" - 18 UNS	2"	50.8	49.3	1.41
2¼" - 18 UN	2¼"	57.2	55.4	1.41

cable carrying capacity

UK wiring regulations BS7671, recommend that the total cross sectional area of the sum of the individual cables should not exceed 40% of the cross sectional area of the conduit. The nominal cross sectional area of single-core, stranded, PVC insulated cables is provided as a guide only. Other cables may have different dimensions.

Nominal conductor size (mm^2)	Nominal overall cross sectional area (mm^2) of cable
1.0	6.6
1.5	7.6
2.5	9.6
4.0	14.5
6.0	18.8
10.0	29.3
16.0	40.2
25.0	63.8
35.0	83.5
50.0	113.0
70.0	149.0
95.0	204.0

Example: is LTP20 suitable for five 4.0mm^2 cables?

- The total cross sectional area of the conductors is 5 x 14.5mm^2 = 73mm^2
- The cross sectional area of LTP20 is $3.142 \times \left[\frac{\text{inside diameter}}{2}\right]^2 = 201mm^2$
- % of conduit cross sectional area $\frac{73}{201} = 36\%$

This is less than 40%; therefore this conduit is suitable for this combination of cables.

UK wiring regulations

UK wiring regulations BS7671 prohibit the use of flexible or pliable conduit as an earthing conductor.

Where conduits of 40mm and above penetrate fire barriers in buildings the wiring regulations stipulate that internal seals should be used to maintain fire resistance.

To meet the UK wiring regulations conduit should be self extinguishing unless they are to be buried or contained in non combustible material e.g: concrete or plaster.

Please telephone the Flexicon hotline for further guidance, +44 (0)1675 466900.