

Technical drawing of a cable assembly, showing a top view and a side view. The drawing includes dimensions, tolerances, and a detailed view of the M12 Male Connector.

Top View:

- Overall diameter: $\phi 46$
- 4xM3 holes with PCD56 (Pitch Circle Diameter 56)
- Length of shorter side of angle: $\pm 1^\circ$

Side View:

- Overall length: 500 (with tolerance $\triangle 1$)
- Outer diameter: $\phi 75$
- Inner diameter: $\phi 4$ (with tolerance $\triangle 1$)
- Length of cable label: 60 (with tolerance $\triangle 1$)
- Length of cable: 20 (with tolerance $\triangle 1$)
- Length of connector: 10

M12 Male Connector:

- Ref. Drawing: M12 Male Connector
- No. 1: +V (Red/Brown)
- No. 2: NC
- No. 3: -V (Black/Blue)
- No. 4: NC

Dimensions and Tolerances:

- Length of shorter side of angle: $\pm 1^\circ$
- Length of cable label: 60 (with tolerance $\triangle 1$)
- Length of cable: 20 (with tolerance $\triangle 1$)
- Length of connector: 10

Table 1: Tolerances

CLASS	NOMINAL LENGTH	PERPENDICULARITY TOLERANCE
H	L ≤ 10	±0.02
K	10 < L ≤ 30	±0.05
	30 < L ≤ 100	±0.1
	100 < L ≤ 300	±0.2
	300 < L ≤ 1000	±0.3
	1000 < L ≤ 3000	±0.4

Table 2: Tolerances

CLASS	NOMINAL LENGTH ON SHORTER SIDE	PERPENDICULARITY TOLERANCE
H	L ≤ 100	±0.2
K	100 < L ≤ 300	±0.3
	300 < L ≤ 1000	±0.4
	1000 < L ≤ 3000	±0.5

Table 3: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0.5
	6 < L	±1.0

Table 4: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0.5
	6 < L	±1.0

Table 5: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0.5
	6 < L	±1.0

Table 6: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0.5
	6 < L	±1.0

Table 7: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0.5
	6 < L	±1.0

Table 8: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0.5
	6 < L	±1.0

Table 9: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0.5
	6 < L	±1.0

Table 10: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0.5
	6 < L	±1.0

Table 11: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0.5
	6 < L	±1.0

Table 12: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0.5
	6 < L	±1.0

Table 13: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0.5
	6 < L	±1.0

Table 14: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0.5
	6 < L	±1.0

Table 15: Tolerances

CLASS	STANDARD DIMENSION RANGE	CHAMFER TOLERANCE
H	L < 0.2	±0.02
K	0.2 ≤ L ≤ 0.5	±0.05
	0.5 < L ≤ 1	±0.1
	1 < L ≤ 3	±0.2
	3 < L ≤ 6	±0